AUSTRALIAN
ENVIRONMENTAL AUDITORS

Environmental Audit Report (53X)

47 Progress Drive, Nightcliff, Northern Territory – Lot A

Prepared for:
Department of Infrastructure, Planning and Logistics

Prepared by:
Australian Environmental Auditors Pty Ltd

Date:
31 March 2022

Project Number:
EA0729

EPA Service Order No.:
PRL8565 (NTEPA2019/0099-199)

Environmental Audit Report (53X)

47 Progress Drive, Nightcliff, Northern Territory – Lot A

Prepared for:
Department of Infrastructure, Planning and Logistics
Level 5, Energy House
18-20 Cavenagh Street, Darwin, NT 0801

Prepared by:
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Suite 21, 1 Ricketts Road
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Date of Report:
31 March 2022

Author:



Jean Paul Pearce
Environmental Auditor (Contaminated Land)
(Appointed pursuant to section 53S (1) of the *Environment Protection Act 1970*)

Version Control Record

DATE ISSUED	DOCUMENT VERSION	SUBMITTED TO	Authors/Reviewers
31 March 2022	Final	NT EPA, Environmental Audit Unit – Attention Christopher Coombes Department of Infrastructure, Planning and Logistics	Auditor: JPP Principal Assistant: BR Internal Auditor Reviewer: PH

Certified System Quality ISO 9001 SAI GLOBAL
Certified System Environment ISO 14001 SAI GLOBAL
Certified System Health & Safety AS/NZS 4801 SAI GLOBAL

ENVIRONMENT PROTECTION ACT 1970 (Vic)

STATEMENT OF ENVIRONMENTAL AUDIT

I, Jean Paul Pearce of Australian Environmental Auditors Pty Ltd, a person appointed by the Victorian Environment Protection Authority ('the Authority') under the Environment Protection Act 1970 ('the Act') as an environmental auditor for the purposes of the Act, having

1. been requested by Ms Sinead Redmond of HK Solutions on behalf of Department of Infrastructure, Planning and Logistics (DIPL) to issue a Certificate of Environmental Audit in relation to the site located at 47 Progress Drive, Nightcliff, Northern Territory – Lot A ('the site' shown in Figure 1), owned by the Northern Territory Government as a DIPL asset.
2. had regard to, among other things,
    i. guidelines issued by the Authority for the purposes of Part IXD of the Act,
    ii. the beneficial uses that may be made of the site,
    iii. relevant State environment protection policies/industrial waste management policies, namely,
        - SEPP (Air Quality Management)
        - SEPP (Ambient Air Quality)
        - SEPP (Waters)
        - SEPP (Prevention and Management of Contamination of Land)
        - Victorian Environment Protection (Industrial Waste Resource) Regulations 2009
3. in making a total assessment of the nature and extent of any harm or detriment caused to, or the risk of any possible harm or detriment which may be caused to, any beneficial use made of the site by any industrial processes or activity, waste or substance (including any chemical substance), and
4. completed an environmental audit report in accordance with section 53X of the Act, a copy of which has been sent to the Authority and the relevant planning and responsible authority.

HEREBY STATE that I am of the opinion that

the site is suitable for the beneficial uses associated with:

- Sensitive use – High density;
- Public open space;
- Commercial use; and
- Industrial use,

subject to the following conditions attached thereto:

1. Prior to use of the site, the owner of the site must provide the following asbestos management framework provided as Appendix 1 (which has been endorsed by the Auditor) to DIPL for upload onto the Octfolio database:
    a. SLR (2021) Ongoing Management of Asbestos in Soil – Sub Slab Works Only, John Stokes Square Development – Lot A. Dated 22 December 2021.
2. Prior to use, the site must be covered with a physical barrier, such as concrete or other hardstand (building slab or pavement), or with at least 0.5 m thickness of suitable clean soils in unsealed areas. The physical barrier must be maintained on the site and if subsequently damaged or removed during development or occupation of the site, must be reinstated as soon as possible and to the same condition or better as it was prior to any disturbance.

3. If permanent removal of the physical barriers (as prescribed in condition 2 above) is proposed, a NT EPA accepted environmental auditor must be engaged to conduct an environmental audit of the site, to consider if the barrier is no longer required.

The condition of the site is detrimental or potentially detrimental to any (one or more) beneficial uses of the site. Accordingly, I have not issued a Certificate of Environmental Audit for the site in its current condition, the reasons for which are presented in the environmental audit report. The terms and conditions that need to be complied with before a Certificate of Environmental Audit may be issued are set out as follows:

- Asbestos contamination in soil would need to be cleaned up such that all relevant beneficial uses of soil are restored.

Other related information:

- Groundwater at the site contains naturally elevated concentrations of pH, cobalt, copper, nickel, lead, manganese and zinc. The levels are considered typical of the natural groundwater quality surrounding the site and do not constitute pollution in accordance with clause 10(2)(c) of State environment protection policy (Waters) 2018.
- If groundwater is to be extracted from the site, advice including testing, should be sought from a suitably qualified professional to ensure the groundwater is suitable for the intended use.
- Any material excavated from the site and disposed of off site should be classified and managed in accordance with IWRG 621 (or its relevant future revisions) or NT EPA equivalent. Analysis of fill materials should include asbestos and PFAS due to the previous on-site asbestos contamination and importation of fill materials from a Defence site;
- Not all land uses for which the land is considered suitable by this audit may be allowed under the existing zoning;
- A separate Environmental Audit Report and Statement of Environmental Audit will be issued for Lot B and another for the Road Reserve and Lot C; and
- In accordance with Section 53ZE of the Act, the owner/occupier of the site must provide a copy of this Statement to any person who becomes or proposes to become an occupier of the site.

This statement forms part of an Environmental Audit Report (Australian Environmental Auditors Pty Ltd, Environmental Audit Report (53X), *47 Progress Drive, Nightcliff, Northern Territory – Lot A*, AEA Ref: EA0729, Service Order No. PRL8565 (NTEPA2019/0099-199).

Further details regarding the condition of the site may be found in the environmental audit report.

DATED 31 March 2022

Signed: 

Jean Paul Pearce

ENVIRONMENTAL AUDITOR
(appointed pursuant to the Environment Protection Act 1970)

Appendix 1: Ongoing Management of Asbestos in Soils and DIPL letter of acceptance

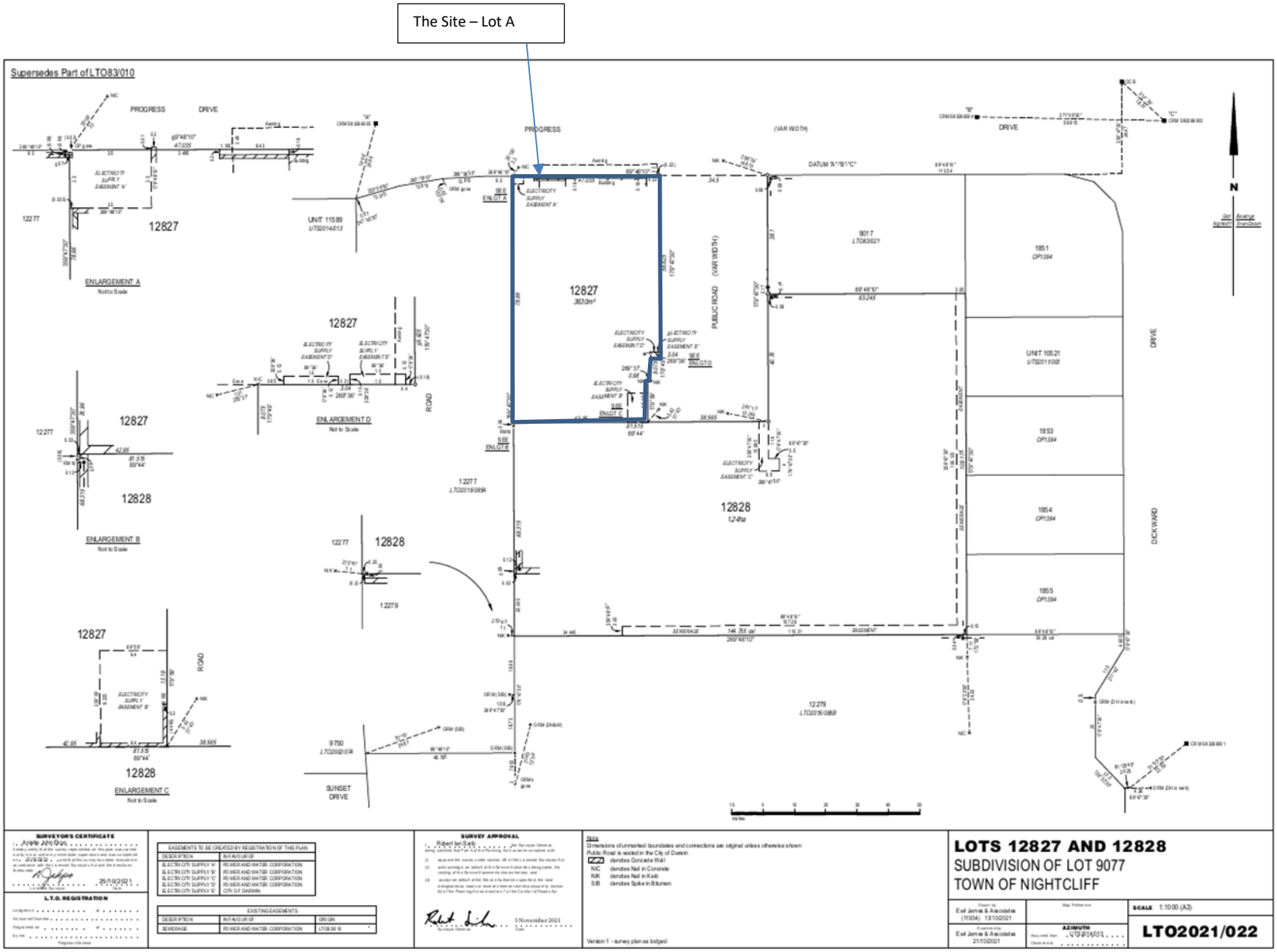


Figure 1: Site Plan – Lot A

ONGOING MANAGEMENT OF ASBESTOS IN SOILS - SUB SLAB WORKS ONLY

John Stokes Square Redevelopment
Lot A

Prepared for:

HK Solutions (on behalf of Department of Infrastructure, Planning and Logistics)
Building 2, Level 1
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Berrimah NT 0828

SLR Ref: 680.10679.00200-R11
Version No: -v2.0
December 2021

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with HK Solutions (on behalf of Department of Infrastructure, Planning and Logistics) (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
680.10679.00200-R11-v2.0	22 December 2021	Julie McDowell	Paul Turyn	Paul Turyn
680.10679.00200-R11-v1.0	19 November 2021	Julie McDowell	Paul Turyn	Paul Turyn

EXECUTIVE SUMMARY

The Department of Infrastructure, Planning and Logistics (DIPL), through Project Management consultants Harris Kmon Solutions Pty Ltd (HK Solutions), commissioned SLR Consulting Australia Pty Ltd (SLR) to provide environmental consultancy services relating to the redevelopment of John Stokes Square, located at 47 Progress Drive Nightcliff, Darwin, Northern Territory (herein referred to as the "Project Area").

The Project Area is being subdivided as part of the redevelopment project, with varying land use classifications including high density residential, public open space, community and commercial. Works were undertaken across the Project Area to characterise, remediate and validate the newly defined land parcels to ensure suitability for the proposed land uses.

The remediation and validation assessment works that were undertaken on land parcel Lot A (herein referred to as "the Site") are documented in the report titled "Validation Report, John Stokes Redevelopment, Lot A (SLR reference: 680.10679.R02). The purpose of the remediation and validation works undertaken at the Site was to confirm the Site's suitability for commercial use (i.e. police station).

Due to deviations in the remediation strategy, there is a possibility that asbestos in soil may still be present at the Site. However, given that future users of the police station will have no to very limited access to soil due to the substantial concrete surfaces that have been established as part of this facility's design and construct – if asbestos impacted soils were present, they are not considered to pose an undue exposure risk to the aforementioned site users during normal operations, provided this surface covering is maintained and access to soil is prevented.

The objective of this document is to provide site-specific management procedures and protocols that would need to be considered to minimise the potential for adverse impacts to human health that asbestos contaminated soil may pose, in the event future maintenance/excavations works are required to be undertaken at the Site. This document applies only to sub surface works and does not apply to routine building works that do not involve exposure to soils beneath the Site's concrete surfaces.

CONTENTS

1 INTRODUCTION 1

2 EXTENT OF POTENTIAL RESIDUAL ASBESTOS IMPACT IN SOILS 1

3 POTENTIAL HEALTH IMPACTS AND EXPOSURE PATHWAYS 2

4 ONGOING MANAGEMENT OF ASBESTOS IN SOILS 3

4.1 Responsibilities 3
4.2 Key Contacts 3
4.3 Siteworks 3
4.4 Asbestos Awareness 5
4.5 Unexpected Finds Protocol 5

5 REFERENCES 7

6 LIMITATIONS 7

DOCUMENT REFERENCES

TABLES

Table 1 Summary of Asbestos Impact at Site 2
Table 2 Key contact details 3

FIGURES

Figure 1 Unexpected finds protocol 6

1 Introduction

The Department of Infrastructure, Planning and Logistics (DIPL), through Project Management consultants Harris Kmon Solutions Pty Ltd (HK Solutions), commissioned SLR Consulting Australia Pty Ltd (SLR) to provide environmental consultancy services relating to the redevelopment of John Stokes Square, located at 47 Progress Drive Nightcliff, Darwin, Northern Territory (herein referred to as the "Project Area").

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The remediation and validation assessment works that were undertaken on land parcel Lot A (herein referred to as "the Site") are documented in the report titled *"Validation Report, John Stokes Redevelopment, Lot A*" (SLR reference: 680.10679.R02). The purpose of the remediation and validation works undertaken at the Site was to confirm the Site's suitability for commercial use (i.e. police station).

Due to deviations in the remediation strategy, there is a possibility that asbestos in soil may still be present at the Site. However, given that future users of the police station will have no, to very limited access to soil due to the substantial concrete surfaces that have been established as part of this facility's design and construct – if asbestos impacted soils were present, they are not considered to pose an undue exposure risk to the aforementioned Site users during normal operations, provided this surface covering is maintained and access to soil is prevented.

The objective of this document is to provide site-specific management procedures and protocols that would need to be considered to minimise the potential for adverse impacts to human health that asbestos contaminated soil may pose, in the event future maintenance/excavations works are required to be undertaken at the Site. This document applies only to sub surface works and does not apply to routine building works that do not involve exposure to soils beneath the Site's concrete surfaces.

This report has been prepared for endorsement by the appointed Contaminated Land Auditor (CLA) (*as defined in Part 9 of the Waste Management Pollution Control Act, 1998*) (WMPC Act) for the Site, Jean-Paul Pearce (Australian Environmental Auditor) and in general accordance with the *Northern Territory Contaminated Land Guidelines NT EPA, June 2017, Version 1.0*. The main role of the CLA is to evaluate the environmental conditions of the Site at the date of signing the certificate of statement and to form an opinion, on which others can rely upon, regarding the suitability of the Site for future land uses.

2 Extent of Potential Residual Asbestos Impact in Soils

The remediation and validation activities undertaken at the Site have been completed in general accordance with the technical memorandum: *Remediation Strategy – John Stokes Square – Lot A* (ref: 680.30002.00000 Remediation Strategy 20200422.docx), which was provided on 22 April 2020 and subsequently approved by the CLA on 24 April 2020.

Due to deviations from the proposed remediation strategy and advice provided by SLR and the CLA during Site works, there is a potential that asbestos impacted soil was used to backfill the excavation at the Site.

The final excavation at the Site had an area of approximately 3,619 m^2 and generally extended down into the natural red soils to a maximum depth of 0.3 m. According to the information provided to SLR, the excavation was backfilled with onsite stockpiles of spoil that had been blended with crushed concrete and imported fill material. The blended material was placed at depths from 0.5 m up to surface level and compacted in "lifts" to meet geotechnical engineering requirements.

Asbestos was detected in samples collected from some stockpiles of spoil that were reportedly blended with crushed concrete and imported fill material. Samples that reported asbestos impact above the adopted investigation level specified for commercial/industrial land uses, are detailed in **Table 1**.

Table 1 Summary of Asbestos Impact at Site

Stockpile	Volume	Impacted Sample ID	Description of Impact
Stockpile 1	40 m^3	STP1_2	Asbestos containing material (ACM) debris: Chrysotile – 0.12%w/w
Stockpile 3	200 m^3	STP3_5	Fibrous asbestos: Chrysotile and Amosite - 0.55%w/w
Stockpile 7	275 m^3	STP7_11B	ACM debris: Chrysotile

Fibrous asbestos and asbestos fines were detected four additional samples collected from the stockpiles of spoil, however the concentrations detected were below the laboratory's calculated limit of reporting or below the adopted investigation level specified for commercial/industrial land uses.

3 Potential Health Impacts and Exposure Pathways

There are no known environmental risks posed by asbestos (ie: risks to flora and fauna in either terrestrial or aquatic environments) however the human health impacts due to exposure to asbestos are well documented. There are many reported cases of death from asbestos related disease due to long term exposure to asbestos, and the number of deaths per year is reported to be steadily increasing over time, believed to be due to the increased usage of asbestos over time. It is also worth noting that symptoms of asbestos related disease could be exhibited some 20 to 30 years after the period of exposure.

The main mode of exposure to asbestos that could result in a risk to human health is inhalation of airborne asbestos fibres. Human health impacts from exposure to airborne asbestos fibres result from the fibres that become lodged within the alveoli of the lungs. The exact mechanism of harm to human health is not yet understood and agreed. One theory is that the fibres that lodge in the alveoli can damage the sensitive tissue and cause scarring, which can then lead to asbestosis, mesothelioma and lung cancer.

Asbestos exposure becomes a health concern when high concentrations of asbestos fibres are inhaled over a long time period. People who become ill from inhaling asbestos are often those who are exposed on a day-to-day basis in a job where they worked directly with the material. As a person's exposure to fibres increases, because of being exposed to higher concentrations of fibres and/or by being exposed for a longer time, then that person's risk of disease also increases. Disease is very unlikely to result from a single, high-level exposure or from a short period of exposure to lower levels.

There is also some documented evidence of dermal contact with asbestos causing health impacts – namely "asbestos warts". Asbestos warts may be formed where sharp fibres are lodged in the skin and overgrown, causing callus like growths.

Whilst the concrete surface established at the Site is maintained and in good condition, exposure pathways to potentially asbestos impacted soils are incomplete. Anyone undertaking sub slab works that results in the disturbance of concrete surfaces (e.g. cutting, removal, replacement), exposure of soils and/or ground penetration/disturbance (e.g. trenching, digging, excavation etc) will need to adhere to the mitigation measures outlined in **Section 4.0**.

4 Ongoing Management of Asbestos in Soils

4.1 Responsibilities

Key agencies responsible for the ongoing management of potential asbestos in soils at the Site include:

- Northern Territory Government (NTG):
  - DIPL via the Octfolio database, which is a key communication tool for managing asbestos related issues within NTG's assets/facilities
  - NT WorkSafe.
- Person(s) conducting a business undertaking with management or control of a workplace.

Others required to comply with directives of this document include Licenced Asbestos Removalist (Class A Licence), Licenced Asbestos Assessor and/or suitably qualified and experienced Environmental Consultant and other trade staff engaged to undertake sub slab works at the Site that results in the exposure of soils and/or ground penetration/disturbance (e.g. trenching, digging, excavation etc) and any works conducted to underground services. This document does not apply to routine building works.

4.2 Key Contacts

Table 2 Key contact details

	Contact Details
NT WorkSafe	1800 019 115
Department of Infrastructure, Planning and Logistics	1300 654 628

4.3 Siteworks

Anyone undertaking sub slab works at the Site that results in the disturbance of concrete surfaces (e.g. cutting, removal, replacement), exposure of soils and/or ground penetration/disturbance (e.g. trenching, digging, excavation etc) must not commence work onsite until they have confirmed at a minimum that they:

- have been issued a copy of this document and acknowledge that it has been read and understood by all contractor staff having to perform works onsite;
- will abide by the management requirements as stipulated in this document;
- have completed an appropriate risk assessment for the works required to be conducted onsite, which has been reviewed and approved by DIPL, and will implement the appropriate controls to minimise disturbance of the Site's concrete surfaces and exposure to soils beneath; and
- have undertaken site-specific asbestos awareness training as per **Section 4.4** of this document.

Additional measures that would need to be adhered to are as follows.

- A suitably qualified environmental consultant should be engaged to review proposed site works and assist in preparing the risk assessment and management strategy to address exposure to potential asbestos impact onsite. The completed risk assessment and management strategy will inform the extent of the works required and, as such, this should be carried out prior to the contractor commencing works onsite and approved by DIPL.
- It should be assumed that asbestos impacted soils are present beneath the Site and appropriate management controls will be required when undertaking any sub slab works, unless it is proven via a soil assessment conducted by a suitably qualified environmental consultant/licenced asbestos assessor, that the area being worked is not impacted. The soil assessment should be undertaken in accordance with the Western Australia Department of Health, 2021 edition, "*Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia, Consultation*". If the area does not contain asbestos impacted soils, then measures additional to that listed above, would not be required.
- Unless it has been confirmed via a soil assessment (including soil sampling and analysis) that asbestos impacted soils are not present in the area being worked, an appropriately licensed asbestos removal contractor is to be engaged to either conduct or support sub slab works involving ground penetration/disturbance and/or soil removal. Depending on the scope, the asbestos removal contractor may be required to submit a notification of asbestos removal to NT WorkSafe.
- Unless it has been confirmed via a soil assessment (including soil sampling and analysis) that asbestos impact is not present in the area being worked, an Asbestos Removal Control Plan (ARCP) for the sub slab works involving ground penetration/disturbance and/or soil removal, is to be prepared and provided to DIPL for review and, if required, submitted to NT WorkSafe as part of the notification process.
- No sub slab works that involve ground penetration/disturbance and/or soil removal are to be undertaken until DIPL has reviewed and approved relevant risk assessments, initial soil assessments (where undertaken) and the ARCP (where asbestos impacted soils are present, or it has not been confirmed that the area is absent of asbestos impacted soils), and, if applicable, the NT WorkSafe notification of asbestos removal has been approved.
- All persons undertaking ground penetration/disturbance works and/or soil removal are to be provided a copy of this document, relevant pre-approved risk assessment(s), initial soil assessments (where undertaken) and the ARCP (where required).
- Appropriate controls outlined within the pre-approved risk assessment(s) and the ARCP (where required) that have been prepared for the works are to be implemented and maintained for the duration of the works. Control airborne asbestos fibre monitoring should be carried out by an appropriately qualified consultant for the duration of the works involving ground penetration/disturbance and/or soil removal, unless the area has been proven to not contain asbestos impact via a soil assessment (including soil sampling and analysis).
- All spoil material generated as part of ground penetration/disturbance works must be appropriately handled and disposed of as asbestos waste, unless proven to not contain asbestos impact via a soil assessment (including soil sampling and analysis) undertaken by a suitably qualified environmental consultant. Any fill material being brought onsite must also be appropriately characterised to ensure that it is suitable for the land use (i.e.: commercial/industrial as defined in the ASC NEPM 2013).

Any contract or tender being issued to conduct sub slab works involving ground penetration/disturbance onsite must include either a full copy of this document or, as a minimum, a copy of the above points listed in **Section 4.3.**

4.4 Asbestos Awareness

All personnel entering the Site for the purpose of conducting sub slab works that results in the disturbance of concrete surfaces (e.g. cutting, removal, replacement), exposure of soils and/or ground penetration/disturbance (e.g. trenching, digging, excavation etc) must be provided with full information on the occupational health and safety consequences of exposure to asbestos and appropriate control measures. The provision of this information should be recorded.

This information can be relayed by the way of providing site inductions and/or asbestos awareness training during project kick off meetings held by the contractor looking to commence works on the Site.

In addition, the principal contractor leading any project works onsite is to develop and deliver site-specific training that includes the following, as a minimum the following.

- A brief overview of the status of asbestos contamination within the Site.
- The restrictions for works within the Site.
- Familiarity with this document.
- The purpose of the training.
- The health risks associated with asbestos.
- Roles and responsibilities of the personnel under this document.
- Where necessary, the timetable for removal/remediation of asbestos materials.
- Where necessary, the process and procedures required to minimise potential exposure.
- Where necessary, the maintenance and control measures, personal protective equipment and work methods required to minimise asbestos material risk including potential contamination of other areas.
- Where necessary, the control levels and exposure standards for asbestos materials.
- The purpose of any air monitoring and/or health surveillance undertaken.

The abovementioned site-specific training is to be delivered to all personnel involved in sub slab works resulting in the disturbance of concrete surfaces (e.g. cutting, removal, replacement), exposure of soils and/or ground penetration/disturbance (e.g. trenching, digging, excavation etc), including those that hold a current asbestos removal licence.

4.5 Unexpected Finds Protocol

An “unexpected find” refers to any situation where ACM is identified during works occurring at the Site, exclusive of works occurring under controlled asbestos conditions (e.g. works involving an ARCP). If personnel carrying out works onsite encounter an unexpected find, the procedure presented in **Figure 1** shall be followed.

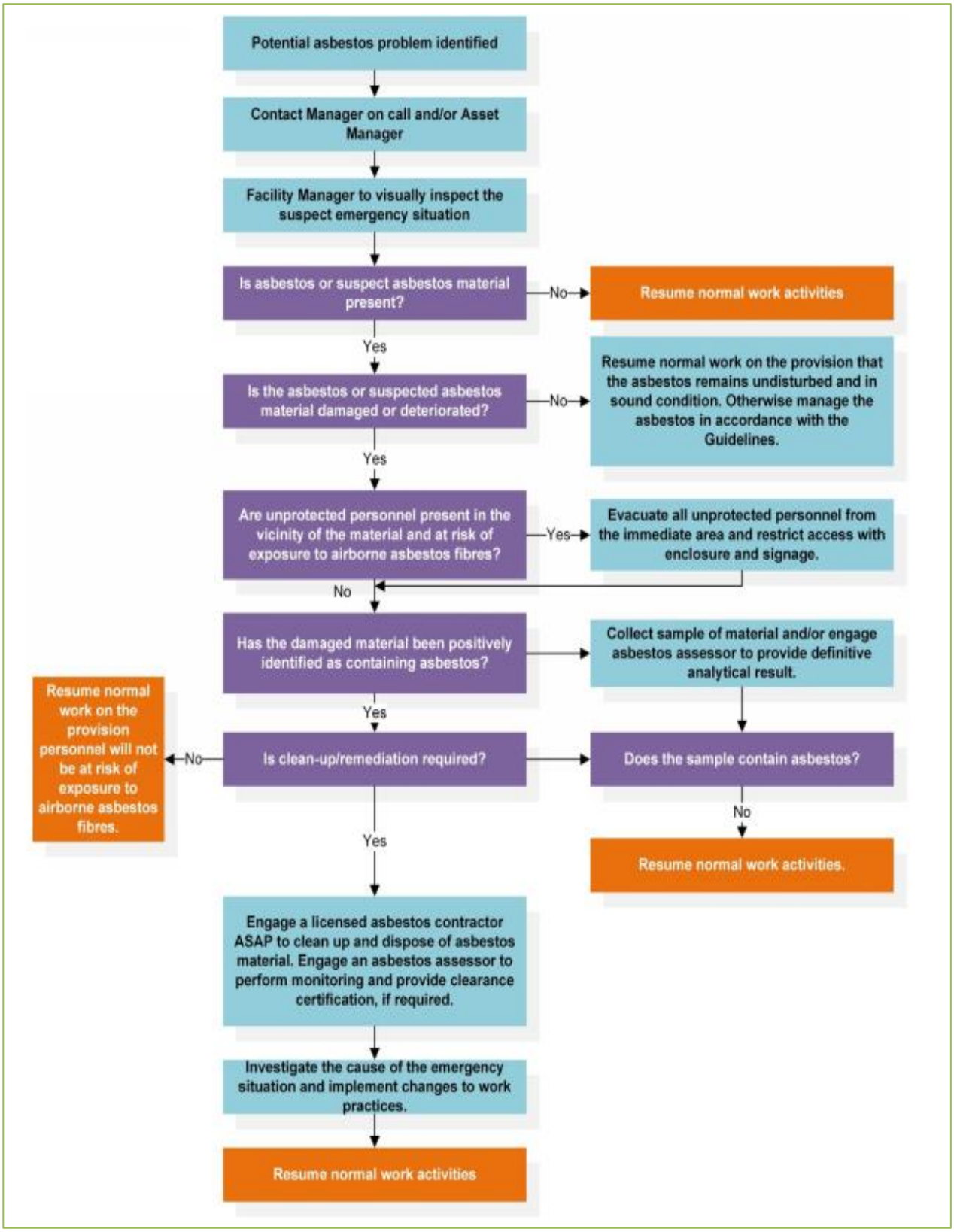


Figure 1 Unexpected finds protocol

5 References

ASC NEPM 2013, *"National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended in 2013"*. National Environment Protection Council.

NT EPA 2017, "*Northern Territory Contaminated Land Guideline."* Northern Territory Environment Protection Authority. Norther Territory of Australia.

NT EPA 2016, *"Waste Management and Pollution Control Act*." Northern Territory Environment Protection Authority. Norther Territory of Australia.

SLR 2020, "*Remediation Strategy – John Stokes Square – Lot A."* SLR Consulting (Australia) Pty Ltd (reference: 680.30002.00000 Remediation Strategy 20200422.docx).

SLR 2021, *"Validation Report, John Stokes Redevelopment – Lot A."* SLR Consulting (Australia) Pty Ltd (reference: 680.10679-R02).

WA Department of Health 2021, "*Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia, Consultation*".

6 Limitations

This document has been prepared for use by the Client who has commissioned the works in accordance with the project brief only and has been based in part on information supplied by the Client and other parties. The advice herein relates only to this project.

Notwithstanding the recommendations in this document, property owners and contractors or other parties working on the Site are responsible for ensuring that all work practices employed at the Site meet or exceed all regulatory requirements to the works being carried out onsite.

That stated protocols are designed as an outline, and specific circumstances may arise where the protocol may need to be altered. Should this be required then the protocols should stand as a minimum requirement and changes should only increase or improve upon the requirements of this plan.

SLR is not a professional quantity surveyor organisation. As such, any areas, volumes and tonnages or any other quantities noted in this report are only indicative estimates. The services of a professional quantity surveyor organisation should be required if quantities are to be relied upon.

SLR assumes no responsibility for the quality or accuracy of data obtained from external sources, or for occurrences outside the scope of works defined in this report.

All work conducted and reports produced by SLR are prepared for a particular Client's objective and are based on a specific scope, conditions and limitations, as agreed upon between SLR and the Client. Information and/or report(s) prepared by SLR may therefore not be suitable for any use other than the intended objective.

Before passing on to a third party any information and/or report(s) prepared by SLR, the Client is to inform fully the third party of the objective and scope, and all limitations and conditions, including any other relevant information which applies to the information and/or report(s) prepared by SLR.

It is the responsibility of third parties to investigate fully to their satisfaction if any information and/or report(s) prepared by SLR, is suitable for a specific objective.

Investigations are conducted in a conscientious and professional manner. The nature of the task, however, and the likely disproportion between any damage or loss which might arise from the work and any report prepared as a result and the cost of our services is such that SLR cannot guarantee that all issues of concern/contamination have been identified.

Thus, while SLR carries out the work to the best of our ability, SLR totally excludes any loss or damages which may arise from services provided to the client or any other parties.

The report(s) and/or information produced by SLR should not be reproduced and/or presented/reviewed except in full.

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Executive Summary

This report is in response to a request for a Certificate of Environmental Audit in accordance with Part IXD of the *Victorian Environment Protection Act 1970*. In accordance with EPA Victoria Publication 1147, summary information on this audit is presented in the following two tables.

Table 1: Summary of Audit Information

Item	Detail
Auditor	Jean Paul Pearce
Auditor account number	289162
Auditor appointment end date	26 November 2022
Audit type	53X
Date EPA notified of audit	21 November 2019
Audit service order number	PRL8565 (NTEPA2019/01099-199)
Name of person requesting audit	Ms Sinead Redmond Project Management Lead Northern Territory Department of Infrastructure, Planning and Logistics Land Development Unit
Relationship of person requesting audit to site	Authorised representative of the site owner
Name of premises owner	Department of Infrastructure, Planning and Logistics (DIPL)
Date of auditor engagement	20 November 2019
Completion date of the audit	31 March 2022
Reason for audit	Due to the identified pesticides and asbestos contamination, we understand EPA has required an Auditor to determine the site is suitable for use
Audit categorisation	Risk
Environmental segments	Air, Land, Groundwater, Surface water
If the audit was required by an EPA notice, licence or other, please provide EPA reference number	Not applicable
Current land use zoning	Zone MR (medium density residential), recently changed to Specific Use (SU) zone SD49.
EPA region	Darwin
Municipality	Nightcliff
Dominant - Lot on plan	Lot 9077 Town of Nightcliff Lot 9077 has since been subdivided creating Lot 12827 and Lot 12828. Lot A is now defined as Lot 12827, with the balance of Lot 9077 defined as Lot 12828 (refer to Attachment 1).
Additional - Lot on plan(s)	Lot A (Stage 1 of 3) – Lot A is defined as Lot 12827, with the balance of Lot 9077 defined as Lot 12828 (refer to Attachment 1).
Site/premises name:	John Stokes Square Nightcliff Development
▪ Building/complex sub-unit No	-

Item	Detail	
▪ Street/Lot – Lower No.	47	
▪ Street/Lot – Upper No.	-	
▪ Street Name	Progress	
▪ Street type (road, court, etc.)	Drive	
▪ Street suffix (North, South etc.)	-	
▪ Suburb	Nightcliff	
▪ Postcode	0810	
GIS coordinate of site centroid:		
▪ Latitude (GDA94)	-12.388587	
▪ Longitude (GDA94)	130.850751	
Site area (in square metres)	3,630 m^2 (Lot A)	
Plan of site/premises showing the audit site boundary attached	Yes, refer to survey plan, Attachment 1.	
Plan of site/premises showing the audit site boundary attached in a spatial data format	No	
Members and categories of support team utilised	Shandel Coleman (AEA) for technical audit support Bridget Roder (AEA) for technical audit support	
Further works or requirements	Implementation of the Ongoing Management of Asbestos in Soils plan for the entire site in accordance with Condition 1 of the Statement of Environmental Audit	
Nature and extent of continuing risk	Risks in groundwater have not been found to be significant, however the condition of the groundwater should be tested by an appropriately qualified environmental consultant (to determine the suitability thereof) prior to being utilised for extractive use. Risks in soil vapour have not been found to be significant. Risks in soil have not been found to be significant apart from the potential presence of asbestos in fill. Bonded asbestos cement material and asbestos fines /friable asbestos are potentially located within fill materials across the site, to be managed in accordance with the Ongoing Management of Asbestos in Soils plan (Condition 1). There is no risk to site users due to the entire site covered by concrete foundations of a building, but there is a potential risk to sub-slab workers (i.e. maintenance workers).	
Outcome of the audit	Statement of Environmental Audit with conditions	
Has EPA determined CUTEP at this site?	No	
Has the auditor determined CUTEP at this site?	No	
Has a GQRUZ been identified at the site/beyond the site by EPA?	No	
Does NAPL remain at the site?	No – never encountered	
Please indicate which of the Protected Beneficial Uses of groundwater are precluded due to pollution	**Protected Use (Segment A1)**	**Precluded?**
	Water Dependent Ecosystems and Species	No
	Potable Water Supply (Desirable)	No
	Potable Water Supply (Acceptable)	No
	Potable Mineral Water Supply	n/a

Item	Detail	
	Agriculture and Irrigation (Irrigation)	No
	Agriculture and Irrigation (Stock Watering)	No
	Water-based Recreation (Primary Contact Recreation)	No
	Industrial and Commercial	No
	Traditional Owners Cultural Values (on-site)	n/a
	Cultural and Spiritual Values (on-site)	n/a
	Geothermal Properties	n/a
	Buildings and Structures	No

Table 2: Physical Site Information

Item	Detail
Historical land use	Residential
Current land use	Recently redeveloped into a police station
Proposed future land use	Police station
Surrounding land use – north	Progress Drive then commercial, with low density residential beyond A service station is located to the north-east of the site
Surrounding land use – south	Proposed residential (Lot B1) and public open space (Lot C) Child care centre and tyre retailer then commercial A service station is located south-east of the site
Surrounding land use – east	Road Reserve, proposed residential (Lot B3), then Dick Ward Drive
Surrounding land use – west	Vacant land and laneway then commercial
Proposed land use zoning	Specific Use (SU) zone SD49
Nearest surface water receptor – name	Outer Estuary of Darwin Harbour
Nearest surface water receptor – direction	West
Likely point of groundwater discharge	Outer Estuary of Darwin Harbour, 160 m west of the site
Site aquifer formation	Unconsolidated soils
Groundwater flow direction	West
Groundwater TDS range (mg/L)	120 to 430 mg/L
Groundwater segment	Segment A1
Are there multiple aquifers impacted by pollution at the site?	No
Perched groundwater depth – upper (metres below ground level (mbgl))	n/a
Perched groundwater depth – lower (mbgl)	n/a
Regional groundwater depth – upper (mbgl)	6
Regional groundwater depth – lower (mbgl)	10
Number of bores within 2 km	46
Closest extractive use (distance in m)	Bore RN000130 (300 m from the site).
Zone of groundwater plume influence (m from site boundary)	Not applicable – non-source site
Year groundwater last monitored	2020
Have you attached electronic copies of Current Groundwater Analytical Results presented as a summary table?	Yes, refer to Appendix A

Read in Conjunction with Audit Report

This Executive Summary summarises the key points of the Audit Report. The Executive Summary must be read in conjunction with the full Audit Report (Service Order No. PRL8565 (NTEPA2019/0099-199); Australian Environmental Auditors Pty Ltd, ref. EA0729, *Environmental Audit Report (53X), 47 Progress Drive, Nightcliff* – Lot A.

Table of Contents

Executive Summary i
1 Introduction 1
1.1 Background 1
1.2 Site Definition 1
1.3 Proposed Development 1
1.4 Reason for the Environmental Audit 1
1.5 Independence of the Environmental Auditor 2
2 Audit Framework and Scope of Works 3
2.1 General 3
2.2 Legislation, Regulations and Guidelines 3
2.3 Audit Scope 5
2.3.1 Previous Environmental Audits 5
2.3.2 Reports Reviewed 5
2.4 Correspondence with Client and their Consultants 6
2.5 Correspondence and Liaison with EPA 6
2.6 Audit Team and Expert Support 6
2.6.1 Site Inspections 7
2.7 Auditor's Verification of Site Conditions 7
2.8 Uncertainties of the Audit Process 7
3 Site History and Characterisation 8
3.1 Site History Summary 8
3.2 Potential Contamination Sources and Contaminants of Concern 8
3.3 Adequacy of Site History Information 9
4 Site Characterisation 11
4.1 Site Description and Observations from AEA Site Inspections 11
4.2 Surrounding Land Uses 11
4.3 Council Planning Scheme 12
4.4 Topography and Surface Waters 12
4.5 Geology and Hydrogeology 12
4.5.1 Regional Geology 12
4.5.2 Site Geology 12
4.5.3 Regional Hydrogeology 12
4.5.4 Registered Bore Search and Current Extractive Uses 12
4.5.5 Site-specific Hydrogeology 13
4.6 Conceptual Site Model 13
4.6.1 General 13
4.6.2 Known and Potential Sources of Contamination 13
4.6.3 Contaminants of Potential Concern 13
4.6.4 Potential Mechanisms of Contamination 13

4.6.5 Potentially Affected Media 13
4.6.6 Human and Ecological Receptors 14
4.6.7 Potential and Complete Exposure Pathways 14
4.6.8 Post Remediation Conceptual Site Model 15
5 Assessment of Beneficial Uses 16
5.1 Beneficial Uses of Land 16
5.2 Adopted Soil Assessment Criteria 17
5.2.1 Maintenance of Ecosystems 18
5.2.2 Protection of Human Health 19
5.2.3 Buildings and Structures 21
5.2.4 Aesthetics 21
5.2.5 Production of Food, Flora and Fibre 21
5.3 Beneficial Uses of Groundwater 22
5.4 Adopted Groundwater Assessment Criteria 23
5.4.1 Water Dependent Ecosystems and Species (WDES), Traditional Owner Cultural Values (TOCV) and Cultural and Spiritual Values (CSV) 23
5.4.2 Potable Water Supply 23
5.4.3 Agriculture and Irrigation (Irrigation) 23
5.4.4 Agriculture and Irrigation (Stock Watering) 24
5.4.5 Industrial and Commercial 24
5.4.6 Water-Based Recreation (Primary Contact Recreation) 24
5.4.7 Buildings and Structures 24
5.5 Beneficial Uses of Surface Water 25
5.6 Beneficial Uses of Ambient Air 26
6 Summary of Investigation Process and Findings 28
6.1 Soil Investigations 28
6.2 Groundwater Investigations 29
6.3 Potential for Vapour Intrusion 30
6.4 Auditor's Opinion on Investigations – Lot A 30
7 Remediation 32
7.1 Concrete Crushing and Management 32
7.2 Remediation and Validation of Asbestos Impacts 32
7.3 Re-use of Soil Stockpiles within Lot A 33
7.4 Off-site Soil Disposal and Importation of Fill Material 33
7.5 Auditor's Opinion on Remediation Data 34
8 Beneficial Use Assessment – Land 35
8.1 Final Soil Condition 35
8.1.1 Maintenance of Ecosystems (MoE) 38
8.1.2 Human Health 38
8.1.3 Aesthetics 38
8.1.4 Production of Food, Flora and Fibre 39

8.1.5 Buildings and Structures 39
8.2 Consideration of Whether a Certificate or Statement Should be Issued 39
8.3 Determination of Whether the Condition of the Site is Detrimental to the Proposed Development 39
9 Beneficial Use Assessment – Groundwater 40
9.1 Groundwater Pollution Assessment Process 40
9.1.1 Is Groundwater Likely to be Polluted? 40
9.1.2 Is Groundwater Polluted? 40
9.1.3 Are Precluded Beneficial Uses Relevant or is the Site the Source? 40
9.2 Final Groundwater Condition 41
9.3 Source and Extent of Groundwater Pollution 42
9.3.1 Background/Regional Pollution 42
9.4 Significance (Risk) of Groundwater Pollution 43
9.4.1 Extractive Groundwater Uses 43
9.4.2 Water Dependent Ecosystems and Species, Traditional Owner Cultural Values, Cultural and Spiritual Values 43
9.4.3 Other Non-Extractive Groundwater Uses 44
9.4.4 Consideration of Potential NAPL 44
9.4.5 Consideration of Potential Vapour Risks 44
9.5 Summary of Precluded Beneficial Uses of Groundwater 44
9.6 Determination of Whether a Certificate or Statement Should be Issued 45
9.7 Determination of Whether the Condition of the Site is Detrimental to the Proposed Development (Statement of Environmental Audit) 45
10 Beneficial Use Assessment – Surface Water 46
11 Beneficial Use Assessment – Ambient Air 47
12 Other Factors Affecting Use of the Site 48
13 Conclusions 49
13.1 Audit Requirement 49
13.2 Verification of Assessor's Conclusions 49
13.3 Auditor's Conclusions 50
14 References 51

List of Tables

Title **Page**

Table 1: Summary of Audit Information i
Table 2: Physical Site Information iv
Table 3: Adequacy of Site History Information 9
Table 4: Summary of Auditor Inspections 11
Table 5: Initial Source – Pathway – Receptor Assessment 14
Table 6: Final Source – Pathway – Receptor Assessment 15
Table 7: Beneficial Uses of Land to be Protected 17
Table 8: Indicators and Objectives for Beneficial Uses of Land 17
Table 9: Beneficial Uses of Groundwater to be Protected 22
Table 10: Beneficial Uses to be Protected (Inland Waters) 25
Table 11: Summary of Soil Investigations at the Site 28
Table 12: Summary of Groundwater Investigations at the Site 29
Table 13: Residual Soil Analytes Comparison with Ecological/Human Health Direct Contact Criteria (mg/kg) 35
Table 14: Validation Soil Analytes Comparison with Ecological/Human Health Direct Contact Criteria (mg/kg) 36
Table 15: Stockpile Soil Analytes Comparison with Ecological/Human Health Direct Contact Criteria (mg/kg) 37
Table 16: Groundwater Results Exceeding Adopted Tier 1 Criteria 41
Table 17: Summary of groundwater contaminant exceedances 43
Table 18: Precluded Beneficial Use Summary Table 44

List of Attachments

Attachment 1: Site Location Plan 54
Attachment 2: Development Plan 55
Attachment 3: Historical Site Layout 56
Attachment 4: Soil Investigation Locations 57
Attachment 5: Groundwater Investigation Locations 58
Attachment 6: Conceptual Site Model 59
Attachment 7: SLR Stockpile Locations 60
Attachment 8: Validation Locations 61

Appendices

Title **Appendix**

EPA Summary Information ..... A
Certificate of Title ..... B
Consultant's Reports C
Client and Consultant Correspondence ..... D

Abbreviations

Abbreviation:	Description
ACM:	Asbestos-containing materials
AF/FA:	Asbestos fines/fibrous asbestos
ANZECC:	Australian and New Zealand Environment and Conservation Council
ASC NEPM:	National Environment Protection (Assessment of Site Contamination) Measure 1999 (as amended 2013)
BTEX:	Benzene, Toluene, Ethylbenzene and Xylenes
BTEXN:	Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene
CCME:	Canadian Council of the Ministers of the Environment
CEA:	Certificate of Environmental Audit
CSM:	Conceptual Site Model
CVS:	Cultural and Spiritual Values
DIPL:	Department of Infrastructure, Planning and Logistics
DQO:	Data Quality Objectives
DSI:	Detailed site investigation
EAR:	Environmental Audit Report
EIL:	Ecological Investigation Level
EPA:	Environment Protection Authority
ESL:	Ecological Screening Level
GME:	Groundwater Monitoring Event
HEPA:	Heads of Environmental Protection Agencies
HIL:	Health-based Investigation Level
HSL:	Health-based Screening Level
IWRG:	Industrial Waste Resource Guidelines
mbgl:	Metres below ground level
mbtoc:	Metres below top of casing
NAPL:	Non-aqueous phase liquid
NATA:	National Association of Testing Authorities
NHMRC:	National Health and Medical Research Council
NT EPA:	NT Environment Protection Authority
OCP/OPP:	Organochlorine pesticides/Organophosphate pesticides
PAH:	Polycyclic Aromatic Hydrocarbons
PFAS:	Per- and poly-fluoroalkyl substances
SEA:	Statement of Environmental Audit
SEPP:	State Environmental Protection Policy
TDS:	Total Dissolved Solids
TOCV:	Traditional Owners Cultural Values
TRH:	Total Recoverable Hydrocarbons
WA DoH:	WA Department of Health
WDES:	Water Dependent Ecosystems and Species

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1 Introduction

1.1 Background

This Environmental Audit Report (EAR) and accompanying Statement of Environmental Audit (SEA) were prepared by Jean Paul Pearce, an employee of Australian Environmental Auditors Pty Ltd (AEA) and Environmental Auditor (Contaminated Land) appointed pursuant to the *Environment Protection Act 1970* (*Victorian EP Act*).

This EAR was prepared in response to a request from Ms Sinead Redmond, a project manager for Department of Infrastructure, Planning and Logistics (DIPL) to conduct an environmental audit of the site under section 53X of the *Victorian EP Act* to satisfy an NT EPA requirement.

DIPL contracted Greencap Pty Ltd (Greencap), Agon Environmental Pty Ltd (Agon) and SLR Consulting Australia Pty Ltd (SLR) to undertake environmental site investigations and remediation for the purpose of providing sufficient information to allow this audit to be completed.

This EAR has been prepared in accordance with Section 53X of the *Victorian EP Act* and relevant Victorian and Northern Territory EPA guidance (particularly EPA Victoria Publications 759 and 1147). The SEA has been prepared in accordance with Section 53Z of the *Victorian Environment Protection Act 1970* and relevant Victorian and Northern Territory EPA guidance (particularly EPA Victoria Publication 759).

1.2 Site Definition

The site subject to this environmental audit is identified as 47 Progress Drive, Nightcliff, Northern Territory – Lot A (the site), and is 0.36 hectares in area. Further details are provided in Table 1.

The site has been split into three audit areas based on the proposed development. The first audit area (Stage 1 of 3 stages) is covered by this audit report for Lot A. The boundaries are shown in Attachment 2. Lot A has recently been subdivided and is now defined as Lot 12827 (Attachment 1).

Separate audit reports will be prepared for the following two stages of the development – residential area (Lots B1, B2 and B3), and the remainder of the site which includes Lot C and the Road Reserve. These areas are currently being redeveloped.

The site is located approximately 8 km north of the Darwin central business district, Northern Territory. The site location is shown in Attachment 1, the certificate of title is included in Appendix B and a plan showing the boundaries of the site and the audit areas is provided as Attachment 2.

1.3 Proposed Development

The site has been developed as a police station. The police station covers the majority of the site with the concrete slab extending to the boundary of Lot A. There are no proposed unsealed areas and no basement. A copy of the proposed lot development plan is provided in Attachment 2.

The proposed development is consistent with *Commercial* under the Land SEPP. Surrounding uses are a mix of sensitive use, commercial and industrial

1.4 Reason for the Environmental Audit

The audit of the site was completed to meet NT EPA requirements. Due to the identified pesticides and asbestos contamination, we understand EPA has required an auditor determine the site is suitable for use. The audit included assessing the site with regard to historical activities potentially impacting on beneficial uses. The Auditor considered the site conditions relative to the proposed use and assessed the suitability of the site for the proposed use, as well as all potential protected beneficial uses, as required by EPA guidelines.

1.5 Independence of the Environmental Auditor

The environmental audit system depends on the Auditor undertaking an independent assessment of the site condition and risks to beneficial uses. EPA guidelines provide guidance on the auditor maintaining their independence and avoiding potential conflicts of interest.

To the best of the Auditor's knowledge, the Auditor and his support team have had no involvement with this site prior to this audit. The Auditor and his support team have no financial association with the consultant or client beyond the payment for audit services by the client. Based on EPA guidance, the Auditor is therefore not aware of any real or perceived conflicts of interest which should prevent the audit from being completed.

2 Audit Framework and Scope of Works

2.1 General

The *Victorian EP Act* defines an environmental audit as a *'total assessment of the nature and extent of any harm or detriment caused to, or the risk of any possible harm or detriment which may be caused to, any beneficial use made of any segment of the environment by any industrial process or activity, waste, substance (including any chemical substance) or noise'.*

The segment of environment for the purposes of an environmental audit (contaminated land) is the audit site which is defined in terms of *'a parcel of land and all other elements (i.e. land, groundwater, surface water, air) of the environment associated with the land within the boundary of the parcel of land'* (Victorian EPA Publication 759).

A beneficial use is defined in the *Victorian EP Act* as '*a use of the environment or any element or segment of the environment which –*

(a) is conducive to public benefit, welfare, safety, health or aesthetic enjoyment and which requires protection from the effects of waste discharges, emissions or deposits or of the emission of noise; or

(b) is declared in State Environment Protection Policy to be a beneficial use;'.

Furthermore, a beneficial use is considered relevant *'if the beneficial use is existing or is likely to be realised at the site'* (Victorian EPA Publication 759).

The assessment of whether a specific beneficial use is precluded or not is undertaken using an assessment of site condition against published qualitative and quantitative assessment criteria.

If the contamination status of the site is not detrimental to any beneficial use, then the outcome of the environmental audit will be a Certificate of Environmental Audit (CEA), in which case there is no restriction on the use of the site due to its contamination status.

If the contamination status of the site is detrimental to any beneficial use, then the outcome of the environmental audit will be an SEA, which indicates that the site is either:

- Not suitable for any use;
- Suitable for specific uses (that is, not detrimental to the beneficial uses associated with the nominated land use) without conditions or limitations; or
- Suitable for specific uses (that is, not detrimental to the beneficial uses associated with the nominated land use) subject to conditions and/or limitations relating to its use and management.

2.2 Legislation, Regulations and Guidelines

Section 68 of the Northern Territory Waste Management and Pollution Control Act 1998 (WMPC Act), Register of qualified persons, specifies that:

(1) The NT EPA must cause to be established and maintained a register of:

(a) persons qualified to perform environmental Audits for the purposes of an environmental Audit program…

It is understood that in early 2011 persons accredited under the NSW Site Auditor Scheme or the Victorian Environmental Auditor Scheme were approved as a class of person suitable to undertake environmental Audits in the Northern Territory.

The Audit was undertaken in accordance with Section 47d of the WMPC Act which states in part that:

An environmental Audit is an evaluation of any of the following:

(d) the likelihood of waste management problems or pollution resulting in environmental harm occurring and the adequacy of safeguards in place to prevent their occurrence or limit their impact on the environment;

(f) the types, amount, distribution or mobility of contaminants or waste present in the environment.

When conducting this environmental audit, the following key pieces of legislation (and subordinate legislation) were considered:

- *Environment Protection Act 1970* (Act No. 8056/1970) Victoria;
- SEPP (State Environment Protection Policy) (1999) *Ambient Air Quality*. Victorian Government Gazette, S19, 9 February 1999;
- SEPP (State Environment Protection Policy) (2001) *Air Quality Management*. Victorian Government Gazette, S240, 21 December 2001;
- SEPP (State Environmental Protection Policy) (2002) *Prevention and Management of Contamination of Land*. Victorian Government Gazette, S95, 4 June 2002; and
- SEPP (State Environmental Protection Policy) (2018) *Waters.* Victorian Government Gazette, S499, 23 October 2018.

Key guidance documents for environmental auditing include, but are not limited to, the following:

- NT EPA, *Guideline for the Preparation of an Environmental Management Plan*, May 2015;
- NT EPA, *Northern Territory Contaminated Land Guideline,* June 2017;
- EPA Victoria Publication 865.12, *Environmental Auditor Guidelines for Appointment and Conduct*, December 2016;
- EPA Victoria Publication 952.5, *Preparation of Environmental Audit Reports on Risk to the Environment*, December 2015;
- EPA Victoria Publication 953.2, *Environmental Auditor Guidelines for Conducting Environmental Audits*, August 2007; and
- EPA Victoria Publication 1147.2, *Environmental Auditor Guidelines – Provision of Environmental Audit Reports, Certificates and Statements*, December 2015 and its replacement Publication 2022, *Environmental Auditor Guidelines – Provision of Statements and Reports for Environmental Audits and Preliminary Risk Screen Assessment*, August 2021.

Additional guidance documents include, but not limited to, the following:

- ASC NEPM (2013) *National Environment Protection (Assessment of Site Contamination) Measure 1999* (ASC NEPM), as amended May 2013, National Environment Protection Council. Australian Government;
- WA DoH (2021) Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia, Department of Health;
- HEPA (2020) PFAS National Environmental Management Plan (NEMP), Heads of EPAs Australia and New Zealand;
- CRC CARE 'Technical Report 16: Safe onsite retention of contaminants Part 2: A risk based approach' (2013); and
- ANZECC (Australian and New Zealand Environment and Conservation Council), *Guidelines for the Assessment of On-Site Containment of Contaminated Soil*, September 1999.

The NT EPA requirements for summary information are provided in the Executive Summary.

The EPA requirements for summary information are provided in Appendix A, including:

- A completed Pro Forma for the Completion and Issue of Statement or Certificate of Environmental Audit, as per Appendix 9 of EPA Publication 759;
- A site survey plan; and
- A summary of current groundwater analytical results as per Attachment C of EPA Publication 840.

The Victorian *Environment Protection Act 2017* commenced on 1 July 2021, replacing the *Environment Protection Act 1970* and Vic EPA publications have been in a state of preparation and revision since then to help industry comply with the new Act. Victorian EPA Publication 1978 *Transition guidance for environmental auditors*, June 2021 provides guidance to Auditors on how to manage the transition of the new Act for their audits. An email from the Victorian Environmental Audit Unit on 26 October 2021 noted the extension of transition arrangement until October 2022. Effectively, audits commenced under the 1970 Act can be completed in accordance with that Act at any time (preferably by October 2022) or can be completed under the new Action from 1 July 2021. The site investigations were largely completed prior to 1 July 2021 and following discussions with NT EPA, it was agreed to complete the audit under the old Act. It is noted that science and technical publications upon which the auditor determines site suitability have not changed.

2.3 Audit Scope

2.3.1 Previous Environmental Audits

The current Audit for Lot A is the first stage of a three-staged development for the larger development area. Separate audit reports will be prepared for the proposed residential area (Lots B1, B2 and B3), and the remainder of the site which includes Lot C and the Road Reserve.

2.3.2 Reports Reviewed

The following documents were finalised prior to commencement of the audit, and were reviewed primarily for background purposes:

- Greencap, *Limited Soil Investigation, John Stokes Square, 47 Progress Drive, Nightcliff,* 14 July 2019;
- Greencap, *Detailed Site Investigation, John Stokes Square, 47 Progress Drive, Nightcliff,* draft 2 September 2019;
- Greencap, *Additional Soil Investigation, John Stokes Square, 47 Progress Drive, Nightcliff,* October 2019;
- Greencap, *Asbestos Management Plan, John Stokes Square, 47 Progress Drive, Nightcliff,* October 2019;
- WANT Geotechnics Pty Ltd, *Geotechnical Investigation, Proposed Redevelopment of John Stokes Square, Lot 9077 Progress Drive, Nightcliff,* 23 October 2019; and
- Agon Environmental, *RE: John Stokes Square – Environmental Summary,* 25 October 2019

The following documents were provided to the Auditor for review and comment during the audit period, and were subsequently revised to meet auditor requirements (only the final versions are listed below):

- Agon Environmental (2020a), *Detailed Site Investigation, John Stokes Square, 47 Progress Drive, Nightcliff, NT* (Ref JF1006.DSI/Final, 21 April 2020;

- SLR (2020a) *Memorandum: Remediation Strategy, John Stokes Square – Lot A* (Ref.680.30002.00000 Remediation Strategy 20200422, 22 April 2020)
- SLR (2020b) Sampling, Analysis and Quality Plan, Detailed Site Investigation, John Stokes Square (ref. 680.10679-R01-v1.0, 3 June 2020)
- SLR (2020c) *Memorandum: Remediation Strategy, John Stokes Square – Residential Lots (Lots B1, B2 and B3)* (Ref. Appendix J - DRAFT Remediation Strategy.docx, 14 May 2020)
- Halikos (2020), *Construction Environmental Management Plan Revision 2.0, John Stokes Square, Broad Scale Site Remediation and Construction Preparation Works* (Ref PMP-3.03 Rev3, June 2020).
- Greenspace Group (2020) Construction Environmental Management Plan (Ref. T20-1056 V1, 5 July 2020)
- SLR (2021) *Validation Report – John Stokes Square Redevelopment, Lot A* (ref. 680.10679-R02, 19 November 2021)
- SLR (2021) Ongoing Management of Asbestos in Soil – Sub Slab Works Only, John Stokes Square Development – Lot A. Dated 22 December 2021.

A copy of the Validation Report is provided in Appendix C, and the Ongoing Management of Asbestos in Soils – Sub Slab Works Only plan is attached to the statement of environmental audit.

A review of the above reports did not identify reference to any relevant reports that have not been provided for review by the auditor.

2.4 Correspondence with Client and their Consultants

During the audit, the Auditor issued a series of formal review letters to the client and their consultant. These letters typically document the outcome of the Auditor's review of work plans and draft reports. A copy of the Auditors letters is provided in Appendix D.

In addition, the Auditor also provided numerous e-mails to the client and consultant. Copies of these documents are held with AEA.

2.5 Correspondence and Liaison with EPA

The Auditor submitted a *Notification of Request to Issue a Certificate of Environmental Audit* to the EPA on 22 November 2019. A copy is provided in Appendix D.

The Auditor corresponded with NT EPA regarding the use and reporting against the 1970 Victorian EP Act as per e-mail dated 8 November 2021.

The final condition of the Site potentially contained residual asbestos in soils and through discussions with EPA and the client, the risk from the asbestos will be managed using the Octfolio asbestos asset management system in lieu of an asbestos management plan and notation on the title as per e-mail dated 8 November 2021.

A copy of the draft audit report and statement were provided to EPA on 11 February 2022 and EPA comments provided on 22 February 2022 were taken into consideration when finalising this audit report. .

2.6 Audit Team and Expert Support

The Auditor consulted with the following expert support team:

- Shandel Coleman, Principal Environmental Scientist – project management, review of assessor's reports and sampling plans and draft audit reporting; and

- Bridget Roder, Senior Environmental Engineer – project management, review of assessor's reports and sampling plans and draft audit reporting.

2.6.1 Site Inspections

A summary of the site inspections and pertinent observations is provided in Section 4.

2.7 Auditor's Verification of Site Conditions

The Auditor has undertaken work to verify that the environmental activities and quality of the site is as reported by the various reviewed.

The Auditor and/or his assistant undertook site inspections via video conference and physically to:

- familiarise with the site and surrounding area;
- verify observations noted by the consultant;
- observe a portion of the remediation work; and
- confirm final site condition.

A number of site inspections were undertaken via video conference due to COVID-19 travel restrictions which were in place during the majority of the project, and the final site inspection was undertaken by the Auditor in person on 28 October 2021.

The Auditor considered that verification sampling was not necessary to complete the audit. This determination was made based upon:

- the lack of unexpected or unexplained pollution;
- the competency of the consultant who conducted the sampling and the laboratories which conducted the analysis;
- the quality of the documentation provided by the consultant and laboratories; and
- the verification between consultant's documentation and site observations by the audit team.

2.8 Uncertainties of the Audit Process

This audit report has been prepared for the client for the purposes described in the audit report. This document may not be suitable for other purposes.

The Auditor has prepared this document in good faith, but is unable to provide certification outside of areas over which he had some control or is reasonably able to check.

It is not possible in an Environmental Audit Report to present all data, which could be of interest to all readers of this report. Readers are referred to the referenced investigation reports for further data. Users of this document should satisfy themselves concerning its application to, and where necessary seek expert advice with respect to, their situation.

The Auditor notes that any comments and conclusions provided in this document regarding the suitability of the site for the proposed land use are implicitly limited to consideration of contamination related issues as defined under the *Victorian EP Act*.

3 Site History and Characterisation

3.1 Site History Summary

Site history information was provided primarily from Agon DSI (2020a). Aerial photography showed that until between approximately 1944 and 1969 the site was native bushland which was subsequently cleared. In 1969 the site had been cleared of vegetation but remained undeveloped, however significant residential development and road infrastructure had occurred to the north of the site. From 1969 land surrounding the site continued to be developed for residential and commercial use. The site was most recently (from the 1980s until 2019) used for high density residential use. Demolition occurred in late 2019.

In December 1974 Cyclone Tracy devastated the city of Darwin destroying buildings and infrastructure across the city (and greater Darwin region). The destruction of buildings resulted in the spread of asbestos debris, resulting in its presence within surface soils across Darwin. Based on the timing of development of the site, it is possible that legacy asbestos debris is present in fill on site associated with Cyclone Tracy.

Based on historical aerial photographs, the Auditor considers that the structures visible in 1974 were potentially constructed using asbestos cement and the bonded asbestos identified in soils may also have originated from the demolition of structures prior to 1990 or importation of asbestos contaminated fill.

No other evidence of point sources of contamination or significant contaminating activities were identified at the audit site, such as underground fuel storage tanks or industrial activities.

The site history identified the following off-site land uses that have potential relevance to the audit:

- Service stations located to the north-east, east and south-east of the site; and
- Other surrounding properties comprised a mix of residential and commercial purposes, and mostly low risk of being a source of significant contamination (uses included supermarket, newsagency, post office, hairdresser, restaurants).

3.2 Potential Contamination Sources and Contaminants of Concern

The Auditor considers that the key on-site potential contaminants of concern and likely location for the site include:

- Historical application of pesticides/herbicides such as termicides;
- Historical use of ACM construction materials; and
- Imported fill across the site (heavy metals, total recoverable hydrocarbons [TRHs], polycyclic aromatic hydrocarbons [PAHs], asbestos, pesticides).

Attachment 3 shows the former site layout.

The Auditor considers that the key potential contaminants of concern from the off-site sources include:

- Service stations with underground fuel storage tanks (USTs), located to the north-east, east and south-west of the site (TRHs, benzene, toluene, ethylbenzene and xylenes [BTEX], PAHs); and
- Urbanisation, sewage disposal and management (nitrate and ammonia).

The results of the site history investigation indicate that the site is a potential source of contamination, particularly in shallow soil/fill. The site history also determined there are potential off-site sources of contamination which may be impacting on the site, particularly groundwater.

3.3 Adequacy of Site History Information

Table 3: provides information on the site history information sources investigated and adequacy for the audit purpose.

Table 3: Adequacy of Site History Information

Information Requirements	Undertaken	Auditor's Comments
Land uses (previous and current)	Yes	Historical certificates of titles, historical aerial photographs and other sources were reviewed to obtain this information and were documented in the consultant's reports.
Owners, occupiers and users (previous and current)	Yes	Historical certificates of title were reviewed to obtain this information and were documented in the consultant's reports.
Current and historical title search	Yes	Reviewed back to 1986 (original title).
Historical aerial photographs for the Site and adjacent properties	Yes	Historical aerial photographs (1944, 1969, 1974, 1985, 1990, 2001, 2012 and 2019) reviewed by Agon.
Environmental Audit Reports and Statements and Certificates for site and surrounding area	Yes	A search of the NT EPA's Contamination Register was documented in the consultant's reports.
Landfill Register	Yes	There is no NT EPA register. The Auditor undertook a review of landfills in the area. No landfills were identified within 500 m of the site.
Unexploded Ordnance (UXO)	Yes	The Auditor undertook a review on the Department of Defence online UXO map and the site and surrounds were not identified as having a potential for UXO.
Groundwater database review	Yes	Agon undertook a search for groundwater data near the site using Northern Territory Groundwater Data Portal, documented in the consultant's reports.
Local planning scheme and environmental overlays	Yes	Documented in consultant's report.
Search of dangerous goods register	No	Formerly residential land use, no storage of dangerous goods expected.
Review of asbestos register (if applicable)	No	No asbestos register available. Asbestos identified in soils and remediation undertaken.
Interviews with person knowledgeable with the site	No	Formerly residential land use, no notable activities expected.
Detailed site inspection	Yes	Numerous site inspections undertaken.
Chemical inventory and storage details (including USTs)	No	Formerly residential land use, no storage of chemicals expected.
Review of previous investigations and critique on adequateness of data	Yes	Documented in consultant's DSI report and undertaken by the auditor.
Chronological list of land use activities including potential information gaps and uncertainties	Yes	Documented in the consultant's report.
List of potential contaminating activities, likely contaminants and locations	Yes	Documented in the consultant's report.
Potential off-site sources of contamination identified	Yes	Documented in the consultant's reports.

Information Requirements	Undertaken	Auditor's Comments
Site plan showing historical site layout (if relevant)	Yes	Documented in the consultant's report.
Environmental setting (i.e. nearby ecological receptors)	Yes	Documented in the consultant's report.
Local geology and hydrogeology	Yes	Documented in the consultant's report.
Potential for acid sulfate soils	Yes	Documented in the consultant's report.

Based on the information provided, the Auditor considers that the site history investigations have been generally undertaken with regard to relevant legislations and guidelines. The Auditor notes that the data gaps identified in the above table and those inherent within site history investigations have been adequately addressed through broad screen analysis of both soil and groundwater, and excavation of surface soils across the entire site.

The Auditor considers that there is sufficient site history information to provide a suitable level of confidence regarding the historical uses of the site as they relate to the potential for contamination and to inform the requirements for detailed site investigations. The Auditor therefore considers the site history investigations as adequate.

4 Site Characterisation

4.1 Site Description and Observations from AEA Site Inspections

At the time of the Auditor's initial site inspection on 28 January 2020, the site had been cleared of structures with crushed concrete present on Lot A. The former site layout is shown in Attachment 3.

At the final site inspection on 28 October 2021, the construction of the police station on Lot A was completed and the police station in use. The police station comprises a slab on ground building which covers the entirety of Lot A. The on-site road next to the police station was completed and landscaping was underway on the verge. The residential apartments in Lot B (B1, B2 and B3) were under construction with the slab on ground installed and landscaping pending.

The Auditor undertook several site inspections over the course of the audit. Due to the travel restrictions from COVID 19, a number of the site inspections were undertaken via video conference or using a local representative. A summary of the key observations is provided in Table 4: below.

Table 4: Summary of Auditor Inspections

Date	Reason for Inspection	Observations
28 January 2020	Initial inspection and meeting with client and consultant to observe site condition	Site vacant and structures demolished. Isolated fragment of potential bonded ACM in good condition. Crushed concrete evident on Lot A with no surface ACM observed. No visual or olfactory indicators of staining. Groundwater wells insitu with no hydrocarbon odours evident. Inspection of surrounding area did not identify groundwater monitoring wells on public land. With the exception of potential ACM, no other indicators of contamination identified.
11 June, 6 August, 14 and 19 October 2020	Video inspections to observe civil/remediation works in progress	Observe remediation works across the general area associated with civil works, including removal of redundant underground services across the wider site and boundary asbestos to the north-east (Lot B). Observations consistent with SLR reporting.
12 August 2021	Video inspection and in person by Chris Gamble of Agon to observe management of unexpected finds	Wider site under construction with civil works and ad hoc asbestos removal occurring within Road Reserve via unexpected finds protocols. Police station structure completed and Lot A fully covered by concrete. Inspection report provided in Appendix D.
28 October 2021	Final site inspection – in person by the Auditor	Construction of the police station (Lot A) is complete with Lot A fully covered by concrete. Construction of the residential apartments with slab installed and awaiting fit-out and landscaping. Boundary works completed. Construction of road partially completed with landscaping in the verge underway. No potential ACM or other visual or olfactory indicators of contamination observed.

4.2 Surrounding Land Uses

The surrounding land uses are as follows:

- North: Progress Drive then commercial with residential properties north-east.
- East: Lot B3 residential properties under development, residential properties and a Coles Express service station then Dick Ward Drive.

- South: Lot B1 residential properties and Lot C public open space under development, existing childcare centre and tyre retailer and Caltex service station to the south-east.
- West: vacant land then commercial.

4.3 Council Planning Scheme

The site was located within a medium density residential zone (SD – Single Dwelling) under the Northern Territory Planning Scheme. During development of the site the zoning was changed to Specific Use (SU) SD49, the purpose of this zone is to facilitate development of the land for a complementary mix of commercial, community and residential uses in mixed use multistorey buildings with high amenity public areas.

4.4 Topography and Surface Waters

The site surface elevation drops approximately 3 m from the north-east corner to the south-west corner towards Darwin Harbour.

There are no on-site surface water bodies. Significant surface water is not expected to enter the site from neighbouring properties or streets.

The site is located approximately 160 m from the edge of a mangrove community and the Outer Estuary of Darwin Harbour to the west of the site.

4.5 Geology and Hydrogeology

4.5.1 Regional Geology

A review of the 2.5 m Geological Map indicates the local geology at the site comprises Cretaceous Aged Sedimentary mudstone and shale deposits and is indicated to be underlain by pisolitic and nodular laterite gravel.

4.5.2 Site Geology

Intrusive investigations indicated the soil at the site consisted of a heterogeneous fill layer up to 0.8 m deep, comprising sandy clay, sandy gravelly silts and clayey silty sand. Natural lateritic soils consisted of red brown and yellow clayey sandy gravel overlying stiff to very stiff red brown sandy clay with trace gravels, underlain by highly weathered siltstone to a maximum of 3.8 mbgl with very low strength siltstone to the maximum depth of investigation (5.6 mbgl).

A review of the *Atlas of Australian Acid Sulfate Soils* (CSIRO) indicates the south-western corner of the site, closest to the marine environment, has a greater probability of encountering Acid Sulfate Soils (ASS) than the remainder of the site (high probability compared to extremely low probability). Test pitting did not encounter any soils typically associated with lowland coastal environments.

4.5.3 Regional Hydrogeology

No water quality data was available within proximity to the site. Regional groundwater flow is likely to be to the west to south-west, towards Darwin Harbour (Beagle Gulf).

4.5.4 Registered Bore Search and Current Extractive Uses

A 2 km radius bore search was undertaken by Agon using *Northern Territory Government Water Data Portal*, and this was cross-checked by AEA. The Agon search identified 46 registered bores, with seven bores within a 500 m radius. One bore was listed as being used for production and the remainder for investigation or unknown purposes.

The nearest production bore (RN000130) was located approximately 300 m east of the site, likely up-gradient to cross-gradient. None of the bores were inferred to be located down-gradient of the site.

Based on the available information, it is possible that groundwater is being used for domestic purposes, such as watering gardens, in the vicinity of the site, however the Auditor considers potential use to be limited, due to the availability of mains water and highly urbanised land use.

4.5.5 Site-specific Hydrogeology

The TDS concentration of groundwater recovered on the site ranged from 120 to 430 mg/L, classifying the groundwater as Segment A1.

Stabilised depths to groundwater were approximately 2.7 to 3.8 m below top of casing (mbtoc). Groundwater flow direction was not determined as the groundwater monitoring wells were not surveyed.

The regional flow direction is expected to be towards the nearest potential discharge point at Outer Estuary of Darwin Harbour (approximately 160 m from the site).

4.6 Conceptual Site Model

4.6.1 General

A written preliminary conceptual site model (CSM) was prepared by Agon (2020a), which provided an assessment of preliminary site conditions against the essential elements of a CSM, as stated in Section 4.3 of Schedule B2 to the ASC NEPM. A diagrammatic representation of the CSM was also provided by Agon (reproduced as Attachment 6). The following sections provide the Auditor's summary and interpretation of the CSM.

The CSM was updated throughout the investigation and remediation phases of work by SLR. The post remediation CSM is detailed in Section 4.6.8.

4.6.2 Known and Potential Sources of Contamination

The primary potential sources of contamination are the historical application of pesticides/herbicides, use of asbestos containing building materials and the presence of imported fill material. The primary off-site potential sources of contamination are from three local service stations in the area.

4.6.3 Contaminants of Potential Concern

Based on the former use of the site and surrounding areas, the contaminants of potential concern are heavy metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc and mercury), TRHs, BTEX, PAHs, pesticides and asbestos.

4.6.4 Potential Mechanisms of Contamination

The most likely mechanism for contamination is from imported fill and pesticides/termiticides is dry weight and leachable contaminants.

The most likely mechanism from off-site contamination to impact the site is from migration of contaminated groundwater to the site.

4.6.5 Potentially Affected Media

The potentially affected media are primarily soil and groundwater. If volatile contaminants are observed in soil or groundwater, then further consideration of soil vapour and air (ambient and indoor air once development has been completed) will be necessary.

4.6.6 Human and Ecological Receptors

The Auditor considers that the human receptors of most concern are future site residents, workers and visitors (following redevelopment), construction workers associated with the development, and intrusive maintenance workers on the site. Risk to off-site human receptors, such as maintenance workers in the road, will need consideration if the site is a source of contamination that could migrate off site.

The Auditor considers that the ecological receptor of most concern is the nearest surface water receptor which receives groundwater discharge. This is likely to be Outer Estuary of Darwin Harbour (160 m to the west). There are unlikely to be any significant ecological receptors on the site itself following redevelopment, as the proposed building footprint and associated car parks will cover the entirety of the site.

4.6.7 Potential and Complete Exposure Pathways

Table 5: presents a summary of the Auditor's assessment regarding the potential and complete exposure pathways which are of most concern. These are generally consistent with Agon's determinations for on-site receptors.

Table 5: Initial Source – Pathway – Receptor Assessment

Source	Pathway/s	Receptor/s	Complete Linkage
On-site soil	Dermal contact and incidental ingestion	• Users of proposed development (maintenance workers); and • Users of proposed development (workers, visitors)	Limited Unlikely
	Inhalation of dust and potential asbestos fibres	• Users of proposed development (maintenance workers); and • Users of proposed development (workers, visitors)	Limited Unlikely
	Inhalation of vapours	• Users of proposed development (workers, maintenance workers)	Possible
Groundwater underlying the site	Discharge into surface water	Nearby surface water bodies	Possible, although unlikely given distance
	Inhalation of vapours	• Users of proposed development (workers, visitors, maintenance workers); and • Off-site intrusive maintenance workers, residents or workers	Possible Possible
	Dermal contact and ingestion by humans	Persons extracting groundwater for use in domestic supply (drinking and cooking water, washing etc), irrigation or for filling swimming pools	Not proposed on site, unlikely down-gradient due to presence of high quality reticulated water supply
	Extraction for stock watering	Ingestion by stock in down-gradient locations (off site)	Unlikely due to urban location
	Extraction for irrigation	Plants (gardens and crops)	Unlikely due to presence of high quality reticulated water supply

Source	Pathway/s	Receptor/s	Complete Linkage
	Underground structures intersecting groundwater	Concrete or steel piles or deep basements following redevelopment	Unlikely given slab-on-ground is proposed although deep underground services (i.e. sewer) may interact with the top of the aquifer

4.6.8 Post Remediation Conceptual Site Model

The CSM was updated on the basis of environmental investigations and remediation activities documented by SLR. A final CSM was provided in SLRs Validation Report (2021a).

Table 6: Final Source – Pathway – Receptor Assessment

Source	Pathway/s	Receptor/s	Complete Linkage
On-site soil	Dermal contact and incidental ingestion	• Users of proposed development (maintenance workers); and • Users of proposed development (workers, visitors)	Unlikely – the site is covered by a concrete surface. As a precautionary measure, potential exposure to asbestos impacted fill associated with intrusive works will be managed under the *Ongoing Management of Asbestos in Soils* document prepared by SLR (2021). Refer to Section 8.
	Inhalation of dust and potential asbestos fibres	• Users of proposed development (maintenance workers); and • Users of proposed development (workers, visitors)	
	Inhalation of vapours	• Users of proposed development (workers, maintenance workers)	No volatile contaminants were identified at the site.
Groundwater underlying the site	Discharge into surface water	Nearby surface water bodies	No site-derived impacts were identified in the groundwater. Elevated concentrations of metals identified in the water were attributed to background conditions associated with naturally occurring aquifer conditions. Refer to Section 9.
	Inhalation of vapours	• Users of proposed development (workers, visitors, maintenance workers); and • Off-site intrusive maintenance workers, residents or workers	
	Dermal contact and ingestion by humans	Persons extracting groundwater for use in domestic supply (drinking and cooking water, washing etc), irrigation or for filling swimming pools	
	Extraction for stock watering	Ingestion by stock in down-gradient locations (off site)	
	Extraction for irrigation	Plants (gardens and crops)	
	Underground structures intersecting groundwater	Concrete or steel piles or deep basements following redevelopment	

5 Assessment of Beneficial Uses

The Environment Protection Act 1970 (Vic) defines an environmental audit as:

"… a total assessment of the nature and extent of any harm or detriment caused to, or the risk of any possible harm or detriment which may be caused to, any beneficial use made of any segment of the environment by any industrial process or activity, waste, substance (including any chemical substance) or noise".

All potential beneficial uses of land, groundwater and surface water have been considered for the site, in accordance with the relevant SEPPs as follows:

- Land SEPP;
- Waters SEPP; and
- Air Management/Air Quality SEPP.

5.1 Beneficial Uses of Land

The Land SEPP states that the beneficial uses of land protected by the policy are:

'(a) maintenance of natural ecosystems, modified ecosystems and highly modified ecosystems;

(b) human health;

(c) buildings and structures;

(d) aesthetics; and

(e) production of food, flora and fibre.'

Table 1 from the Land SEPP, which is reproduced below as Table 7: , defines the beneficial uses which require protection for the different land use categories. Based on the proposed development (Lot A only), the land use is as follows:

- Commercial – with regard to both direct contact and vapour intrusion pathway.

It is noted that EPA Publication 759 notes that *'… all beneficial uses of land are relevant for the purpose of determining whether to issue a Certificate, irrespective of whether they are protected for the current or proposed land use.'* As such, all beneficial uses defined in SEPP (Land) still require consideration in the audit.

Table 7: Beneficial Uses of Land to be Protected

Beneficial use	Land use						
	Parks and Reserves	Agriculture	*Sensitive use*		Recreation /Open Space	Commercial	Industrial
			High density	Other			
Maintenance of Ecosystems:							
Natural	✓	N/A	N/A	N/A	N/A	**N/A**	N/A
Modified	✓	✓	N/A	✓	✓	**N/A**	N/A
Highly Modified Ecosystems	N/A	✓	✓	✓	✓	✓	✓
Protection of Human Health	✓	✓	✓	✓	✓	✓	✓
Buildings and Structures	✓	✓	✓	✓	✓	✓	✓
Aesthetics	✓	N/A	✓	✓	✓	✓	✓
Production of Food Flora and Fibre	✓	✓	N/A	✓	N/A	**N/A**	N/A

Note: N/A = not applicable.

5.2 Adopted Soil Assessment Criteria

The following table provides the indicators and objectives which are to be used to determine whether the level of any contaminant poses an unacceptable risk to protected beneficial uses of land.

Table 8: Indicators and Objectives for Beneficial Uses of Land

Beneficial Land Use	Indicators	Objectives
Maintenance of Ecosystems	Chemical substances or waste identified through application of the ASC NEPM (Schedule B2, Appendix A) or any other chemical substance of waste.	Contamination must not adversely affect the maintenance of relevant ecosystems and the level of any indicator must not be greater than – (a) any regional Ecological Investigation Level developed in accordance with the ASC NEPM and published by the Authority for a region in which the site is located. Until such time that regional Ecological Investigation Levels applicable to the site are published, the Interim Urban Ecological Investigation Levels nominated in the ASC NEPM shall be used in its place; or (b) levels derived using the risk assessment methodology described in the ASC NEPM; or (c) levels approved by the Authority.
Protection of Human Health	Chemical substances or waste identified through application of the ASC NEPM (Schedule B2, Appendix A) or any other chemical substance or waste.	Contamination must not cause an adverse effect on human health and the level of any indicator must not be greater than – (a) the screening level specified for human health in the ASC NEPM; or (b) levels derived using a risk assessment methodology described in the ASC NEPM; or (c) levels approved by the Authority.
Buildings and Structures	pH, sulfate, redox potential, salinity or any chemical substance or waste that may have a detrimental impact on the structural integrity of buildings or other structures.	Contamination must not cause the land to be corrosive to, or adversely affect the integrity of, structures or building materials.

Beneficial Land Use	Indicators	Objectives
Aesthetics	Any chemical substance or waste that may be offensive to the senses.	Contamination is not to cause the land to be offensive to the senses of human beings.

5.2.1 Maintenance of Ecosystems

The ASC NEPM provides two types of soil criteria which are based upon protection of the environment, namely Ecological Investigation Levels (EILs) and Ecological Screening Levels (ESLs). Both the EILs and ESLs are to be applied to assess risks to terrestrial ecosystems and apply to the upper 2 m of the soil profile. The EILs and ESLs differ with respect to the contaminants considered and the methodologies used when applying the screening levels.

The EILs cover zinc, arsenic, naphthalene, DDT, chromium (III), copper, lead and nickel. The EILs allow for the consideration of a range of factors which are critical when assessing ecological risks, including:

- The period of time which the contaminant has been in the environment:
    - Fresh is <2 years; and
    - Aged is >2 years.
- Three soil characteristics:
    - Cation exchange capacity (CEC);
    - pH; and
    - Organic carbon content.
- Ambient background concentration (ABC);
- The iron content of the soil (fresh ABC only);
- The state and traffic volume (aged ABC only); and
- Three land use settings:
    - Area of ecological significance;
    - Urban residential/public open space;
    - Commercial and industrial.

An EIL calculator has been provided as part of the '*ASC NEPM Toolbox*' which allows for the derivation of EILs.

Depending on site conditions, such as different soil layers having significantly different properties, more than one set of EILs may need to be derived.

The ESLs are based upon two documents prepared by Dr Michael Warne[1,2], which in broad terms provide a review of guidance provided by the Canadian Council of the Ministers of the Environment (CCME). The ESLs cover the following chemicals:

- Four petroleum hydrocarbon groups:

[1] Warne, M (2010) Review of the appropriateness of the Canadian petroleum hydrocarbon country-wide standards in soil, for incorporation into the Australian National Environment Protection (Assessment of Site Contamination) Measure, National Environment Protection Council, Australia.

[2] Warne, M (2010) Review of the appropriateness of selected Canadian Soil Quality Guidelines (benzene, benzo(a)pyrene, ethylbenzene, toluene and xylenes), for incorporation into the Australian National Environment Protection (Assessment of Site Contamination) Measure, and recommended ecological investigation levels, National Environment Protection Council, Australia.

- F1: C_6-C_{10} minus BTEX;
- F2: >C_{10}-C_{16} minus naphthalene;
- F3: >C_{16}-C_{34}; and
- F4: >C_{34}-C_{40}.

- BTEX; and
- The PAH benzo(a)pyrene (BaP);

It is noted that the ASC NEPM refers to the above-mentioned criteria as ESLs, whereas the Warne (2010) documents refer to the criteria as low reliability EILs.

5.2.2 Protection of Human Health

The ASC NEPM provides Health Investigation Levels (HILs) for four different generic land use settings:

- *'HIL A – Residential with garden/accessible soil (home grown produce <10% fruit and vegetable intake (no poultry), also includes childcare centres, preschools and primary schools.*
- *HIL B – Residential with minimal opportunities for soil access; includes dwellings with fully and permanently paved yard space such as high-rise buildings and apartments.*
- *HIL C – Public open space such as parks, playgrounds, playing fields (e.g. ovals), secondary schools and footpaths. This does not include undeveloped public open space where the potential for exposure is lower and where a site-specific assessment may be more appropriate.*
- *HIL D – Commercial/industrial, includes premises such as shops, offices, factories and industrial sites.'*

The ASC NEPM states the HILs generally apply to the top 3 m of soil for residential use and site-specific conditions should determine the depth to which other HILs apply.

Schedule B1 of the ASC NEPM states that when comparing results to Tier 1 screening levels, where it is appropriate for the exposure being evaluated, consideration should be given to:

- The maximum concentrations detected in relation to the screening levels;
- The 95% upper confidence limit (UCL) of the arithmetic mean concentrations in relation to the screening levels;
- The implications of localised hotspots;
- The standard deviation of the data (i.e. should be <50% of screening level); and
- The magnitude of any screening level exceedances (i.e. should be <250% of screening level).

The ASC NEPM makes reference to direct contact (i.e. dermal contact, incidental ingestion, dust inhalation exposure) HSLs provided for petroleum hydrocarbons in Friebel & Nadebaum (2011). It is understood that these criteria were not presented in the ASC NEPM as the vapour intrusion pathway drives risks for petroleum hydrocarbon exposure. Friebel & Nadebaum (2011) provides direct contact criteria which consider:

- The petroleum hydrocarbon compounds BTEX and naphthalene, as well as the petroleum hydrocarbon groups C_6-C_{10}, >C_{10}-C_{16}, >C_{16}-C_{34} and >C_{34}-C_{40}; and
- Four land use settings which are directly comparable to the ASC NEPM (i.e. HSL A, HSL B, HSL C and HSL D) as well as an additional land use setting (i.e. intrusive maintenance worker).

The ASC NEPM highlights that the direct contact HSLs are likely to represent unacceptable aesthetic characteristics and may also represent unacceptable short-term vapour inhalation risks.

The ASC NEPM also provides management limits which are to be applied after the HILs/HSLs/EILs/ESLs have been considered.

Asbestos

The ASC NEPM provides Health Screening Levels (HSLs) for asbestos in soil, including bonded asbestos containing material (ACM), friable asbestos (inclusive of asbestos fines and fibrous asbestos) and 'all forms of asbestos'. The criteria provided covers exposure scenarios which are comparable to the HILs (i.e. HSL A, HSL B, HSL C and HSL D). The criteria are both quantitative (i.e. % w/w) and qualitative (i.e. no visible asbestos). The ASC NEPM also refers to the WA Department of Health (DoH) Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia provides further details on the assessment and remediation of asbestos. In addition to the screening levels provided in the ASC NEPM for different land uses, the accessible ground surface (as designated by suite investigations or the 10 cm default) should be free from visible bonded ACM and fibrous asbestos at the end of the remedial site works.

The WA Asbestos Guidelines provide details for determining soil asbestos concentrations and interpreting results (Appendix Two) based on the weight of asbestos for a given weight of soil. The methodology looks at estimating asbestos concentrations for a given strata/material.

Soil Vapour

The ASC NEPM provides HSLs for vapour intrusion (i.e. migration of contaminants in subsurface indoor air in the vapour phase) based directly upon Friebel & Nadebaum (2011). HSLs are provided for:

- The following chemicals in soil, groundwater and soil vapour
    - Two petroleum hydrocarbon groups
        - F1: TRH C_6-C_{10} minus BTEX; and
        - F2: TRH >C_{10}-C_{16} minus naphthalene.
    - BTEX; and
    - Naphthalene.
- Four land use settings which are generally comparable to the ASC NEPM (i.e. HSL A, HSL B, HSL C and HSL D). It is noted that buildings with a basement or ground floor car park covering the entire footprint (and no residences within the lowest floor level) are assessed as HSL D for the vapour intrusion pathway.
- Three soil types
    - Sand;
    - Silt; and
    - Clay.
- Four different source to receptor distances
    - 0 m to <1 m;
    - 1 m to <2 m;
    - 2 m to <4 m; and
    - >4 m.

For some soil types and depths, the HSL is higher than the theoretical vapour phase saturation limit. In these instances, no HSL is provided and it is assumed to be not limiting (NL).

Before the HSLs for vapour intrusion can be used, they must be shown to be applicable using the applicability checklist provided in Friebel & Nadebaum (2011).

The vapour intrusion based HSLs do not take aerobic biodegradation of vapours into account, with this degradation process known to be significant under certain conditions. The vapour intrusion based HSLs may be modified by factors of 10 (2 m - <4 m source depths) or 100 (source depths 4 m and greater) if the following conditions are met:

- The scenario is based on a slab-on-ground or ventilated crawl space building;
- There is direct measurement of oxygen at a depth of 1 m or greater;
- The vapour source is no closer than 2 m from a current or proposed building foundation;
- The current or proposed building foundation has a width no greater than 15 m (oxygen penetration limited at greater widths); and
- The source concentration is less than 100 mg/m^3.

The ASC NEPM includes interim vapour intrusion HSLs for trichloroethene (TCE), 1,1,1 trichloroethane (1,1,1 TCA), tetrachloroethene (PCE), cis 1,2 dichloroethene (cis 1,2 DCE) and vinyl chloride (VC). In the absence of more applicable criteria these HSLs are considered to be applicable.

Where criteria are not provided in Friebel & Nadebaum (2011) or the ASC NEPM, reference is made to other reputable guidance sources on a case by case basis.

5.2.3 Buildings and Structures

Australian Standard AS2159 (2009) *Piling – Design and Installation* provides exposure classification values for concrete and steel piles in soil (non-aggressive to severely aggressive) based upon chlorides, sulfates and pH. In the absence of a directly applicable EPA endorsed criteria, these guidelines are considered to be appropriate in assessing the potential for detrimental impacts of site soils to buildings and structures. In addition, the presence of other aggressive chemical compounds (e.g. acids) may be potentially detrimental to buildings or structures.

The ASC NEPM states that the management limits are relevant for '*operating sites where significant sub-surface leakage of petroleum compounds has occurred and when decommissioning industrial and commercial sites'*. The ASC NEPM states that the intent of the management limits is to minimise the potential for petroleum hydrocarbons to cause the formation of light non-aqueous phase liquid (LNAPL), fire/explosive hazards and effects on buried infrastructure.

5.2.4 Aesthetics

The SEPP (Land) states that *Contamination must not cause the land to be offensive to the senses of human beings*.

The aesthetic condition of soil is assessed with respect to the guidance provided in Schedule B1 of the ASC NEPM (Section 3.6). In general terms, consideration is given to the presence of non-hazardous foreign materials, discoloration and odorous soils.

5.2.5 Production of Food, Flora and Fibre

SEPP (Land) states that *'Contamination of land must not ... (b) affect the level of any indicator in food, flora and fibre produced at the site (or that may be produced) such that the level of that indicator is greater than that specified by the Australia New Zealand Food Authority, Food Standards Code.'*

The Food Standards Code provides maximum levels (MLs) for various organic and inorganic chemicals in various foods, with the MLs for each chemical varying dependent on the food type. The Food Standards Code does not provide threshold criteria for contaminant levels in soils. The correlation between contaminant levels in soils and resulting contaminant levels in food, flora and fibre produced in soils is complex and related to the bioavailability of the contaminant, the rate at which the contaminant is taken up by the crop/stock and the ability of various crop/stock to regulate the contaminant.

As a conservative measure and in the absence of directly applicable criteria, it is assumed that the site has been polluted at potentially unacceptable levels with respect to the production of food, flora and fibre if the contaminants of concern are present at levels above that which can reasonably be considered to represent background levels. It is noted that a site may not be suitable to produce food, flora and fibre due to natural background levels of a range of contaminants (i.e. arsenic).

5.3 Beneficial Uses of Groundwater

SEPP (Waters) divides groundwater into seven segments based on total dissolved solids (TDS) concentration ranges. The following table, which is based on Table 1 of SEPP (Waters), defines the beneficial uses of groundwater which require protection for each segment. Based upon the available TDS data for the on-site bores (range 120 to 430 mg/L), the water table aquifer at the site is classified as Segment A1.

The Auditor considered Segment A1 to be appropriate to the audit site.

Table 9: Beneficial Uses of Groundwater to be Protected

Beneficial use	Segments (mg/L TDS)						
	A1 (0–600)	A2 (601–1200)	B (1201–3100)	C (3101–5400)	D (5401–7100)	E (7101–10,000)	F (>10,001)
Water dependent ecosystems and species	✓	✓	✓	✓	✓	✓	✓
Potable Water Supply (desirable)	✓	N/A	N/A	N/A	N/A	N/A	N/A
Potable Water Supply (acceptable)	**N/A**	✓	N/A	N/A	N/A	N/A	N/A
Potable Mineral Water supply #	✓	✓	✓	✓	N/A	N/A	N/A
Agriculture and irrigation (irrigation)	✓	✓	✓	N/A	N/A	N/A	N/A
Agriculture and irrigation (Stock Watering)	✓	✓	✓	✓	✓	✓	N/A
Industrial and commercial	✓	✓	✓	✓	✓	N/A	N/A
Water-based recreation (Primary Contact Recreation)	✓	✓	✓	✓	✓	✓	✓
Traditional Owner cultural values	✓	✓	✓	✓	✓	✓	✓
Cultural and spiritual values	✓	✓	✓	✓	✓	✓	✓
Building and Structures^	✓	✓	✓	✓	✓	✓	✓
Geothermal properties *	✓	✓	✓	✓	✓	✓	✓

The site is not within a declared mineral water resource area and this beneficial use is not considered relevant.

^ The proposed development of the site is understood to have no proposed basements, but has been included in the case of deep underground services.
* Groundwater at the site was not found to have geothermal properties (described in the Waters SEPP as a natural thermal capacity which corresponds to a temperature between 30 and 70 degrees Celsius), and therefore this beneficial use was not considered relevant at this site.

5.4 Adopted Groundwater Assessment Criteria

5.4.1 Water Dependent Ecosystems and Species (WDES), Traditional Owner Cultural Values (TOCV) and Cultural and Spiritual Values (CSV)

In accordance with the Waters SEPP, groundwater must not cause receiving waters to be affected to the extent that the level of any environmental quality indicator is greater than the level of that indicator specified for surface waters in the SEPP. This means that the likely receiving water body should be identified and that the WDES criteria for the receiving water body be applied at the point of groundwater discharge.

For screening purposes, the relevant WDES criteria are initially applied to assess the condition of groundwater underlying the site. If there are analyte concentrations in groundwater which exceed the adopted WDES criteria, then further consideration should be given as to whether elevated concentrations are likely to reach the point of discharge, and impact on the receiving water body.

The likely receiving water body for groundwater underlying the site is Outer Estuary of Darwin Harbour. The water body is considered to be a slightly-moderately modified aquatic ecosystem, with environmental quality objectives for protection generally corresponding to 95% species protection as defined in ANZG (2018).

Unless specific objectives are described in the SEPP, the environmental quality objectives for the WDES are those values specified in:

- ANZG (2018), *Guidelines for Fresh and Marine Water Quality*, 2018 – 95% level of protection.

For beneficial uses that do not have specific environmental quality indicators or objectives provided in the Waters SEPP, the objectives for WDES can be adopted. This is based on the assumption that water-based ecosystems and species are typically the most sensitive beneficial use to pollution. Consistent with the Waters SEPP and in the absence of contrary regulatory advice, the Auditor has also adopted the WDES objectives for TOCV and for CSV.

5.4.2 Potable Water Supply

Reference is made to the current version of the *Australian Drinking Water Guidelines* when assessing drinking water use, which is currently National Health and Medical Research Council (NHMRC) version 3.5 (2018).

The NHMRC drinking water criteria are largely based upon the World Health Organisation (WHO) drinking water criteria. However, there are some compounds where NHMRC has drawn a different conclusion to WHO and a number of other compounds where WHO provides some criteria but NHMRC has not adopted any criteria. Consideration to WHO criteria is given on a case by case basis, as deemed appropriate by the Auditor. In the absence of more applicable criteria, WHO (2008)[3] criteria have been adopted to assess TRH.

5.4.3 Agriculture and Irrigation (Irrigation)

To assess risks from use of groundwater for irrigation of agriculture, parks and gardens, reference has been made to the water quality objectives for irrigation waters in Section 4.2 of the ANZECC (2000), as these are retained under ANZG (2018).

[3] WHO (2008) *Petroleum Products in Drinking Water*, Background Document for Development of WHO Guidelines for Drinking-Water Quality.

5.4.4 Agriculture and Irrigation (Stock Watering)

To assess risks to livestock consuming groundwater, reference has been made to Sections 4.3 and 9.3 of ANZECC (2000), as ANZG (2018) has not yet been updated for stock watering. It is assumed that livestock could consume metals which are dissolved, complexed within an organic compound or bound to sediments (i.e. non-filtered total concentrations).

ANZECC (2000) does not provide livestock drinking water guidance for organic contaminants. ANZECC (2000) recommends that human drinking water criteria are adopted for pesticides. In the absence of more applicable data, the Auditor adopts the same approach for other organics.

5.4.5 Industrial and Commercial

The earlier version of the ANZECC (2000) Guideline (i.e. 1992) provided criteria for a range of contaminants and industrial processes, however, ANZECC (2000) states that:

> *'After extensive consultation with representative industrial groups, the current guidelines provide no specific guidance for industrial water use, because industrial water requirements are so varied (both within and between industries) and sources of water for industry have other coincidental environmental values that tend to drive management of the resource. Industrial water use continues to be a recognised environmental value that has high economic benefit to the community. It must be given adequate consideration during the planning and management of water resources.'*

It is understood that the current informal EPA Victoria policy is to also consider the appropriateness of industrial water use based upon a qualitative approach (i.e. related elevated concentrations of a contaminant). For the purpose of the audit, groundwater objectives for other uses are expected to be protective of this beneficial use.

5.4.6 Water-Based Recreation (Primary Contact Recreation)

The Waters SEPP specifies that E. coli count must be less than 10 per 100 mL, or zero per 100 mL if human faecal sources of contamination have been identified (such as septic tanks or sewerage infrastructure).

Environmental quality objectives and indicators for long-term chemical hazards are based on National Health and Medical Research Council (NHMRC 2008) *Guidelines for Managing Risks in Recreational Water*, which in turn reference the *Australian Drinking Water Guidelines* (NHMRC, latest version 3.5 dated August 2018).

Where inhalation of vapours and dermal contact are not a concern, the relevant health based drinking water criteria is multiplied by 10 to represent incidental ingestion. Where inhalation of vapours and/or dermal contact are a concern, the relevant health-based drinking water criteria are adopted without modification. In some instances, it is important to consider the foundation of the drinking water criteria value and determine whether it is logical to multiply the criteria by 10 (e.g. nitrate drinking water criteria is based upon protecting bottle fed infants, which is not relevant for primary contact recreation exposure).

5.4.7 Buildings and Structures

For the protection of buildings and structures, SEPP (Waters) specifies that the following indicators should be considered: pH, sulfate chloride, redox potential, salinity and any chemical substance or waste that may have a detrimental impact on the structural integrity of buildings or other structures. Australian Standard AS2159-2009 *Piling – Design and Installation* provides values for pH, sulfate and chloride for building and structures, and reference should also be made to the ASC NEPM (2013).

It is noted that the AS2159 criteria for sulfate in water is provided as sulfate-SO_3. A conversion to sulfate-SO_4 (i.e. 100 ppm S-SO_4 = 80 ppm S-SO_3) results in a sulfate-SO_4 criteria for non-aggressive conditions of 375 mg/L.

5.5 Beneficial Uses of Surface Water

Surface water has been considered as part of this audit in accordance with the SEPP (Waters). Table 10, which is based on Table 3 of SEPP (Waters), defines the beneficial uses of surface waters which require protection based upon geographical location[4].

No surface water bodies exist on site. The nearest surface water body is the mangrove of the Outer Estuary of Darwin Harbour, located 160 m to the west, therefore the Urban segment is applicable for this site. Given the proposed commercial development, and subsequent management of surface water through stormwater drains, the site is not deemed likely to have any potential impact on surrounding surface water bodies.

Table 10: Beneficial Uses to be Protected (Inland Waters)

	Water	Aquatic Reserves	Rivers & Streams						Wetlands
Beneficial Uses	**Segment**	**Aquatic Reserves**	**Highlands**	**Uplands A**	**Uplands B**	**Coastal Foothills and Coastal**	**Urban**	**Murray and Western Plains**	**Lakes & Swamps**
Water dependent ecosystems and species that are:	Largely unmodified	✓	✓	✓	✓	N/A	N/A	N/A	N/A
	Slightly to moderately modified	N/A	N/A	N/A	N/A	✓	N/A	✓	✓
	Highly modified	N/A	N/A	N/A	N/A	N/A	✓	N/A	N/A
Human consumption after appropriate treatment		✓ where water is sourced for supply in accordance with the special water supply catchments area set out in Schedule 5 of the Catchment and Land Protection Act 1994 or the Safe Drinking Water Act 2003.							
Agriculture and Irrigation		N/A	✓	✓	✓	✓	✓	✓	✓
Human consumption of aquatic foods		✓	✓	✓	✓	✓	✓	✓	✓
Aquaculture		✓ where the environmental quality is suitable and an aquaculture licence has issued under the *Fisheries Act 1995*							
Industrial and commercial		N/A	N/A	✓	✓	✓	✓	✓	N/A
Water-based recreation (primary contact)		✓*	✓	✓	✓	✓	✓	✓	✓
Water-based recreation (secondary contact)		✓*	✓	✓	✓	✓	✓	✓	✓
Water-based recreation (aesthetic enjoyment)		✓*	✓	✓	✓	✓	✓	✓	✓
Traditional Owner cultural values		✓	✓	✓	✓	✓	✓	✓	✓
Cultural and spiritual values		✓	✓	✓	✓	✓	✓	✓	✓
Navigation and shipping		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Note: If a segment is marked with a tick that is asterisked there is an exclusion identified in Table 5 (see clause 1(4) of Schedule 2 SEPP (Waters)).

SEPP (Waters) recommends that ANZECC (2000) is used as the source of assessment criteria, unless SEPP (Waters) provides alternative criteria.

[4] Figure 1 of SEPP (Waters) defines the policy area and segments.

5.6 Beneficial Uses of Ambient Air

The 1999 Ambient Air Quality SEPP and the 2001 Air Quality Management SEPP, are the relevant SEPPs that provide the framework for ambient air management in Victoria (air being defined as "*the external air environment, it does not include the air environment inside buildings or structures"*). The SEPP (Ambient Air Quality) was prepared to adopt the requirements of the National Environmental Protection Council (Ambient Air Quality). SEPP (Air Quality Management) was prepared in part to ensure that the objectives of SEPP (Ambient Air Quality) are met.

Section 9 of SEPP (Air Quality Management) states that the following beneficial uses of ambient air are protected throughout Victoria:

'(a) life, health and well-being of humans;

(b) life, health and well-being of other forms of life, including the protection of ecosystems and biodiversity;

(c) local amenity and aesthetic enjoyment;

(d) visibility;

(e) the useful life and aesthetic appearance of buildings, structures, property and materials; and

(f) climate systems that are consistent with human development, the life, health and well-being of humans, and the protection of ecosystems and biodiversity.'

The Auditor has assessed whether or not ambient air is likely to be polluted on the basis of:

- Land pollution (including soil, soil gas and soil vapour);
- Groundwater pollution; and
- Surface water pollution.

Where ambient air pollution is considered to be likely, ambient air sampling/analysis is conducted and quantitative criteria are considered.

SEPP (Air Quality Management) does not provide indicators and objectives for the majority of contaminants which can be of concern at a typical contaminated site.

Section 10 of SEPP (Air Quality Management) defines four classes of ambient air quality indicators, namely:

a) 'Class 1 indicators: common or widely distributed air pollutants which are established as environmental indicators in the State Environment Protection Policy (Ambient Air Quality) and may threaten the beneficial uses of both local and regional air environments;

b) Class 2 indicators: hazardous substances that may threaten the beneficial uses of the air environment by virtue of their toxicity, bio-accumulation or odorous characteristics;

c) Class 3 indicators: extremely hazardous substances that are carcinogenic, mutagenic, teratogenic, highly toxic or highly persistent, and which may threaten the beneficial uses of the air environment; and

d) Unclassified indicators: indicators of the beneficial uses of local amenity and aesthetic enjoyment, namely odour and total suspended particles (nuisance dust).'

SEPP (Ambient Air Quality) provides environmental quality objectives and goals for carbon monoxide, nitrogen dioxide, photochemical oxidants, sulfur dioxide, lead, particles as PM10 and visibility reducing particles.

SEPP (Air Quality Management) provides:

- design criteria for new or expanded emission sources (Schedule A);
- intervention levels for the substances noted in Schedule A (Schedule B);
- emission limits for existing stationary sources (Schedule D); and
- emission limits for new stationary sources (Schedule E).

For scenarios where the above-mentioned indicators/objectives are not relevant, impacts to air quality are assessed on a case by case basis.

6 Summary of Investigation Process and Findings

The following section provides a summary of the detailed site investigations undertaken at the site, split into the separate segments of the environment.

6.1 Soil Investigations

A summary of the soil investigations and soil sampling undertaken for the entire site (including Lot A) is provided in the following table.

Table 11: Summary of Soil Investigations at the Site

Date (Consultant)	Sample Locations	Lot A Locations	Sampling Methodology and Depth
June and August 2019 (Greencap)	Boreholes SS01-1 to SS01-4, SS02-1 to SS02-4, SS01 to SS44 Test pits: TP01 to TP29	TP01 – TP08 SS01 – SS12	Surface soil locations (n=52). Soil samples collected from the surface around the perimeter of buildings Analysis for contaminants of concern (CoC) heavy metals, organochlorine pesticides (OCP) Grid test pits (n=29) sampling up to 0.9 mbgl. Soil samples recovered directly from the centre of the excavator bucket. Analysis for asbestos.
September 2019 (Greencap)	Boreholes SS53 to SS64, SS65_N, SS65-E, SS65-S, SS65-W, SS66-N, SS66-E, SS66-S, SS67-N, SS67-E, SS67-S, SS68-N, SS68-E, SS68-S, SS68-W, SS69-N, SS69-E, SS69-S, SS69-W Test pits: TP36 to TP57	SS53, SS45, SS64, SS66 and SS67	Surface soil locations (n=29). Soil samples collected from the building footprints and delineation of previously identified OCP impacts Analysis for OCP Test pits (n=22) delineation of previously identified ACM impacts. Analysis for asbestos.
November 2019 (Agon)	Test pits: TP01 to TP20	TP1 – TP8	In-fill grid sampling (n=20) to between 0.7-1.2 mbgl, collected from the centre of excavator bucket. Analysis for CoC and selected samples for a broader analytical suite.
December 2019 (Agon)	Boreholes MW01 to MW04	NA	Soil samples recovered during drilling for groundwater wells (n=10), sample collection methodology was not documented by Agon. Analysis for TRH, BTEXN, lead, select samples for PAH
April 2020 (SLR)	Validation samples: V1 to V144 ACM1 and ACM5 Stockpile samples STP1_1 to 4 STP2_1 to 4 STP3_1 to 8 STP4_1 to 4 STP5_1 to 10 STP6_1 to 11 STP7_1 to 11 STP8_1 to 10 STP9_1 to 5	All locations specific to Lot A	Validation samples were collected from the base of the excavation. Analysis for TRH, BTEXN, pesticides, metals and AF/FA. Stockpile samples were collected for the purpose of onsite re-use. Analysis for TRH, BTEXN, pesticides, metals and asbestos.

The soil and groundwater investigation sampling locations are shown on Attachments 4 and 5 respectively.

The results of the soil investigations are summarised below.

Fill materials were encountered across the site consisting of sandy clay and clayey silty sand with gravel. Fill material was typically less than 0.5 m thick. The assessor reported no visual or olfactory indication of contamination in the general fill material.

Natural soils consisted of red brown and yellow clayey sandy gravel ranging to depths of 1.5 to 2.8 m, underlain by stiff red brown sandy clay with trace gravels. Extremely weathered siltstone was encountered from depths between 2.15 and 3.8 mbgl with very low strength siltstone extending to 5.6 mbgl.

ACM was observed in soils at the site and on the site surface during sampling and site inspections by Greencap, Agon and SLR.

The fill materials across the site contained concentrations of aldrin+dieldrin exceeding HIL A and HIL D criteria (up to 369 mg/kg, SS30 within Lot B3). The highest aldrin+dieldrin concentration reported was considered to be an anomaly as this concentration could not be replicated in any additional sampling undertaken and was collected prior to commencement of the audit. The next highest concentration was 39.7 mg/kg exceeding HIL A, but below HIL D criteria.

All other analytes were below laboratory detection limits or assessment criteria.

The natural soils across the site contained elevated concentrations of nickel with respect to the ecosystem criteria adopted by Agon for these analytes, these analytes were considered to be naturally occurring. All other natural soil concentrations were below either laboratory detection limits or adopted assessment criteria.

No volatile contaminants were detected in soil at levels above the vapour intrusion screening levels.

Area-Specific Data (Lot A)

The soil profile comprised silty sandy fill typically 0.5 m deep (up to a maximum depth of 0.8 m), with inclusions of building rubble and bitumen fragments. The underlying natural soil consisted of clays.

In total 48 samples were analysed for pesticides; some of these samples exceeded residential criteria but all results were below the relevant criteria for commercial use. A further ten samples were analysed for asbestos in soil; all results were reported as non-detect.

Soil and crushed concrete from other areas onsite were placed on site; isolated hotspots of pesticides (concentrations below commercial guidelines, with the exception of sample SS30) were removed from other areas onsite and placed below the crushed concrete.

During remediation validation samples reported the presence of asbestos at 144 locations on site; the asbestos at these locations was removed and validated. All visible asbestos was removed. There are some ACM and AF/FA exceedances within the stockpiles which may have been re-used on site; these exceedances were assessed as part of the validation works.

6.2 Groundwater Investigations

A summary of the groundwater investigations undertaken for the greater site (encompassing Lots A, B and C) is provided in the following table.

Table 12: Summary of Groundwater Investigations at the Site

Date (Field Work)	Sample Locations	Sampling Methodology and Depth
GME1 December 2019 and January 2020 (Agon)	MW01 to MW04 (install and sample)	Installation and gauging of MW01 to MW04. Low flow purging and sampling. Analysis of samples for TRHs, BTEX, PAHs, chlorinated hydrocarbons, pesticides, herbicides, 14 metals, phenolics, halogenated benzenes, halogenated hydrocarbons, solvents, chloride and sulfate.

The groundwater well locations are shown in Attachment 5.

The findings of the groundwater investigations are summarised as follows:

- Although the groundwater monitoring wells were not surveyed, it is expected that the groundwater flow direction underlying the site would be to the west, consistent with expected regional flow toward the Darwin Harbour. Standing water levels ranged from 2.7 to 3.8 mbtoc;
- Field readings recorded redox potential in the range 123 to 318 mV, electric conductivity ranged between 166 and 880 µS/cm and dissolved oxygen levels ranging from 2.68 to 5.77 mg/L). Groundwater was acidic (4.4 to 5.6 pH units);
- No measurable separate phase hydrocarbons (NAPL) or sheen was reported in groundwater from on-site or off-site wells, and no odours were reported;
- Low levels of TRHs (max 0.28 mg/L) were detected in on-site wells MW01 and MW02, at concentrations well below the Dutch intervention criteria. Agon conducted silica gel clean-up on the MW01 groundwater sample to determine if the low-level hydrocarbons were petroleum based or naturally occurring. The results of the silica gel clean-up were all below the laboratory limit of reporting indicating they were naturally occurring hydrocarbons or highly degraded fuel;
- Low levels of the chlorinated hydrocarbon chloroform was detected in two on-site wells, at concentrations well below adopted criteria for human health and ecosystem protection;
- Cobalt exceeded WDES criteria in all wells;
- Concentrations of copper and nickel exceeded the WDES criteria in one or more wells but were considered naturally occurring. The maximum nickel concentration also exceeded the recreational and irrigation water criteria;
- Lead exceeded the WDES criteria in three wells and the drinking water criteria in one well;
- Manganese exceeded the recreational water criteria in three wells, with the maximum also exceeding the irrigation criteria; and
- Concentrations of other metals (arsenic, beryllium, boron, cadmium, mercury, and selenium), PAHs, BTEX, halogenated benzenes, halogenated hydrocarbons, solvents, pesticides, herbicides, chloride, sulfate and phenols were not detected above the adopted assessment criteria for any beneficial uses.

6.3 Potential for Vapour Intrusion

The groundwater and soil results did not identify that a vapour intrusion risk required assessment. Refer to details regarding low level concentrations of TRH (in soil and groundwater) and chloroform (in groundwater), detailed in Section 8 and 9.

6.4 Auditor's Opinion on Investigations – Lot A

When preparing this section of the EAR, the Auditor has given particular attention to Appendix 3 of EPA Publication 759 which states that an EAR should provide *'… an opinion on the quality and completeness of prior assessment(s) of the site, including details of investigator, laboratory, sampling and analytical methods and type of assessment undertaken …'*

The Auditor considers as a whole, the data collected is within acceptable error margins as determined through the assessor's Data Quality Objectives (DQO) (refer to Section 4.5 of SLR's (2021) Validation Report). As such, the Auditor considers that the data collected is sufficient to adequately characterise the site for the audit purposes, given:

- The lack of significant systematic errors with the data collection process;
- Absence of major gaps in understanding of the site use over time;

- All identified point sources of contamination were investigated with the soil investigation undertaken including 178 grid and targeted (including validation) locations, which exceeds the AS4482.1 recommended number of sampling locations for an approximately 0.36 hectare site (11 locations);
- The groundwater investigations undertaken across the site included a total of four on-site groundwater wells which were monitored. The groundwater investigations did not identify site-derived groundwater contamination, which supports the adequacy of the soil investigations across the site;
- The large number of samples collected across the site and the comprehensive suite of analysis undertaken, which addresses inherent data gaps in site histories;
- The laboratory analysis was undertaken by NATA accredited laboratories;
- The site-specific geology and hydrogeology is consistent with anticipated regional conditions;
- The analytical results are consistent with expectations based on the site history and field observations; and
- The entire development has a been sealed with concrete.

The Auditor considers the quantity and quality of the site investigations undertaken are adequate to characterise the nature and extent of contamination at the site. The Auditor considers the data collected is sufficient for the purposes of this environmental audit. The Auditor is of the view that the site has been assessed and characterised adequately within the means and information available to the Auditor at the time of preparing this EAR.

7 Remediation

The following section provides a summary of the remediation works undertaken at the site.

7.1 Concrete Crushing and Management

Between 9 October 2019 and 5 November 2019 (prior to commencement of the audit), Agon supervised the crushing of concrete for re-use on site. Agon's licenced asbestos assessors conducted progressive visual inspections of concrete stockpiles that were proposed to be crushed. Once the concrete was cleared of visible suspect materials, the concrete rubble was mechanically sieved to removed materials less than 100 mm. Two visual inspections of the mechanically sieved content were conducted each hour prior to passing through the crusher. Visible cement sheeting debris adhered to the concrete rubble was observed during these inspections. The sheeting was sampled on multiple occasions, though no asbestos was identified in any of the fragment samples.

Concrete larger than 100 mm was passed through the plant crusher. The crushed material was stockpiled, and validation sampling conducted. Four stockpiles were created as shown in Attachment 7. Validation sampling consisted of the collection of a 10 L sample which was field screened with a 7 mm sieve. Any asbestos identified in the oversize was collected for lab analysis and a 500 mL sample of the sieved soil was collected for lab analysis.

One sample from stockpile 1 detected asbestos and therefore a section of this stockpile was removed and disposed to an accredited landfill facility. Due to repeated detections of asbestos during validation sampling, Stockpile 2 was completely removed from site and disposed to an accredited landfill facility.

The remaining crushed concrete was stockpiled awaiting re-use on Lot A.

7.2 Remediation and Validation of Asbestos Impacts

Soil investigations completed by Greencap had identified the presence of asbestos in multiple locations across the site. The Auditor's calculations determined that only one location exceeded the assessment criteria for AF/FA (TP20, 0.0047%w/w). This location along with TP38 and TP39 (which had previously detected asbestos but was below the assessment criteria for high density residential) were excavated down to natural soil in a radius of 2.5 m around the original locations and disposed as asbestos contaminated waste to an accredited landfill facility. The excavated area was approximately 25 m^2 to a depth of 0.8 m. No validation sampling was completed following removal as the excavation removed all fill material down to natural soils.

Agon provided an asbestos clearance certificate dated 29 November 2019 indicating that the visual inspection confirms that the area described is fit for re-occupation and further site works. It also stated that the site is subject to the conditions of an asbestos management plan which would detail a "first finds" procedure should asbestos be identified.

Agon conducted airborne asbestos fibre monitoring on each day of works and there were no exceedances of the 0.01 f/mL criteria.

Additional remediation and validation was completed by SLR in April 2020. These works entailed the excavation of all uncontrolled fill material to apparent natural (comprising a combination of undisturbed natural and assumed reworked natural soils) across Lot A, approximately 0.3 mbgl. Any underground services encountered within the fill material at depths less than 0.3 mbgl were removed. Any deeper underground services that may be present beneath the site were not removed as part of the remediation works.

The excavated surface was visually inspected and validation samples collected for asbestos, metals, TRH, BTEXN and OCP/OPP (validation locations provided in Attachment 8). Asbestos, in the form of an ACM fragment, was identified in two locations on the surface at concentrations exceeding the adopted criteria

for commercial land use; the validation samples are shown in Attachment 8. Soil sampling conducted in these locations did not identify asbestos in soil.

SLR reported that the reinstatement and compaction of soil onsite was completed without the presence of a SLR consultant. Therefore visual clearance of the surface of each compacted lift during reinstatement could not be provided as requested by the Auditor.

SLR also conducted airborne asbestos fibre monitoring on each day of remediation works and there were no exceedances of the 0.01 f/mL criteria. No known monitoring was conducted during reinstatement of soils.

7.3 Re-use of Soil Stockpiles within Lot A

SLR characterised the stockpiles of spoil generated during excavation of the site. These stockpiles were tested for TRH, BTEXN, OCP/OPP, asbestos and eight metals. Asbestos in the form of ACM fragments and fibrous asbestos were detected above investigation levels in stockpiles STP1, STP3 and STP7. Although recommended by SLR, the contractor was unable to confirm if asbestos impacted areas identified had been segregated and disposed of off site.

Stockpiles STP1 to STP9 were blended with the crushed concrete material and imported fill prior to being re-used to reinstate the validated excavation. Due to the lack of tracking of stockpiles, on-site inspections and clarity regarding the soils used to backfill Lot A, it has conservatively been assumed that where the final destination of the stockpiles is unknown that the soil (and associated contamination) has been placed in Lot A based on contractor engagement and stage of construction works. Based on AEA understanding of the works, this appears to be error or oversight, rather than a deliberate deviation from the Auditor's or SLRs directions and one that can be managed without any impact on day to day use of the site.

SLR undertook a statistical assessment using the asbestos results from these stockpiles to assess the potential risk posed by this residual contamination. The results are considered to be conservative as the assessment does not take into account the removal of asbestos-impacted soils. The results found the average concentration of AF/FA above ASC NEPM screen levels. As such, it is considered that potential residual asbestos in the backfill will require management. Management details are provided in SLR's document Ongoing Management of Asbestos in Soils – Sub Slab Works Only, provided in Appendix C.

7.4 Off-site Soil Disposal and Importation of Fill Material

Soil classification for the stockpiles of potentially contaminated soil was based on samples from each stockpile. There were nine soil stockpiles (STP1 To STP9), one topsoil stockpile (STP_TS) and one construction waste stockpile (STPW). The topsoil and construction waste stockpiles were disposed to Shoal Bay Waste Management Facility (SBWMF). Waste disposal documentation is provided in SLR 2021 Appendix H, but also includes documentation for other stages of the development. Asbestos was identified in one sample in each of three soil stockpiles (STP1, STP3, STP7). The soil surrounding the identified asbestos was removed from each of the stockpiles and separated. The remainder of the three stockpiles was inspected by an asbestos assessor and deemed suitable for re-use.

To bring the excavation level with the general site surface 1,000 tonnes of soil was imported and placed across the site prior to the Auditor's knowledge. The soil was sourced from Larrakeyah Barracks Redevelopment Temporary Base Entry (refer to Appendix G of the SLR Validation report). Eighteen stockpile samples were collected by AECOM in January 2019 (SP1 to SP10) and February 2019 (SP11, SP12, SP16, SP18, SP21, SP22, SP24, SP27). All samples were analysed for asbestos, metals, TRHs, MAHs, PAHs and PFAS with the results indicating all concentrations below all relevant ecological and human health-based screening criteria. PFAS was detected at low concentrations (0.0002-0.0006 mg/kg) in three samples (SP12, SP22 and SP24). It was recommended that this soil should remain on site at Larrakeyah Barracks though the remaining soil was suitable for re-use as clean fill.

7.5 Auditor's Opinion on Remediation Data

The remediation works are likely to have resulted in the removal of the known contaminated soils at the site, although there have been two issues as discussed above which necessitate controls on the site to manage potential risks (refer to the SEA), but these controls are not onerous and do not compromise the use of the site for the proposed use.

The Auditor considers that as a whole, the remediation data collected are within acceptable error margins as determined through the assessor's quality assurance program (refer to Section 4.5 of SLR Validation Report). As such, the Auditor considers that the data collected is sufficient to adequately characterise the site for the audit purposes, given:

- The lack of significant systematic errors with the validation data collection process;
- Soil contamination was visually identified by during excavation works;
- Removal of all fill material down to natural soil, screening and inspection of stockpiled material prior to re-use;
- Collection of validation samples from the final excavation extent and laboratory analysis was undertaken by NATA accredited laboratories;
- The analytical results are consistent with expectations based on the site history and field observations;
- The entire site is sealed with concrete; and
- Future intrusive works to manage unexpected asbestos finds as per the SEA.

The Auditor considers the quantity and quality of the remediation validation undertaken are adequate to characterise the nature and extent of contamination at the site. The Auditor considers the data collected are sufficient for the purposes of this environmental audit.

8 Beneficial Use Assessment – Land

8.1 Final Soil Condition

The final soil condition at the site is characterised by the soil samples collected that remain on site, which includes both the surface soils/rubble within Lot A (which was screened and spread across the site as general fill), the residual soils within Lot A, and spoil from other areas on site which were also used as backfill within Lot A. The final destination of stockpiles STP1 to STP9 generated during site works and re-used as backfill on site was not tracked; as such it is assumed that this material has potentially be re-used within Lot A and therefore the stockpile results have been included in this summary. A separate section has been included detailing the asbestos assessment results.

The investigation and validation samples for soils within Lot A (Table 13 and Table 14) include:

- Soil investigations by Greencap (July 2019) n = 9
- Greencap (September 2019) n=26
- Greencap (October 2019) n=30
- Agon (February 2020) n=13
- Validation sampling by SLR (2021) n=74

The stockpile assessment undertaken by SLR (2021) for spoil from across the greater area (Table 15) include:

- STP1 n=4
- STP2 n=4
- STP3 n=8
- STP4 n=4
- STP5 n=10
- STP6 n=11
- STP7 n=11
- STP8 n=10
- STP9 n=5

Reported exceedances of the adopted soil quality objectives are summarised in the following tables. It is noted than none of the samples exceed the site specific criteria for commercial/industrial use.

Table 13: Residual Soil Analytes Comparison with Ecological/Human Health Direct Contact Criteria (mg/kg)

Analyte	n	n > PQL	Max.	Number of Samples > Criteria					
				EIL/ESL Urban Res.	EIL/ESL Com/Ind	HIL/ *HSL A*	HIL/ *HSL B*	HIL/ *HSL C*	HIL/ *HSL D*
Arsenic	35	25	30	0 >100	0>160	0 >100	0 >500	0 >300	0 >3,000
Cadmium	35	2	0.7	0 >10[#]	0 >21[#]	0 >20	0 >150	0 >90	0 >900
Chromium (total)	35	35	300	0>390**	0>630**	0>120,000*	0>120,000*	0>120,000*	n/a
Copper	35	34	58	0 >80	0 >110	0 >6,000	0 >30,000	0 >17,000	0 >240,000
Lead	35	35	31	0 >1,100	0 >1,800	0 >300	0 >1,200	0 >600	0 >1,500
Mercury	35	1	5.5	0 >6.6[#]	0 >24[#]	0 >40	0 >120	0 >80	0 >730
Nickel	35	35	20	0 >180	0 >310	0 >400	0 >1,200	0 >1,200	0 >6,000
Zinc	35	33	280	0 >400	0 >590	0 >7,400	0 >60,000	0 >30,000	0 >400,000
pH (pH units)	4	4	Range 5.8-9.2		-	-	-	-	-

Analyte	n	n > PQL	Max.	Number of Samples > Criteria					
				EIL/ESL Urban Res.	EIL/ESL Com/Ind	HIL/ *HSL A*	HIL/ *HSL B*	HIL/ *HSL C*	HIL/ *HSL D*
Carcinogenic PAHs (as B(a)P TEQ)	14	14	0.6	-	-	0>3	0 >4	0>3	0 >40
DDT+DDE+DDD	61	2	0.08	0 >180 (DDT only)	0 >640 (DDT only)	0 >240	0 >600	0 >400	0 >3,600
Chlordane	61	12	2	-	-	0>50	0>90	0>70	0>530
Aldrin + Dieldrin	61	40	39.7	-	-	10>6	2>10	2>10	0>45

Notes:
EILs were calculated on the basis of site-specific soil parameters.
* Criteria from USEPA Regional Screening Level table (April 2019 version); ** Criteria based on CrIII; # Criteria from CCME (1999 & 1991).

Table 14: Validation Soil Analytes Comparison with Ecological/Human Health Direct Contact Criteria (mg/kg)

Analyte	n	n > PQL	Max.	Number of Samples > Criteria					
				EIL/ESL Urban Res.	EIL/ESL Com/Ind	HIL/ *HSL A*	HIL/ *HSL B*	HIL/ *HSL C*	HIL/ *HSL D*
Arsenic	74	74	32	0 >100	0>160	0 >100	0 >500	0 >300	0 >3,000
Cadmium	74	0	-	0 >10#	0 >21#	0 >20	0 >150	0 >90	0 >900
Chromium (total)	74	74	320	0>390**	0>630**	0>120,000*	0>120,000*	0>120,000*	n/a
Copper	74	74	18	0 >80	0 >110	0 >6,000	0 >30,000	0 >17,000	0 >240,000
Lead	74	74	280	0 >1,100	0 >1,800	0 >300	0 >1,200	0 >600	0 >1,500
Mercury		0	-	0 >6.6#	0 >24#	0 >40	0 >120	0 >80	0 >730
Nickel	74	74	28	0 >180	0 >310	0 >400	0 >1,200	0 >1,200	0 >6,000
Zinc	74	74	120	0 >400	0 >590	0 >7,400	0 >60,000	0 >30,000	0 >400,000
TRH > C10-C16 (F2)	74	12	360	*1>120*	*1>170*	*1>110*	*1>110*	NL	NL
TRH > C16-C34 (F3)	74	4	500	*1>300*	*0>1700*	-	-	-	-
TRH > C34-C40 (F4)	74	2	230	*0>2,800*	*0>3,300*	-	-	-	-
DDT+DDE+DDD	74	0	-	0 >180 (DDT only)	0 >640 (DDT only)	0 >240	0 >600	0 >400	0 >3,600
Chlordane	74	0	-	-	-	0>50	0>90	0>70	0>530
Aldrin + Dieldrin	74	30	2.7	-	-	0>6	0>10	0>10	0>45

Notes:
NL – Non Limiting
EILs were calculated on the basis of site-specific soil parameters.
Italics text relate to HSLs; Shaded box relates to exceedances.
* Criteria from USEPA Regional Screening Level table (April 2019 version); ** Criteria based on CrIII; # Criteria from CCME (1999 & 1991).

Table 15: Stockpile Soil Analytes Comparison with Ecological/Human Health Direct Contact Criteria (mg/kg)

Analyte	n	n > PQL	Max.	Number of Samples > Criteria					
				EIL/ESL Urban Res.	EIL/ESL Com/Ind	HIL/ *HSL A*	HIL/ *HSL B*	HIL/ *HSL C*	HIL/ *HSL D*
Arsenic	66	66	35	0 >100	0>160	0 >100	0 >500	0 >300	0 >3,000
Cadmium	66	0	-	0 >10#	0 >21#	0 >20	0 >150	0 >90	0 >900
Chromium (total)	66	66	240	0>390**	0>630**	0>120,000*	0>120,000*	0>120,000*	n/a
Copper	66	66	15	0 >80	0 >110	0 >6,000	0 >30,000	0 >17,000	0 >240,000
Lead	66	66	100	0 >1,100	0 >1,800	0 >300	0 >1,200	0 >600	0 >1,500
Mercury	66	0	-	0 >6.6#	0 >24#	0 >40	0 >120	0 >80	0 >730
Nickel	66	66	24	0 >180	0 >310	0 >400	0 >1,200	0 >1,200	0 >6,000
Zinc	66	66	58	0 >400	0 >590	0 >7,400	0 >60,000	0 >30,000	0 >400,000
DDT+DDE+DDD	67	0	-	0 >180 (DDT only)	0 >640 (DDT only)	0 >240	0 >600	0 >400	0 >3,600
Chlordane	67	0	-	-	-	0>50	0>90	0>70	0>530
Aldrin + Dieldrin	67	37	1.83	-	-	0>6	0>10	0>10	0>45

Notes:
EILs were calculated on the basis of site-specific soil parameters.
* Criteria from USEPA Regional Screening Level table (April 2019 version); ** Criteria based on CrIII; # Criteria from CCME (1999 & 1991).

The asbestos assessment works was described in Sections 6.1 and 7.2 of this EAR. In summary, bonded ACM and friable asbestos was identified in fill soils on site with fill up to approximately 0.3 mbgl and reworked natural extending to a depth of 0.8 mbgl. As part of the earthworks within Lot A the majority of fill was excavated and stockpiled on site. The excavation generally extended to natural or inferred (reworked) natural (maximum depth of 0.3 m). Asbestos was not observed at the excavation surfaces, or where it was observed it was removed and validated. Although the surfaces were visually validated for asbestos there is potential for asbestos to be present in the reworked natural soils remaining on site, and associated with abandoned underground services which are understood still to be present on site.

As detailed in Section 7.2, samples collected from the stockpiled spoil reported the presence of bonded ACM and AF/FA above screening criteria. The consultant, SLR, recommended that the asbestos-impacted soils be segregated. However, these stockpiles were potentially re-used on site, without confirming whether the segregation of the asbestos-impacted areas were completed. In accordance with the precautionary principle it has been assumed that these stockpiles have been re-used on Lot A, without having been segregated.

Information provided by the contractor confirmed that construction/demolition rubble from the stockpiles was screened and separated from the soil material, and the soil was reinstated under an unexpected finds protocol and overseen by a geotechnical engineer. The works undertaken indicate that some of the asbestos may have been removed during screening and backfill of the stockpiled material. However, without verification that the asbestos was removed, it has been conservatively assumed that the asbestos present in the stockpiles remains in the backfill material on site.

SLR reviewed the weighted average of asbestos found within the sampled collected from the stockpiles re-used on site (STP1-STP9), and compared the results to the weight of the samples collected to calculate an average asbestos concentration (based on the assumption that the asbestos was not removed). The

calculations are detailed in SLR's Validation Report (2021a). The assessment found that the average amount of AF/FA reported in the stockpiles (0.006%) was above the guideline value of 0.001%.

Given the potential for ACM to be present in the residual reworked natural, abandoned underground services and compacted backfill above ASC NEPM screening levels, an asbestos management framework has been prepared for future maintenance/earthworks below the concrete hardstand. The *Ongoing Management of Asbestos in Soils* document forms a condition of the Statement of Environmental Audit (SEA) and is provided as Attachment 1 of SEA.

8.1.1 Maintenance of Ecosystems (MoE)

Concentrations of TRH were reported in at least one soil sample above the adopted ecosystem criteria for urban residential and commercial/industrial use. All the exceedances were located within validation samples located on the floor of the excavation. Based on the isolated exceedance, absence of visual indications of contamination observed, low concentration reported the exceedance is considered trivial.

The current soil condition is not considered detrimental to the MoE beneficial use, under an unrestricted land use. The Auditor considers this use to be of limited relevance for the proposed site use, as the impacted area will be effectively capped by the building footprint and/or sealed surfaces.

8.1.2 Human Health

Following the remediation works, residual exceedances of human health screening criteria remained in fill soils for asbestos (all land uses), TRH F2 (HSL A&B) and aldrin+dieldrin (HIL A, B and C).

All results relevant to soils which remain on site are below the adopted human health criteria for the vapour intrusion exposure pathway, as light fraction TRHs are non-limiting for a commercial/industrial land use.

On the basis of the Tier 1 screening results, the Auditor considers that the condition of the site is detrimental to the objectives of this beneficial use due to the potential risks from direct contact and dust inhalation if no management measures were put in place, due principally to potential for ACM to be present in the fill material on site. However, risks would be minimised if the soil was permanently capped with a building slab, paving/hardstand, or with clean fill material. An Ongoing Management of Asbestos in Soils plan has been prepared to specify the management measures which should be implemented, and this is a condition of the Statement of Environmental Audit.

Asbestos contamination in the form of asbestos fines/fibrous asbestos (AF/FA) is potentially present in the soil used to backfill the site. On the basis of the reported exceedances, residual reworked natural and historical underground services potentially containing ACM, the Auditor considers that the condition of the site is potentially detrimental to human health under an unrestricted land use but acceptable with capping and management.

8.1.3 Aesthetics

Near surface soils comprised inclusions of building rubble (concrete, plastics, scrap metal, ceramic tiles). These soils were excavated to 0.3 m, and the geotechnically unsuitable construction and demolition rubble was screened from the stockpiled soil. Stockpiles were visually inspected for evidence of ACM.

No hydrocarbon odours or staining was identified in the sample locations, with field screening of soil samples for volatile organic compounds recording low concentrations.

Given the removal of the fill, and screening of geotechnically unsuitable materials, the current condition of the site is not considered detrimental to the objectives of this beneficial use.

8.1.4 Production of Food, Flora and Fibre

As the residual fill material contains TRH which exceeds criteria for protection of urban ecosystems, the Auditor considers that the current condition of the site is detrimental to the objectives of the beneficial use of *Production of Food, Fibre and Flora*.

It is noted that this beneficial use is not relevant for commercial or industrial uses.

8.1.5 Buildings and Structures

Overall, the soil condition for the beneficial use of buildings and structures was considered to be 'non-aggressive to mild' in accordance with AS2159-2009, based on the following results:

- pH results ranging from 5.8-9.2 pH units; and
- the site is located in an area of potential acid sulfate soil.

TRHs were all reported below the management limits, indicating that buried infrastructure is unlikely to be adversely impacted by the hydrocarbon concentrations.

There is potential that Acid Sulfate Soils (ASS) may impact on deep building footings due to its natural salinity, acidity, sulfate content, corrosiveness and/or encrustation potential, but is not considered a risk to the development.

The Auditor therefore considers that the condition of the site is potentially detrimental to the objectives of this beneficial use for deep structure.

8.2 Consideration of Whether a Certificate or Statement Should be Issued

Groundwater pollution has not been identified at the site and therefore groundwater does not prevent the issuing of a Certificate of Environmental Audit. However, the final soil condition is considered to be detrimental to some beneficial uses of land. Therefore a Certificate of Environmental Audit cannot be issued.

8.3 Determination of Whether the Condition of the Site is Detrimental to the Proposed Development

The Auditor considers that the condition of the site soil is not detrimental to the proposed development, provided exposure to surface soils is minimised. This is considered a reasonable constraint for a commercial development, and will be managed post-development via a Statement conditions requiring that capping of the impacted soil is maintained and an Ongoing Management of Asbestos in Soil document be implemented.

The condition of groundwater is not considered detrimental to the proposed development.

9 Beneficial Use Assessment – Groundwater

9.1 Groundwater Pollution Assessment Process

The auditor has followed the process for assessing groundwater pollution provided in Section 13 of EPA Publication 759, whereby the Auditor must answer the following questions:

- Is groundwater likely to be polluted?
- Is groundwater polluted?
- Are the beneficial uses of the groundwater precluded by the pollution relevant, or, is the site the source of pollution?

9.1.1 Is Groundwater Likely to be Polluted?

The site was formerly used for residential purposes. Imported fill was a potential source of groundwater pollution. In addition, a number of nearby properties were potential or known sources of groundwater pollution, including multiple service stations, as detailed in Section 3.2. Based on these considerations, pollution of groundwater was considered a possibility and intrusive groundwater investigation was warranted.

9.1.2 Is Groundwater Polluted?

The discussion in the following section presents the Auditor's assessment of whether the groundwater is polluted or not. That is, do elevated concentrations in groundwater (above naturally occurring levels) exceed allowable levels for the protected beneficial uses of groundwater?

The aquifer is classified as Segment A1, with the following beneficial uses of groundwater to be protected:

- Water Dependent Ecosystems and Species;
- Potable Water Supply (Desirable);
- Potable Mineral Water Supply (considered not relevant as the site is not within a designated mineral water area);
- Agriculture and Irrigation (Irrigation);
- Agriculture and Irrigation (Stock Watering);
- Water-based Recreation (Primary Contact Recreation);
- Industrial and Commercial;
- Traditional Owner Cultural Values;
- Cultural and Spiritual Values;
- Geothermal Properties (considered not relevant as the groundwater in this area was not found to have geothermal properties); and
- Buildings and Structures.

Based on the groundwater investigations undertaken, concentrations exceed screening criteria for some of these beneficial uses. Although some of the analytes are considered naturally occurring (cobalt, copper, nickel, lead, manganese and zinc). This is further discussed in Section 9.2.

9.1.3 Are Precluded Beneficial Uses Relevant or is the Site the Source?

The site is not considered a source of groundwater pollution, as discussed in Section 9.3.

The risk the groundwater pollution presents to the beneficial uses and the relevancy of those beneficial uses are discussed in Section 9.4.

A summary of the precluded beneficial uses of groundwater due to the groundwater pollution is discussed in Section 9.5.

9.2 Final Groundwater Condition

The most recent groundwater monitoring event (GME) was undertaken in January 2020. Given the soil contamination was not related to the elevated groundwater concentrations (i.e. different contaminants) and active groundwater remediation was not undertaken (off-site source), rebound or long term monitoring of groundwater was not necessary.

Concentrations present in groundwater exceeding the adopted assessment criteria for the protected beneficial uses are summarised in the following table and based on the latest sampling event, where data was available.

It is noted that some low level concentrations of TRH and chloroform were reported in MW01 and MW02 (closest to the off-site service station). MW01 was re-tested using silica gel clean up methodologies. The silica gel clean up results were reported to be below limit of reporting (LOR). The chloroform results were compared to WHO drinking water guidelines, and found to be below this criteria (6 and 10 µg/L for MW01 and MW02 respectively, compared to a criteria of 300 µg/L), the chloroforms are likely a result of leaking mains water.

Table 16: Groundwater Results Exceeding Adopted Tier 1 Criteria

Location	Contaminant (mg/L)	Tier 1 Criteria exceeded* (mg/L)
MW1	Cobalt (0.006)	MWG (0.001)
	Copper (0.017)	MWG (0.0013)
	Lead (0.035)	DWG (0.01) MWG (0.0044) FWG (0.0034)
	Manganese (0.21)	RWG (0.1) LIWG (0.2)
	Nickel (0.12)	DWG (0.02) MWG (0.07) FWG (0.011) RWG (0.1)
	Zinc (0.26)	MWG (0.015) FWG (0.008)
	pH (6.1)	RWG (6.5-8.5)
MW2	Cobalt (0.002)	MWG (0.001)
	Lead (0.009)	MWG (0.0044) FWG (0.0034)
	Manganese (0.19)	RWG (0.1)
	Nickel (0.009)	FWG (0.011)
	Zinc (0.044)	MWG (0.015) FWG (0.008)
	pH (6.2)	RWG (6.5-8.5)

Location	Contaminant (mg/L)	Tier 1 Criteria exceeded* (mg/L)
MW3	Cobalt (0.005)	MWG (0.001)
	Copper (0.006)	MWG (0.0013)
	Lead (0.005)	MWG (0.0044) FWG (0.0034)
	Manganese (0.14)	RWG (0.1)
	Nickel (0.025)	DWG (0.02) FWG (0.011)
	Zinc (0.093)	MWG (0.015) FWG (0.008)
	pH (4.5)	RWG (6.5-8.5)
MW4	Cobalt (0.002)	MWG (0.001)
	Copper (0.004)	MWG (0.0013)
	Lead (0.002)	FWG (0.0034)
	Nickel (0.016)	FWG (0.011)
	Zinc (0.034)	MWG (0.015) FWG (0.008)
	pH (4.9)	RWG (6.5-8.5)

*Adopted Criteria detailed in Section 5.4:
MWG – marine water guidelines – 95% protection
FWG – freshwater guidelines – 95% protection
DWG – drinking water guidelines
RWG – recreational water guidelines
LIWG – Livestock / Irrigation water guidelines

9.3 Source and Extent of Groundwater Pollution

The assessor did not present a quantitative comparison of elevated groundwater analytes on site with regional data, and therefore this comparison was undertaken by the Auditor.

9.3.1 Background/Regional Pollution

The concentrations of pH, cobalt, copper, nickel, zinc, lead and manganese were above one or more assessment criteria during the GME. A comparison of the up-gradient and down-gradient groundwater exceedances are summarised in the table below. These analytes are not considered site-derived pollution for the following reasons:

- The concentrations of metals and pH were present at levels which may be attributed to naturally occurring aquifer conditions;
- These analytes were not identified as key site-sourced contaminants of concern within the site history; and
- Concentrations of these analytes in soil during site investigation, excavation and remediation/validation works were not indicative of an obvious on-site source.

Therefore, the Auditor considers that the site is not a source or co-source of pH, cobalt, copper, nickel, zinc, lead and manganese pollution in groundwater but indicative of the natural groundwater conditions surrounding the site.

The groundwater investigation was undertaken to understand if there was contamination present beneath the site from up-gradient off-site sources. Concentrations of petroleum hydrocarbon and volatile were not identified at concentrations indicative of a risk to site users.

Table 17: Summary of groundwater contaminant exceedances

Analyte	On-site concentration range (µg/L)		Guidelines values for protected beneficial uses* (µg/L)					Bore/s Exceeding Criteria
	Up-gradient (MW01 to MW03)	Down-gradient (MW04)	MWG	FWG	DWG	RWG	IWRG	
Analytes considered by the Auditor to be natural and hence not pollution								
Cobalt	**6**	**2**	**1**	**-**	-	-	**10**	MW01, MW02, MW03, MW04
Copper	**17**	**4**	**1.3**	**1.4**	2,000	1,000	200	MW01, MW03, MW04
Lead	**35**	2	**4.4**	**3.4**	**10**	50	2,000	MW01, MW02, MW03
Manganese	**210**	32	-	1,900	500	**100**	**200**	MW01, MW02, MW03
Nickel	**120**	**16**	**70**	**11**	**20**	**100**	200	MW01, MW02, MW03, MW04
Zinc	**260**	**34**	**15**	**8**	3,000	5,000	2,000	MW01, MW02, MW03, MW04
pH	**4.5**	**4.9**	-	**-**	**6.5 – 8.5**	**6.5 – 8.5**	**6 – 8.5**	MW01, MW02, MW03, MW04

*Adopted Criteria detailed in Section 5.4:
MWG – marine water guidelines – 95% protection
FWG – freshwater guidelines – 95% protection
DWG – drinking water guidelines
RWG – recreational water guidelines
LIWG – Livestock/Irrigation water guidelines

9.4 Significance (Risk) of Groundwater Pollution

9.4.1 Extractive Groundwater Uses

Based on Segment A1, protected extractive uses of groundwater include potable water supply, primary contact recreation, irrigation, stock watering and commercial and industrial use. As per Section 13.7 of EPA Publication 759, the relevancy of beneficial uses only needs to be considered at the site, for non-source sites.

The proposed development will not include any extractive use of groundwater. It is also noted that extractive use on site in the future is unlikely, based on the natural aquifer characteristics (relatively low yield and concentrations of inorganics and metals), availability of mains water, highly urbanised site location and the building footprint (covering the majority of the site).

9.4.2 Water Dependent Ecosystems and Species, Traditional Owner Cultural Values, Cultural and Spiritual Values

Concentrations of cobalt, copper, nickel, zinc and lead exceeded the WDES criteria on site. Concentrations were considered naturally occurring and do not represent pollution.

The groundwater quality objectives for WDES apply at the point of discharge to surface water and no surface water bodies exist on site. The Auditor considers that in the case where groundwater is not proposed to be extracted, TOCV and CSV should also be applied at the point of discharge. Furthermore for non-source sites, as per Section 13.7 of EPA Bulletin 759, off-site beneficial uses do not need to be

considered when evaluating potential impacts of groundwater pollution, and therefore these beneficial uses are not relevant at this site.

9.4.3 Other Non-Extractive Groundwater Uses

Based on the depth to groundwater, the only relevant on-site non-extractive groundwater use relates to building foundations that may extend into groundwater, that is Buildings and Structures. As per Section 13.7 of EPA Bulletin 759, for non-source sites the relevancy of beneficial uses only needs to be considered at the site.

Groundwater is classified as 'non-aggressive to mild' based on AS2159-2009 and therefore Buildings and Structures is not a precluded beneficial use, based on the following:

- pH in groundwater ranged from 4.5 to 6.1 pH units and is considered slightly acidic;
- Chloride in groundwater ranged from 16 to 190 mg/L and was considered to be naturally occurring; and
- Sulfate (as SO_4) concentrations in groundwater ranged from 17 to 56 mg/L and were considered to be naturally occurring.

9.4.4 Consideration of Potential NAPL

No measurable NAPL or sheen has been reported for groundwater from on-site or off-site wells.

9.4.5 Consideration of Potential Vapour Risks

There were no detectable concentrations of volatile contaminants.

9.5 Summary of Precluded Beneficial Uses of Groundwater

A summary table of the currently precluded beneficial uses is provided in Table 18: below and is consistent with Attachment 3 of EPA Publication 840. As the concentrations of potential contaminants in groundwater are considered to be natural, uses of groundwater therefore can not be precluded, but should still be proven to be safe for that proposed use as concentrations exceed some adopted criterion.

Table 18: Precluded Beneficial Use Summary Table

Precluded Beneficial Use	Contaminants
Water Dependent Ecosystems and Species[1]	Cobalt (n), copper (n), lead (n), nickel (n), zinc (n).
Potable Water Supply	Lead (n)and nickel (n)
Potable Mineral Water Supply	Not Applicable at this site.
Agriculture and Irrigation (Irrigation)	Manganese
Agriculture and Irrigation (Stock Watering)	None
Water-based Recreation (Primary Contact Recreation)	Manganese (n) and pH (n)
Industrial and Commercial[2]	None
Traditional Owner cultural values[1]	Refer to WDES – not applicable on site.
Cultural and spiritual values[1]	Refer to WDES – not applicable on site.
Geothermal Properties	Not applicable at this site.

Precluded Beneficial Use	Contaminants
Buildings and Structures	Not precluded.

(n) naturally occurring; (b) = background/regional pollution; (a) = aesthetic.
1 Based on concentrations in the vicinity of the site, whilst criteria apply at the point of exposure/receptor.
2 No chromium criteria are available for commercial or industrial use, as suitability for these uses are highly dependent on the specific use proposed. It is recommended that suitability for a specific commercial or industrial use is evaluated on an individual basis.

9.6 Determination of Whether a Certificate or Statement Should be Issued

Groundwater pollution has not been identified at the site and therefore groundwater does not prevent the issuing of a Certificate of Environmental Audit. However, soil contamination is detrimental to some beneficial uses of land and therefore a Certificate of Environmental Audit cannot be issued.

9.7 Determination of Whether the Condition of the Site is Detrimental to the Proposed Development (Statement of Environmental Audit)

The proposed development does not propose extractive use of groundwater and groundwater pollution has not been identified, therefore, the condition of groundwater is not considered detrimental to the proposed development.

10 Beneficial Use Assessment – Surface Water

The Auditor considers that the current condition of the site is not detrimental to the relevant beneficial uses of surface water on the basis that:

- There are no surface water bodies located within the boundaries of the site;
- Erosion of surface soils is unlikely due to the effective capping of the site once the proposed development is constructed; and
- The potential receiving waters (mangrove community of the Outer Estuary of Darwin Harbour) are located approximately 160 m away, and the processes of dispersion and sorption would act to reduce the contaminant levels.

Based on the above, the Auditor considers that the condition of the site is not detrimental to the beneficial uses of surface water defined in SEPP (Waters).

11 Beneficial Use Assessment – Ambient Air

The Auditor has assessed whether or not the site is detrimental to ambient air (defined as air outside a building) on the basis of:

- Land pollution, specifically vapour emissions from polluted soils (i.e. volatile hydrocarbons in soil and soil vapours) and landfills;
- Groundwater pollution, specifically vapour emissions from polluted groundwater (i.e. volatile hydrocarbons dissolved in groundwater and NAPL); and
- Surface water pollution, specifically vapour emissions from polluted surface waters.

The risks to on-site receptors from vapour emissions into ambient and indoor air is within acceptable levels for the proposed development based on the results of soil and groundwater investigations.

In accordance with EPA Publication 788, the Auditor is required to consider the presence of open and closed landfills within 500 m of the site and assess the risk of any resultant landfill gas impacts. No landfills were identified within 500 m of the site.

Based on the above, the Auditor considers that the condition of the site is not detrimental to the beneficial uses of air defined in SEPP (Air Quality Management) and SEPP (Ambient Air Quality).

12 Other Factors Affecting Use of the Site

EPA Publication 759 notes that a range of other factors (other than land, groundwater, surface water and air) may be identified that do not affect a beneficial use of the site, but may be relevant to the development of, or activities at, the site. Such factors are noted below and repeated in the Statement of Environment Audit in the section titled "Other Related Information":

- Groundwater at the site contains naturally elevated concentrations of pH, cobalt, copper, nickel, lead, manganese and zinc. The levels are considered typical of the natural groundwater quality surrounding the site and do not constitute pollution in accordance with clause 10(2)(c) of State environment protection policy (Waters) 2018.
- If groundwater is to be extracted from the site, advice including testing, should be sought from a suitably qualified professional to ensure the groundwater is suitable for the intended use.
- Any material excavated from the site and disposed of off site should be classified and managed in accordance with IWRG 621 (or its relevant future revisions) or NT EPA equivalent. Analysis of fill materials should include asbestos and PFAS due to the previous on-site asbestos contamination and importation of fill materials from a Defence site;
- Not all land uses for which the land is considered suitable by this audit may be allowed under the existing zoning;
- A separate Environmental Audit Report and Statement of Environmental Audit will be issued for Lot B (B1, B2 and B3) and another for the Road Reserve and Lot C; and
- In accordance with Section 53ZE of the Act, the owner/occupier of the site must provide a copy of this Statement to any person who becomes or proposes to become an occupier of the site.

13 Conclusions

13.1 Audit Requirement

This audit was requested by the NT EPA to assess the suitability of the site for the proposed use. The proposed development is for a police station with no to very little access to soil due to substantial concrete surfaces, refer to Attachment 2 for the development plan.

13.2 Verification of Assessor's Conclusions

Appendix 3 of EPA Publication 759 states that, '*Where another person has undertaken the site assessment, the audit report should include the auditor's verification of the assessor's conclusions in relation to these issues.*' Among SLR And Agon's conclusions are the following:

- *DIPL commenced demolition of former public housing buildings in mid-2019. The majority of the demolition waste was removed and a portion of crushed concrete rubble was screened and spread across the site as general fill.*
- *Fill was observed to approximately 0.3 mbgl, with deeper pockets of reworked natural to 0.8 mbgl, overlying natural weathered rock or rock. At the completion of works all fill was removed, with natural or reworked natural soils remaining.*
- *Investigations of the site identified contamination in the form of asbestos (bonded fragments and fibres) and pesticides (aldrin and dieldrin) in soils.*
- *SLR developed a remediation strategy for the site. Geotechnically unsuitable material was excavated and screened for reuse or disposal. The excavated surfaces and stockpiles were visually inspected for bonded fragments of asbestos. ACM debris was removed for off-site disposal.*
- *The civil contractor reinstated and compacted the excavation areas without the presence of an SLR consultant. Visual clearance of the stockpiles reused as backfill on site was not undertaken. Further, the stockpiles of crushed concrete were not inspected or resampled to confirm suitability prior to reuse.*
- *Subsequently SLR does not have sufficient evidence to comment on the suitability of the material used as backfill on site. However, the potential exposure to site users from asbestos-impacted material inadvertently re-used as backfill is not considered to pose an undue exposure risk to site users based on the proposed development plan (i.e. police station with limited soil access), provided that the surface covering is maintained and access to soil prevented;*
- *SLR consider that persons conducting future excavations may encounter asbestos impacted soils or fragments of ACM debris. As a precautionary approach SLR recommend that the following is included in workplans for excavation works at site: an Asbestos Management Plan (AMP), unexpected finds protocol and associated training.*
- *SLR consider that the site has been suitably remediated and validated for the proposed commercial use (i.e. police station) provided access to soil is restricted (i.e. concrete/paved surface coverings, minimal gardens).*
- *Agon found that the soil investigations identified fill up to 1 m, consistent with reworked natural soils. Bonded ACM fragments and fibres where identified in the soil, with concentrations of OCPs exceeding residential criteria (below commercial criteria). The fill was largely excavated from Lot A, and screened before used as backfill within Lot A. Soil from elsewhere on site (i.e. soils which exceeded residential criteria but below commercial criteria) was also used to backfill Lot A.*
- *Agon reported concentrations of TRH, ether oxygenates, BTEX and halogenated volatile organics within groundwater were below the adopted assessment criteria, minor concentrations of chloroform were detected in groundwater. Some metals were reported to exceed site-specific criteria.*

The Auditor generally concurs with the above findings. Due to the potential for residual asbestos to be present in fill beneath the site and the construction of the building footprint which covers the entirety of the site, the Auditor considers the implementation of an asbestos management plan (Ongoing management of Asbestos in Soils – Sub Slab Works Only prepared by SLR) will prevent an unacceptable human health risk.

13.3 Auditor's Conclusions

The Auditor considers that the final condition of the site is detrimental to some of the relevant beneficial uses defined in SEPP (Land), i.e. *Protection of Human Health*, due to asbestos risks potentially present in the residual fill/backfill under an unrestricted land use (for example, excavation of fill beneath the sealed surface). As such, a CEA cannot be issued.

However, an SEA has been issued which states that the condition of the site is acceptable for the beneficial uses of '*Sensitive use – High Density*, '*Public Open Space*' , *'Commercial' and 'Industrial*' uses subject to the SEA conditions.

The Auditor considers that the condition of the site is not detrimental to the relevant beneficial uses defined in SEPP (Waters) for groundwater and surface water, SEPP (Air Quality Management) and SEPP (Ambient Air Quality).

14 References

Legislation and Regulations

Environment Protection Act 1970 (Vic) (Act No. 8056/1970) Victoria.

Planning and Environment Act 1987 (Vic) Section 12 (2)(a) Minister's Direction No. 1 Potentially Contaminated Land. (Act No. 45/1987. Direction Amended 27 September 2001).

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USEPA (2019) *Regional Screening Level (RSL) Summary Table (TR=1E-6, HQ=1).* At: <http://www.epa.gov>.

Guidelines and Policies

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ANZG (2018), *Australian and New Zealand Guidelines for Fresh and Marine Water Quality*. At: < https://www.waterquality.gov.au>

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NHMRC (2018). *Australian Drinking Water Guidelines 6 2011*, Version 3.5 updated August 2018, National Health and Medical Research Council.

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Northern Territory Waste Management and Pollution Control Act 1998 (WMPC Act) .

Northern Territory Environment Protection Agency (NT EPA) Asbestos Disposal in the Northern territory – Information on the requirements for the disposal of Asbestos in the Northern Territory. Not dated.

Northern Territory Environment Protection Agency (NT EPA) Guideline for the Preparation of an Environmental Management Plan, May 2015.

EPA Victoria Publications and Industrial Waste Resource Guidelines

EPA Victoria Publication 759.3. *Environmental Auditor (Contaminated Land): Guidelines for Issue of Certificates and Statements of Environmental Audit*. December 2015.

EPA Victoria Publication 840.2. *The Cleanup and Management of Polluted Groundwater*, April 2016.

EPA Victoria Publication 865.12, *Environmental Auditor Guidelines for Appointment and Conduct*, December 2016.

EPA Victoria Publication 953.2. *Environmental Auditor Guidelines for Conducting Environmental Audits*. August 2007.

EPA Victoria Publication 1147.2. *Environmental Auditor Guidelines – Provision of Environmental Audit Reports, Certificates and Statements*. December 2015.

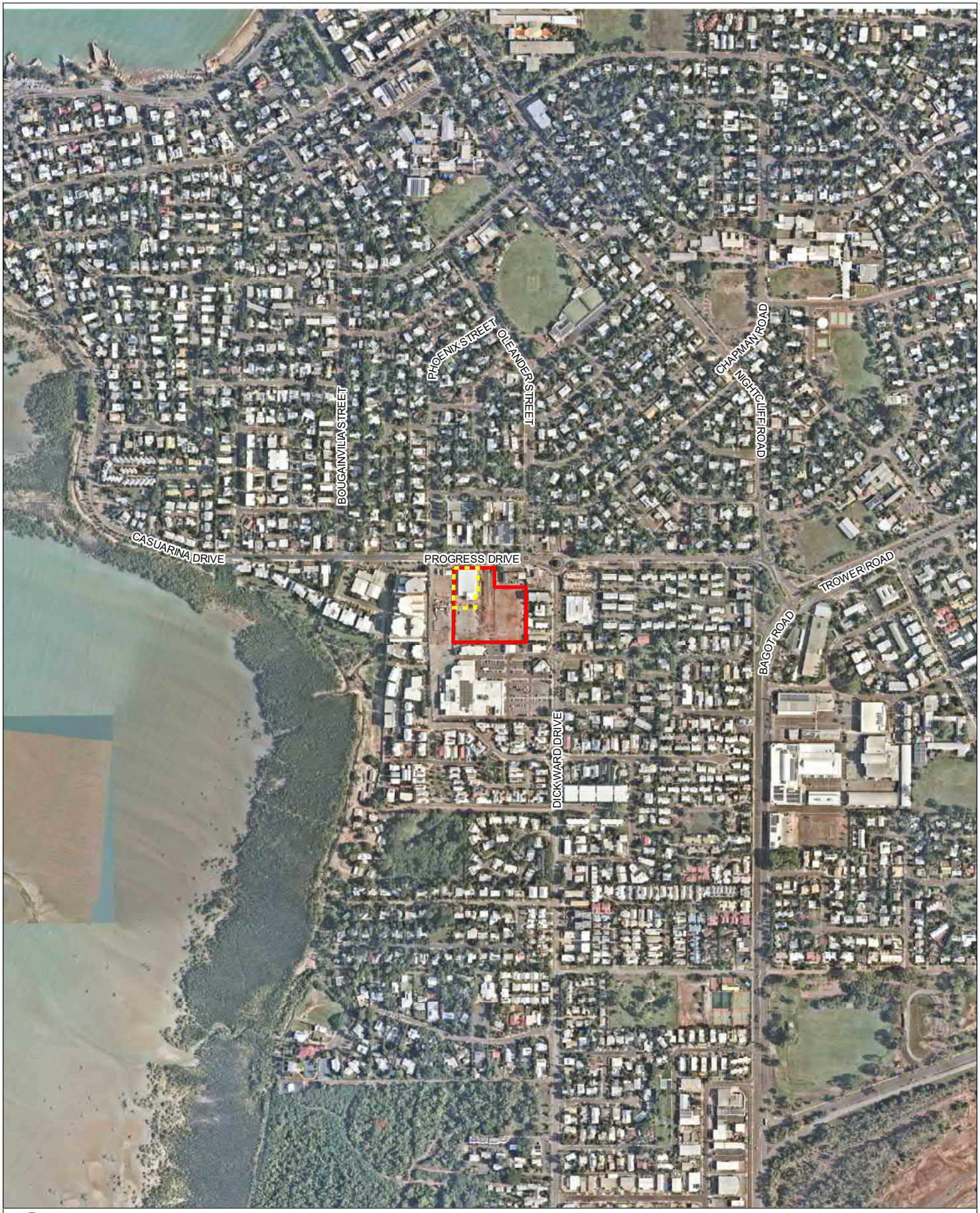
EPA Victoria IWRG 621. *Soil Hazard Categorisation and Management*. June 2009.

Victorian Environment Protection (Industrial Waste Resource) Regulations 2009

Attachments

Attachment 1: Site Location Plan
Attachment 2: Development Plan
Attachment 3: Historical Site Layout
Attachment 4: Soil Investigstion Locations
Attachment 5: Groundwater Investigation Locations
Attachment 6: Conceptual Site Model
Attachment 7: SLR Stockpile Locations
Attachment 8: Validation Locations

Attachment 1: Site Location Plan



0 50 100 m

Coordinate System:	GDA 1994 MGA Zone 52
Scale:	1:10,000 at A4
Project Number:	680.10679
Date:	24-Feb-2021
Drawn by:	JG

Proposed Residential Allotments - Lot A

Project Area

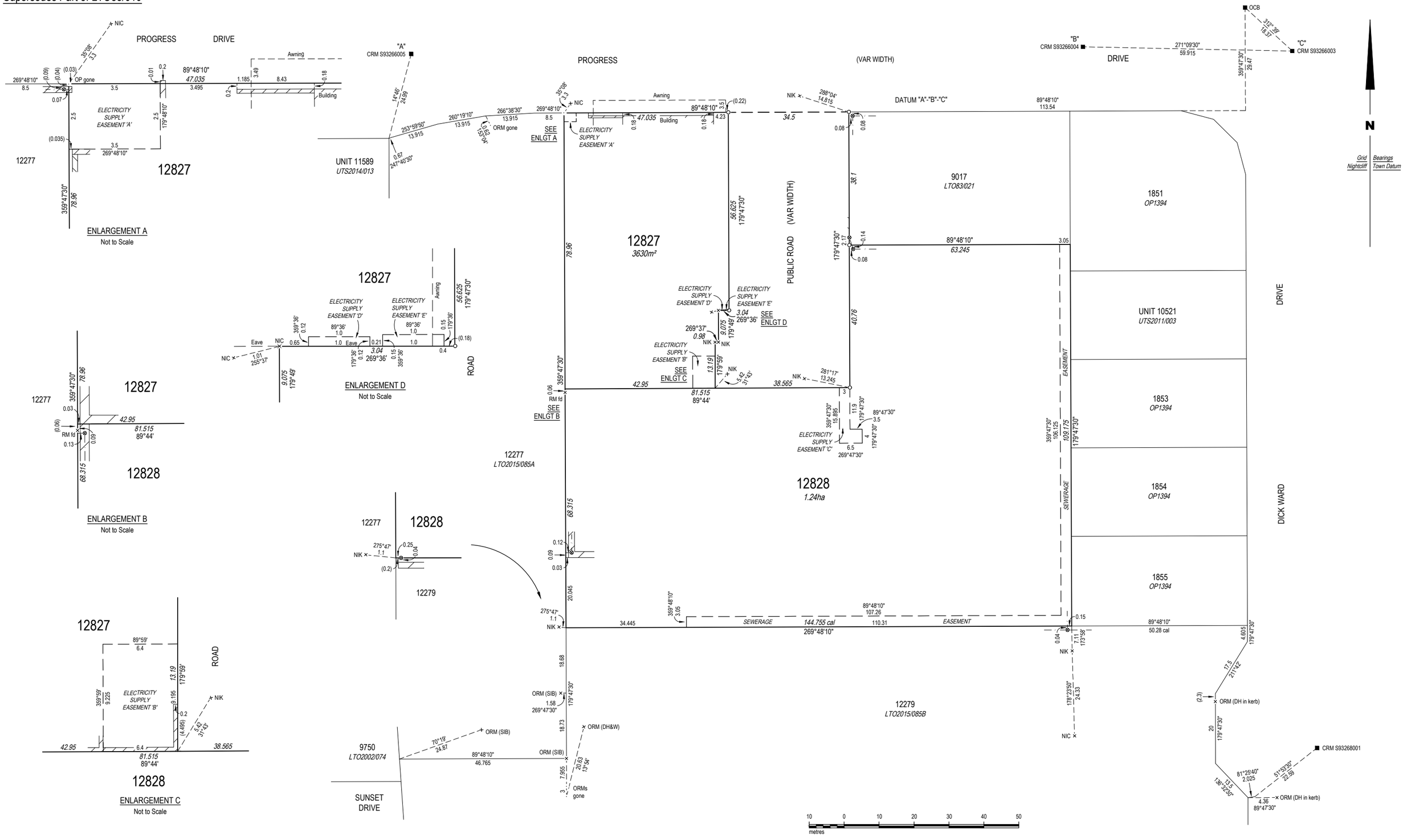
JOHN STOKES SQUARE

Site Locality

FIGURE 1

\\au.slr.local\Corporate\Projects-SLR\620-BNE\680-DRW\680.10679 - John Stokes Square\GIS\680.10679 F01 Site Locality.mxd

Supersedes Part of LTO83/010



SURVEYOR'S CERTIFICATE

I, Anietie John Ekpo
hereby certify that the survey represented on this plan was carried out by me or under my immediate supervision and was completed on 12/10/2021, and that this survey has been executed in accordance with the Licensed Surveyor's Act and the directions thereunder.

Licensed Surveyor — Date 25/10/2021

L.T.O. REGISTRATION

Lodged on . . . . . at . . . . .
Instrument Number . . . . . .
Registered on . . . . . at . . . . .
by me . . . . . .
Registrar-General

EASEMENTS TO BE CREATED BY REGISTRATION OF THIS PLAN	
DESCRIPTION	IN FAVOUR OF
ELECTRICITY SUPPLY 'A'	POWER AND WATER CORPORATION
ELECTRICITY SUPPLY 'B'	POWER AND WATER CORPORATION
ELECTRICITY SUPPLY 'C'	POWER AND WATER CORPORATION
ELECTRICITY SUPPLY 'D'	POWER AND WATER CORPORATION
ELECTRICITY SUPPLY 'E'	CITY OF DARWIN

EXISTING EASEMENTS		
DESCRIPTION	IN FAVOUR OF	ORIGIN
SEWERAGE	POWER AND WATER CORPORATION	LTO83/010

SURVEY APPROVAL

I, Robert Ian Sarib, the Surveyor-General, being satisfied that Part 5 of the Planning Act has been complied with:

(i) approve the survey under section 49 of the Licensed Surveyors Act;
(ii) acknowledge, on behalf of the Service Authorities designated, the vesting of the Service Easements shown hereon; and
(iii) accept on behalf of the Service Authorities specified, the land designated as roads or reserves hereon vested pursuant to section 64 of the Planning Act and section 7 of the Control of Roads Act

Surveyor-General — Date 3 November 2021

Note
Dimensions of unmarked boundaries and connections are original unless otherwise shown
Public Road is vested in the City of Darwin
▨ denotes Concrete Wall
NIC denotes Nail in Concrete
NIK denotes Nail in Kerb
SIB denotes Spike in Bitumen

Version 1 - survey plan as lodged

LOTS 12827 AND 12828
SUBDIVISION OF LOT 9077
TOWN OF NIGHTCLIFF

Drawn by: Earl James & Associates (11934) 13/10/2021
Examined by: Earl James & Associates 21/10/2021
Map Reference
AZIMUTH — Assumed from UTS2014/013 — Observed at
SCALE 1:1000 (A3)

LTO2021/022

Attachment 2: Development Plan



H:\Projects-SLR\680-DRW\680.10679 DIPL John Stokes Square ERA\06 SLR Data\01 CAD\GIS\GIS\D SLR\RandLotC.mxd

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Project No.:	680.10679
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Drawn by:	Sarah Doherty
Scale:	1:1,000
Sheet Size:	A4
Projection:	GDA 1994 MGA Zone 52

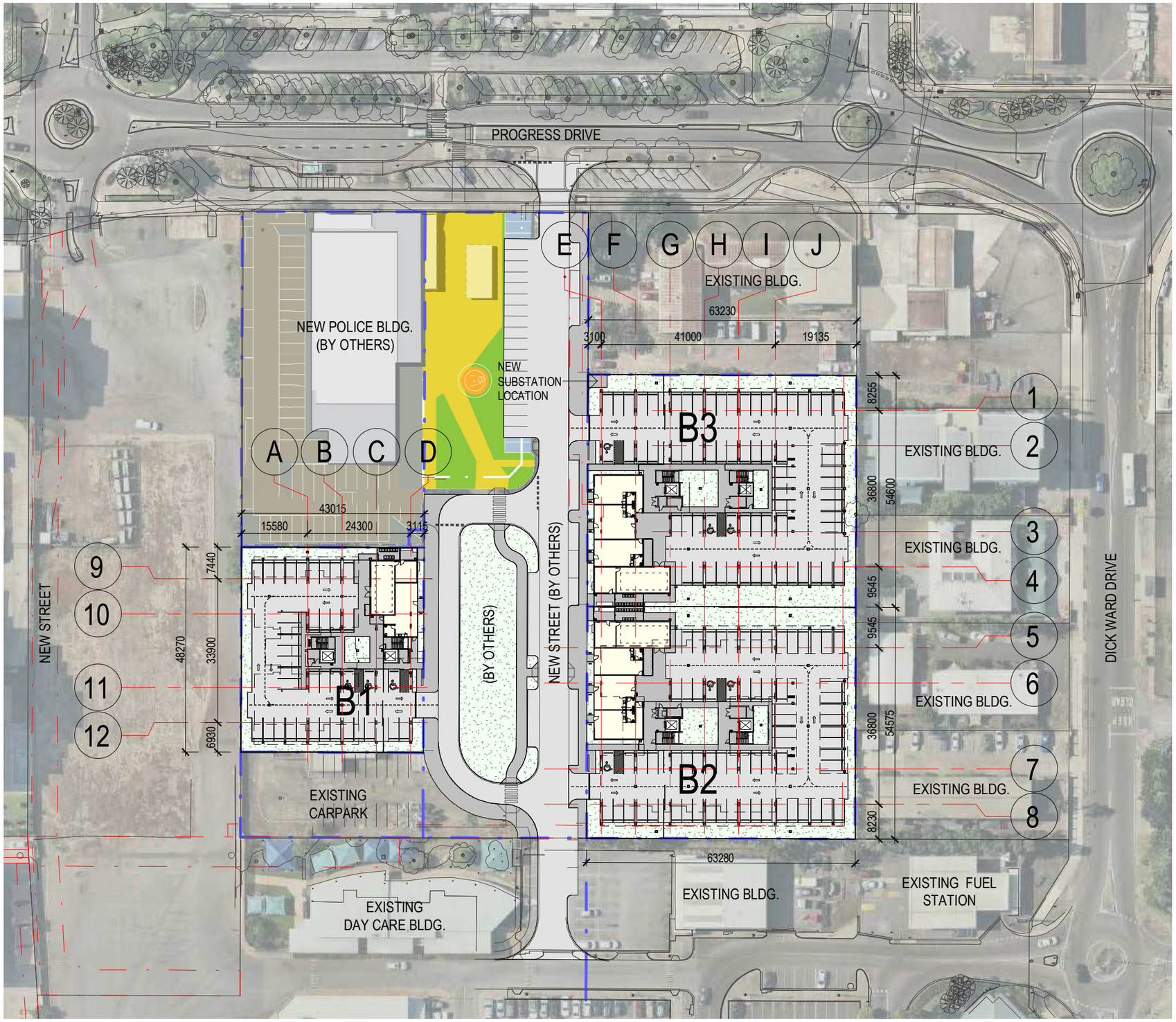
N
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E
S

Imagery sourced from Nearmaps June 2020

Figure 2

0 5 10 20 Metres

Future Land Use Classifications



B1 - CARPARK SCHEDULE	
Type	Count
5500 x 2500	34
5500 x 2500 NGO Carpark	2
5500 x 2700 DDA	2
5500 x 2700 NGO DDA Carpark	1
TOTAL CARPARK	39

B2 - CARPARK SCHEDULE	
Type	Count
5500 x 2500	60
5500 x 2500 NGO Carpark	6
5500 x 2700 DDA	2
5500 x 2700 NGO DDA Carpark	1
TOTAL CARPARK	69

B3 - CARPARK SCHEDULE	
Type	Count
5500 x 2500	60
5500 x 2500 NGO Carpark	6
5500 x 2700 DDA	2
5500 x 2700 NGO DDA Carpark	1
TOTAL CARPARK	69

CARPARK SUMMARY	
LOT	Count
B1 - CARPARK	39
B2 - CARPARK	69
B3 - CARPARK	69
TOTAL CARPARK	177

0 5000 20000 40000 50000

1:1000mm

SITE PLAN

1 : 1000

100% CONCEPT DESIGN

No.	DESCRIPTION	DATE	INIT.	DEPT/COMPANY
3	RE-DESIGN FOR REVIEW AND COORDINATION	15/08/19	DKJ	
2	100% DESIGN CONCEPT	02/08/19	DKJ	
1	95% DOCUMENTATION	25/07/19	DKJ	
0	50% DESIGN CONCEPT	11/07/19	DKJ	

AMENDMENTS PLOTTED: 23/08/2019 9:20:04 AM

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ABN 4815 4057 995

DKJ JOB No: 193041

DRAWN	CHECKED
BM	AW
DATE 25/07/19	DATE 25/07/19
DESIGNED	CHECKED
DKJ projects.architecture	AW
DATE 25/07/19	DATE 25/07/19
DESIGN PROJECT LEADER	NTG PROJECT MANAGER
AW	MS
DATE 25/07/19	DATE 25/07/19

Northern Territory Government

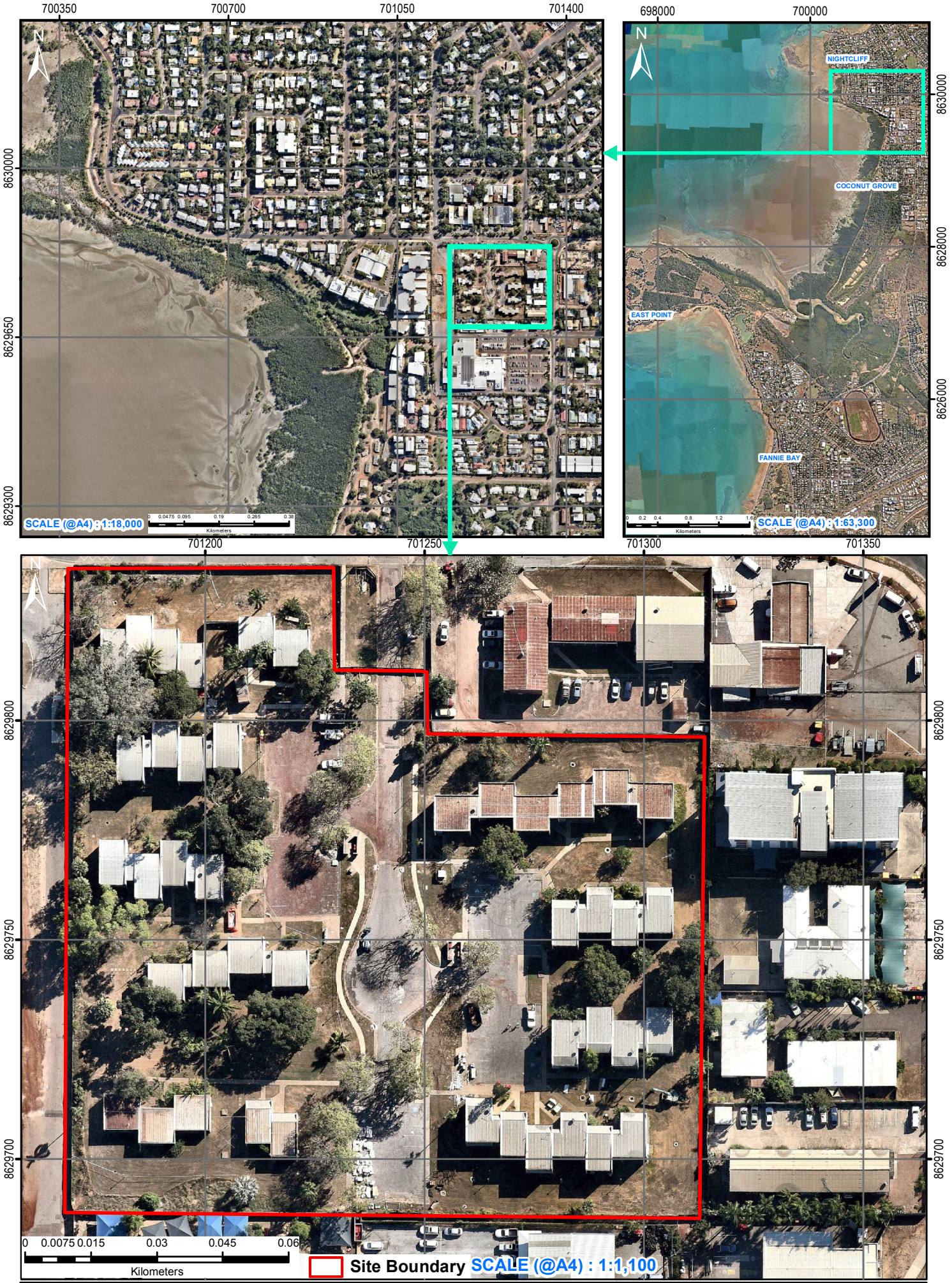
DARWIN REGION
LOT 9077, PROGRESS DRIVE, NIGHTCLIFF

REDEVELOPMENT OF JOHN STOKES SQUARE - RESIDENTIAL PRECINCT

SITE PLAN

NTG PROJECT No.	NTG ASSET No.	SHEET No.	NTG DRAWING No.	AMENDMENT	SHEET SIZE
HOD33630	86/22030	02 OF 25	B19-13544	3	A3

Attachment 3: Historical Site Layout



Project: Soil Contamination Investigation – John Stokes Square, 47 Progress Drive, Nightcliff NT			Coordinate System: GDA_1994_MGA_Zone_52	GREENCAP Going Further in Managing Risk
Figure1: Site Location	Job Ref: J163803	Date: Sep. 2019	Author: Sam.K.	Checked: Stuart C.

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Attachment 4: Soil Investigation Locations

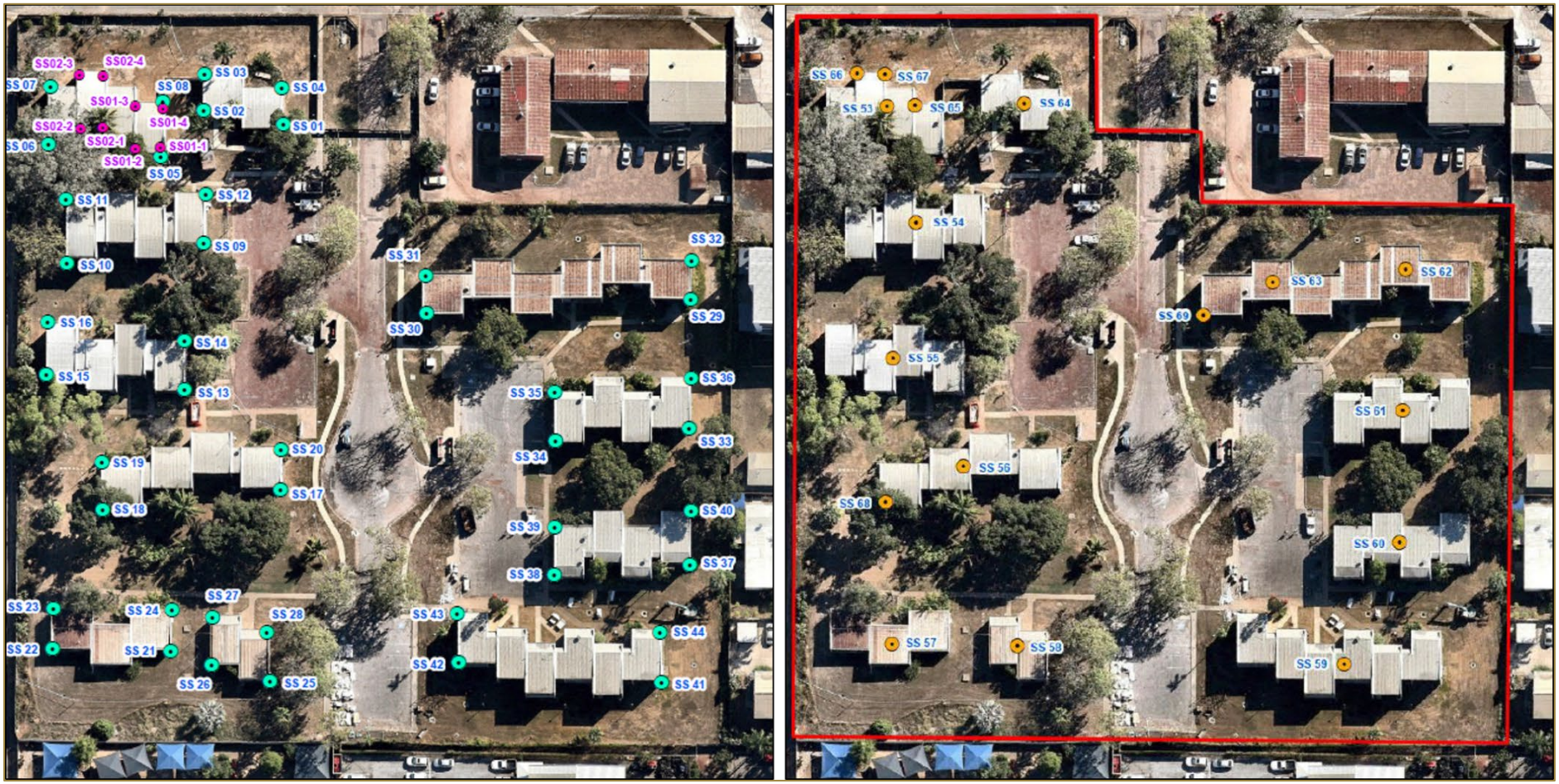


Figure 6: Previous Surface Sample Locations

Source: Greencap 2019a and 2019b (left) and Greencap 2019c (right)

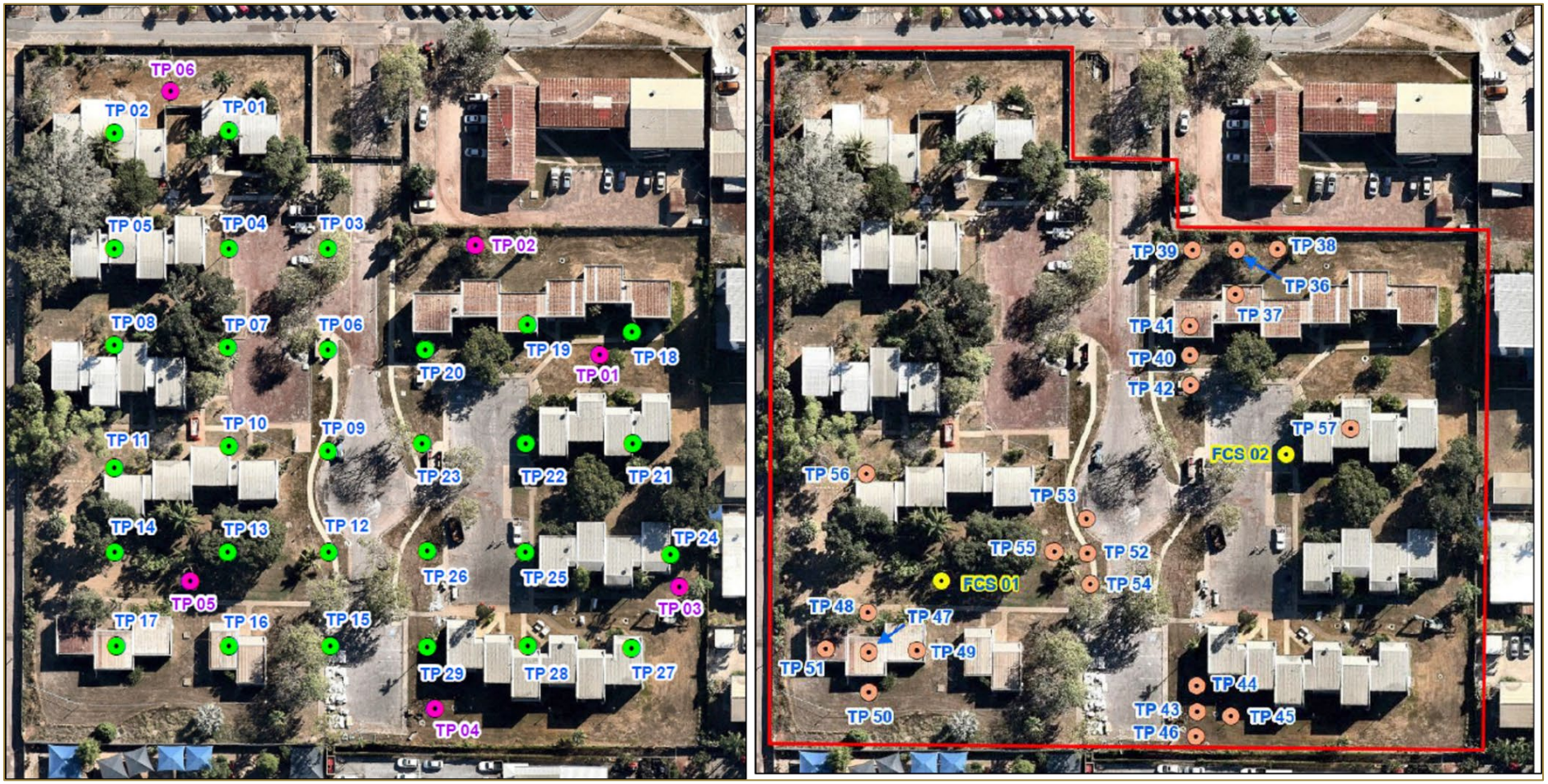


Figure 7: Previous Test Pit Sample Locations
Source: Greencap 2019a and 2019b (left) and Greencap 2019c (right)

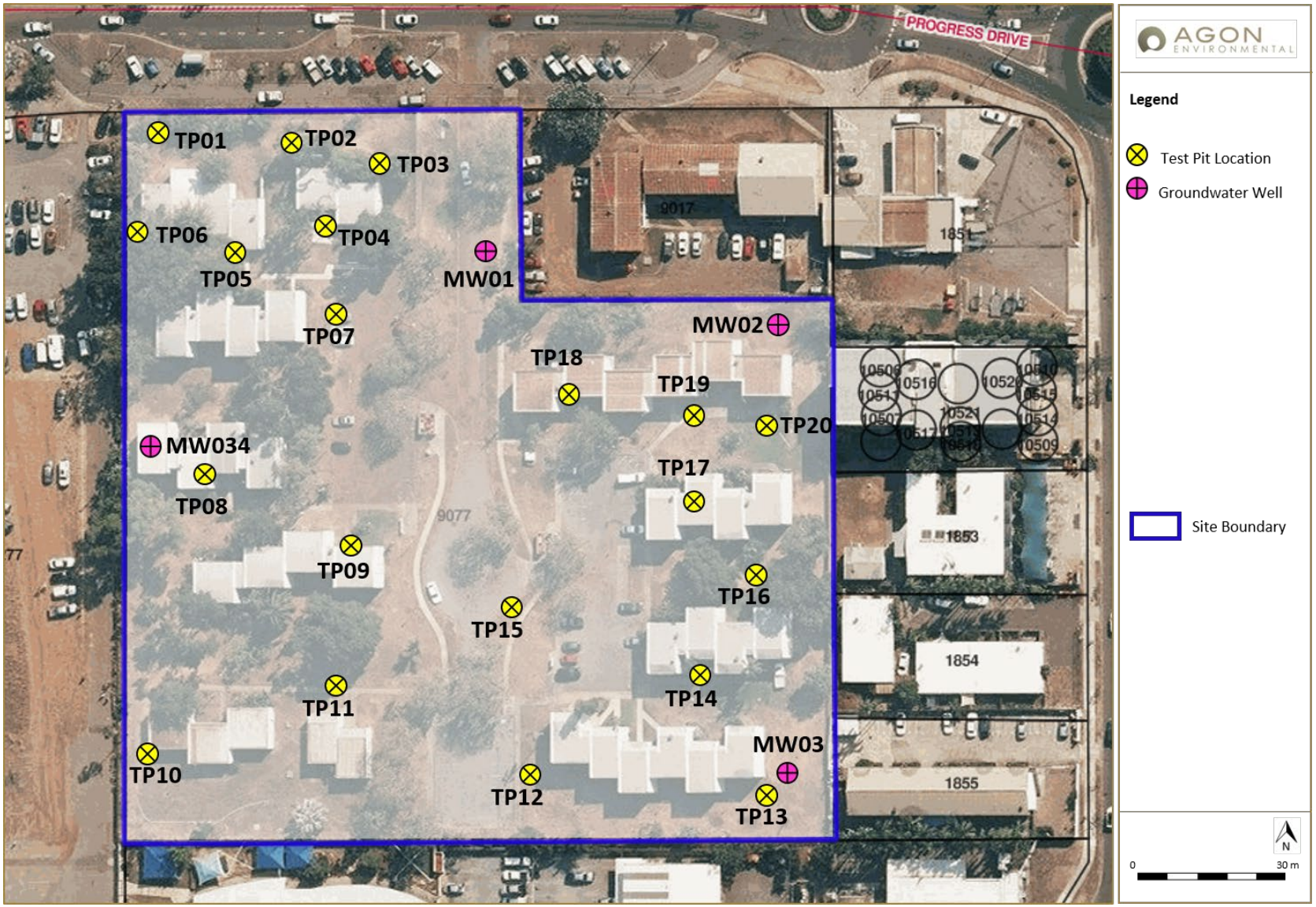


Figure 9: Agon Sample Locations

Source: NR Maps

Attachment 5: Groundwater Investigation Locations

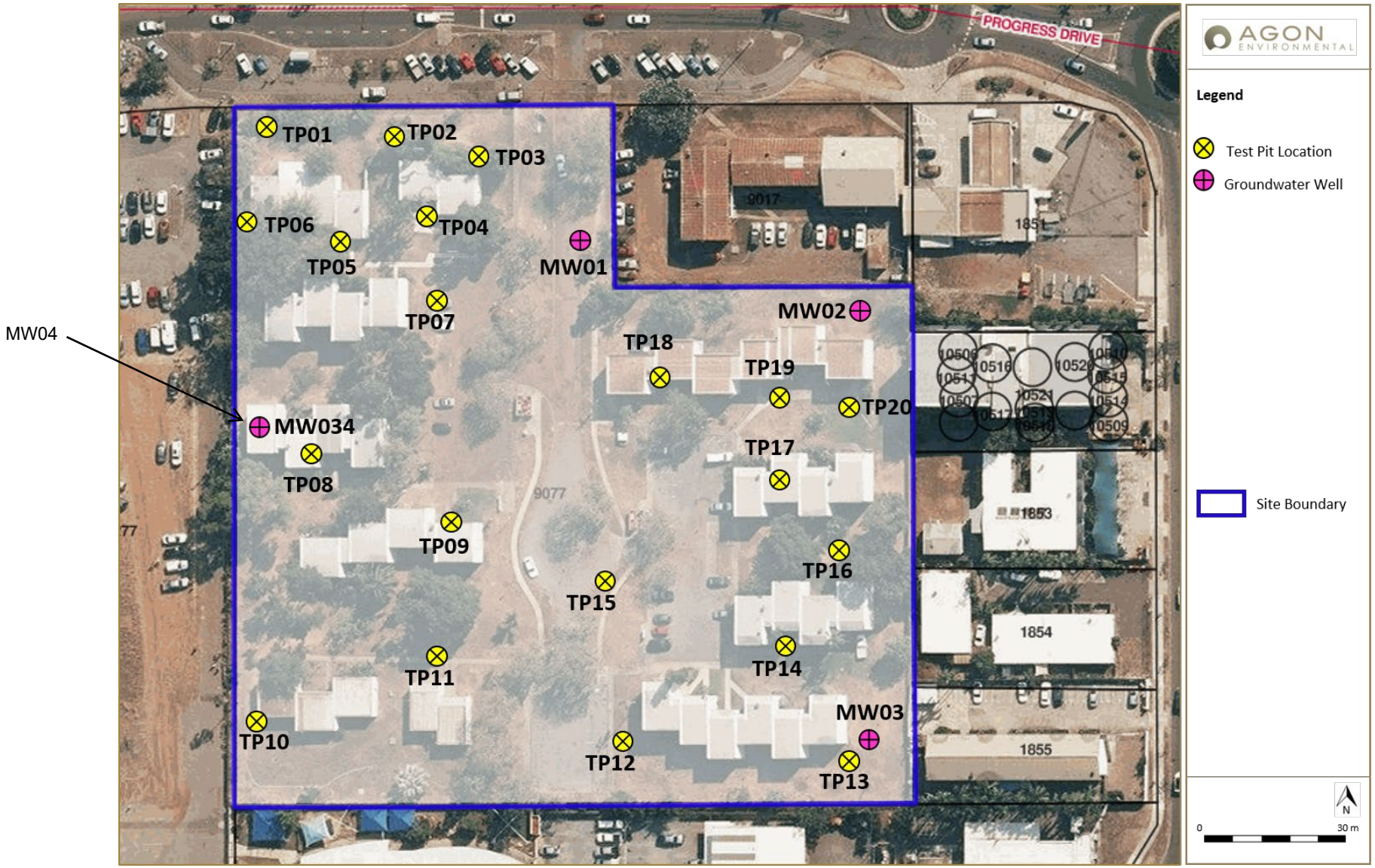


Figure 9: Agon Sample Locations

Source: NR Maps

Attachment 6: Conceptual Site Model

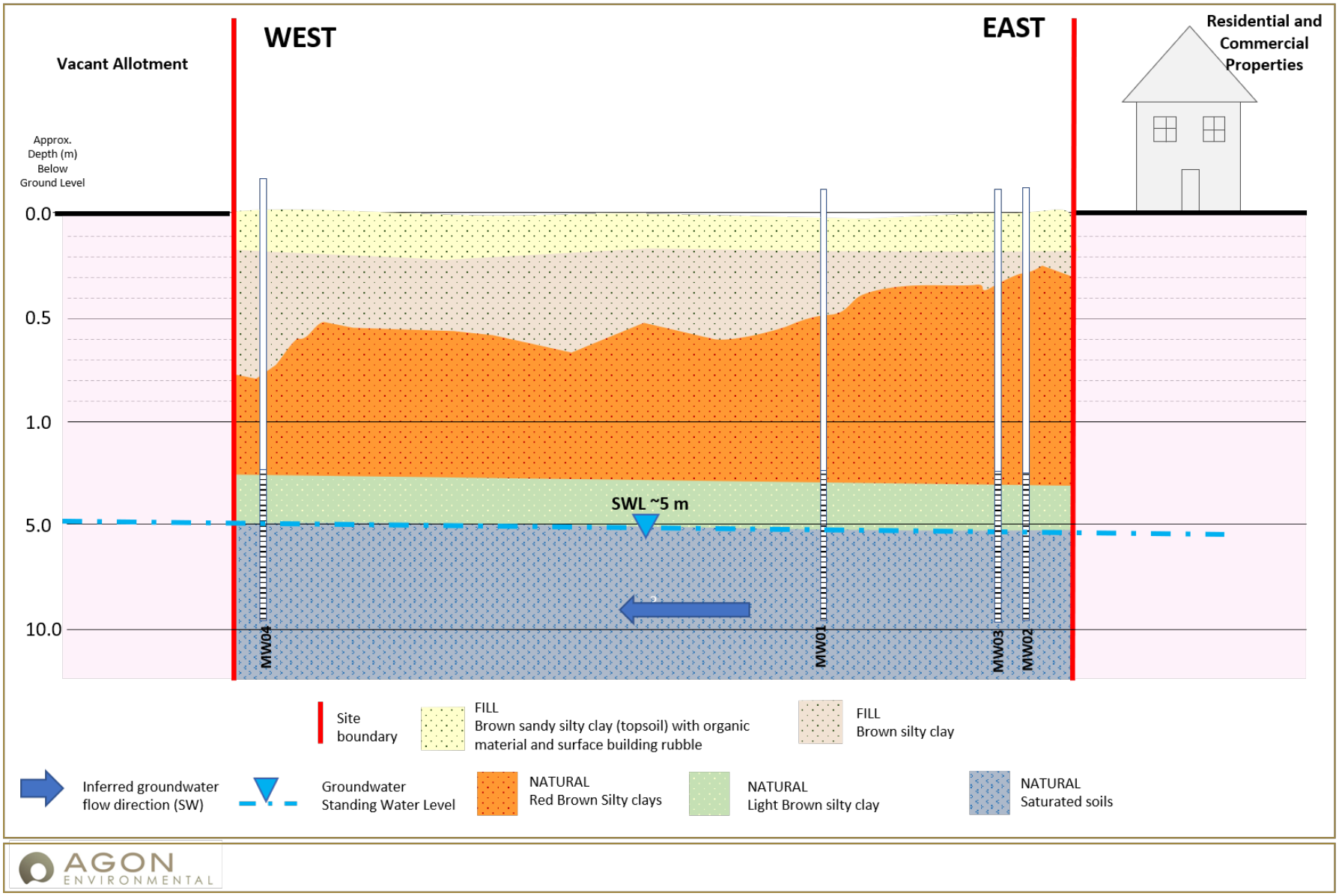
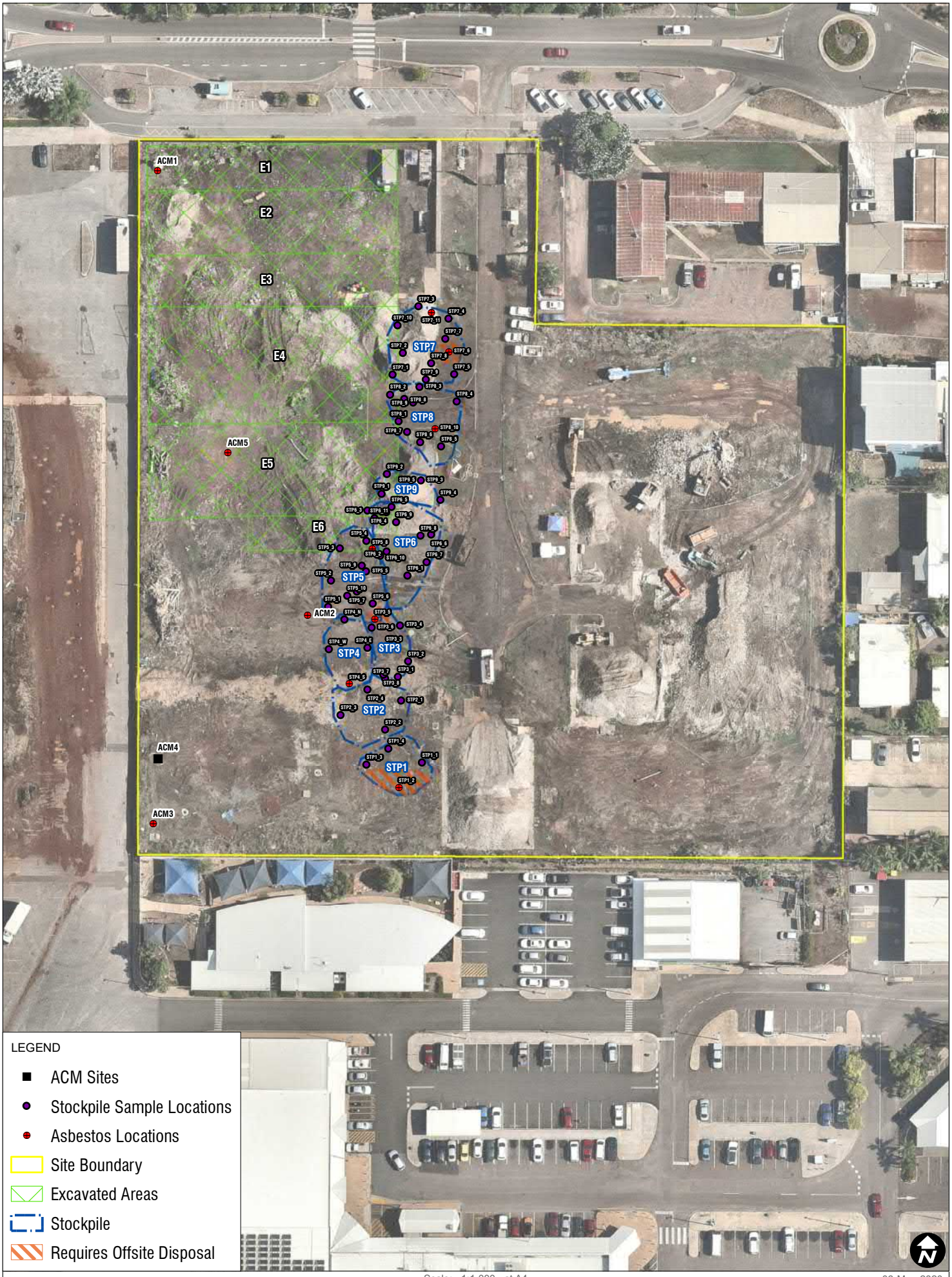


Figure 11: Graphical Conceptual Site Model

Attachment 7: SLR Stockpile Locations



Scale: 1:1,000 at A4
GDA 1994 MGA Zone 52

06-May-2020
680.10679

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Data Source: © Nearmap 2020
Imagery Date: 3rd Nov 2019

John Stokes Square Redevelopment Headworks
Environmental Risk Assessment
Stockpile Locations and Sampling Regime

FIGURE 1

H:\Projects-SLR\610-SrvSYD\680-DRW\680.10679\68010679 Stockpiles.mxd

Attachment 8: Validation Locations



C:\Users\seperkins\Documents\saa_GIS\JSS\Ltd AUSS - Lot A - Site locality.mxd

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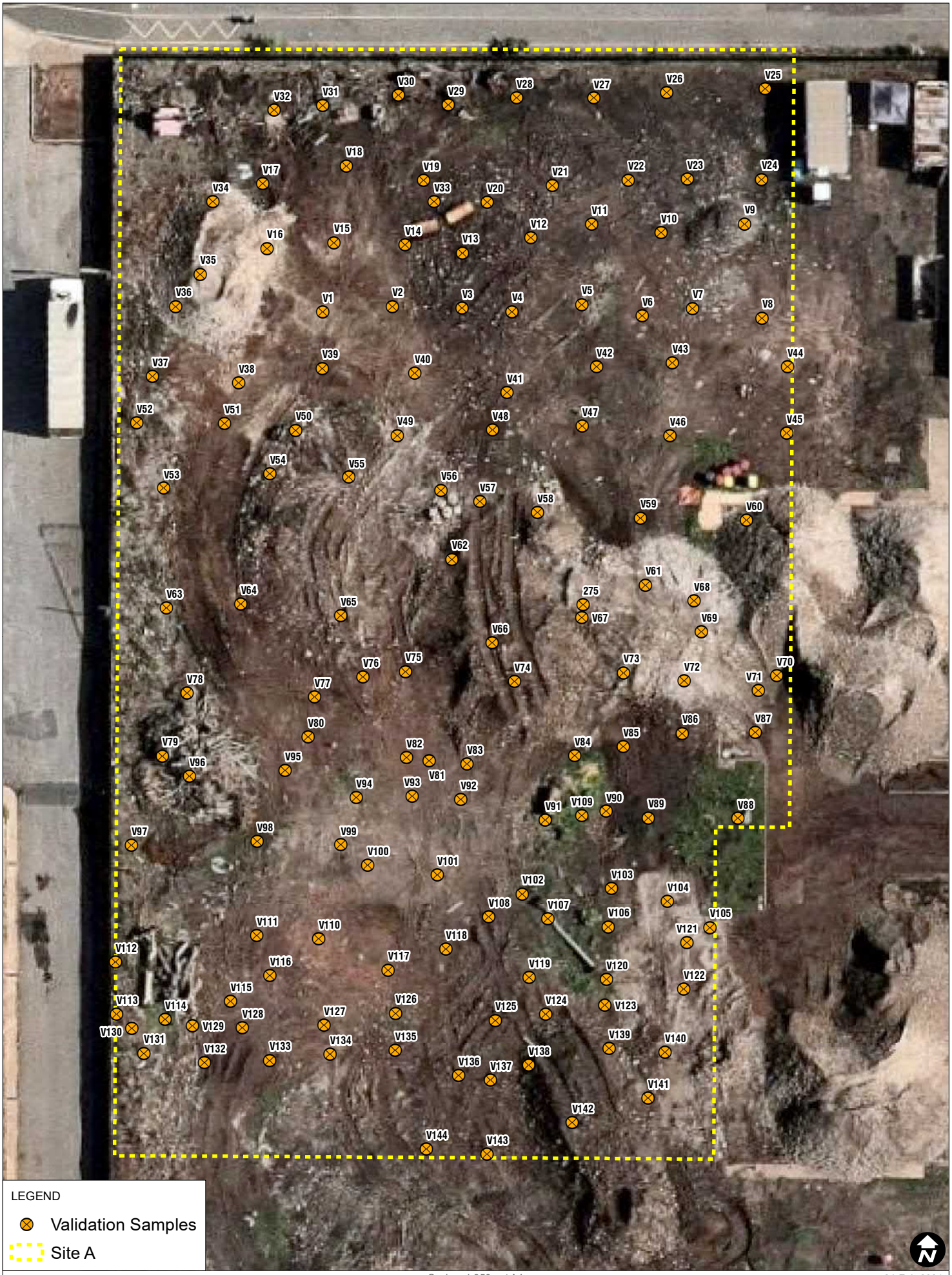
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Imagery sourced from Nearmaps October 2020

Figure 3

0 5 10 20
Metres

ACM finds



LEGEND

Validation Samples

Site A

0 5 10 Meters

Scale: 1:350 at A4
GDA 1994 MGA Zone 52

24-Feb-2021
680.10679

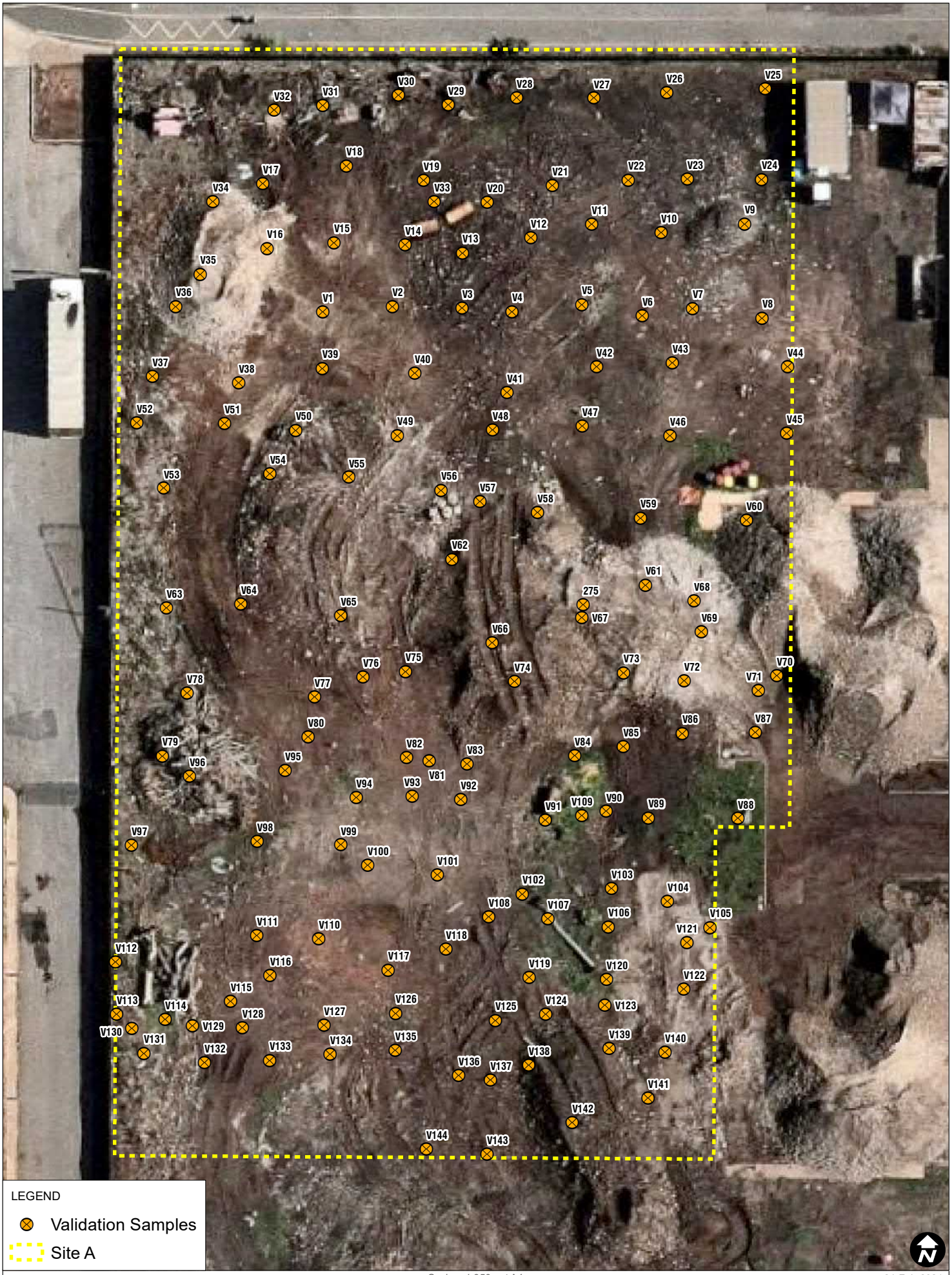
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Data Source: © Nearmap Imagery
Image Date: 3/11/2029

Site A
Sampling Locations

Figure 4

\\au.slr.local\Corporate\Projects-SLR\620-BNE\680-DRW\680.10679 - John Stokes Square\GIS\68010679 Site A Sampling locations.mxd



LEGEND

Validation Samples

Site A

0 5 10 Meters

Scale: 1:350 at A4
GDA 1994 MGA Zone 52

24-Feb-2021
680.10679

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Data Source: © Nearmap Imagery
Image Date: 3/11/2029

Site A
Sampling Locations

Figure 4

\\au.slr.local\Corporate\Projects-SLR\620-BNE\680-DRW\680.10679 - John Stokes Square\GIS\68010679 Site A Sampling locations.mxd

Appendices

Appendix A
EPA Summary Information

NOTIFICATION OF COMPLETION AND ISSUE OF STATEMENT OR CERTIFICATE OF ENVIRONMENTAL AUDIT

The following *pro forma* must be used by auditors when notifying EPA of the completion and issue of a statement of environmental audit or a certificate of environmental audit. This *pro forma* should be forwarded electronically (in .docx and .pdf format).

31 March 2022
Manager – Environmental Audit
EPA Victoria
GPO Box 4395
MELBOURNE, 3001

I, Jean Paul Pearce, a person appointed as an environmental auditor (contaminated land) by the Environment Protection Authority under s. 53S of the *Environment Protection Act 1970* (Vic.), have completed an environmental audit and issued a certificate/statement (*select appropriate*) of environmental audit for the site located at (*insert site address as per SoEA/CoEA*). Details are as follows.

Auditor	Jean Paul PEARCE
Auditor account number	101292
Auditor appointment end date	26 November 2022
Auditor's appointment category	CL
Audit Type	53X (site suitability audit)
Date EPA notified of audit	21 November 2019
Audit service order number	PRL8565 (NTEPA2019/0099-199)
Name of person requesting audit	Ms Sinead Redmond Project Management Lead Northern Territory Department of Infrastructure, Planning and Logistics Land Development Unit sinead.redmond@hksolutions EPA customer account number (if available). – n/a
Relationship of person requesting audit to site	Authorised representative of site owner
Name of premises owner	DIPL Representative Project Manager
Date of auditor engagement	20/11/2019
Completion date of the audit	1/04/2020
Reason for Audit	Due to the identified pesticide and asbestos contamination, we understand EPA has required an Auditor to determine the site is suitable for use;
Audit Categorisation	Risk
Environmental Segments	Air, Land, Groundwater, Surface water
If the audit was required by an EPA notice, licence or other, please provide EPA reference number	n/a
Current land use zoning	Zone MR (medium density residential), recently changed to Specific Use (SU) zone SD49.
EPA Region	Darwin
Municipality	Nightcliff
Dominant Lot on title plan	Lot 9077 Town of Nightcliff – Lot 9077 has since been subdivided creating Lot 12827 and Lot 12828. Lot A is now defined as Lot 12827, with the balance of Lot 9077 defined as Lot 12828
Additional Lot on title plan(s)	Lot A (Stage 1 of 3) – Lot A is defined as Lot 12827, with the balance of Lot 9077 defined as Lot 12828

Site/Premises name	John Stokes Square Nightcliff Development
Building/complex sub-unit/lot No.	--
Street/Lot – Lower No.	47
Street/Lot – Upper No.	
Street Name	Progress,
Street type (road, court, etc)	Drive
Street suffix (North, South etc)	--
Suburb	Nightcliff
Postcode	0810
GIS Coordinate of Site centroid[1] Latitude (GDA94)	-12.388587°
Longitude (GDA94)	130.850751°
Site area (in square metres)	3,630 m^2
Plan of site/premises showing the audit site boundary attached	Yes
Plan of site/premises showing the audit site boundary attached in a spatial data format	No
Members and categories of support team utilised	Shandel Coleman (internal audit support). Bridget Roder (internal audit support).
Further works or requirements	Implementation of the Ongoing Management of Asbestos in Soils plan for the entire site in accordance with Condition 1 of the Statement of Environmental Audit
Nature and extent of continuing risk	Risks in groundwater have not been found to be significant, however the condition of the groundwater should be tested by an appropriately qualified environmental consultant (to determine the suitability thereof) prior to being utilised for extractive use. Risks in soil vapour have not been found to be significant. Risks in soil have not been found to be significant apart from the potential presence of asbestos in fill. Bonded asbestos cement material and asbestos fines /friable asbestos are potentially located within fill materials across the site, to be managed in accordance with the Ongoing Management of Asbestos in Soils plan (Condition 1). There is no risk to site users due to the entire site covered by concrete foundations of a building, but there is a potential risk to sub-slab workers (i.e. maintenance workers).
Outcome of the audit	Statement of Environmental Audit with conditions
Has EPA determined CUTEP at this site?	No
Has the Auditor determined CUTEP at this site?	No
Has a GQRUZ been identified at the site/beyond the site by EPA?	No
Does NAPL remain at the site?	No – never encountered

[1] Longitude and latitude (decimal degrees) co-ordinates in the 1994 Geocentric Datum of Australia (GDA94) is required to six decimal places.

<table>
<tr><td>Please indicate which of the Protected Beneficial Uses of groundwater are precluded due to pollution</td><td>e.g. including site-sourced and regional pollution.
<table>
<tr><th>Protected Use</th><th>Precluded?</th></tr>
<tr><td>Maintenance of Ecosystems</td><td>No</td></tr>
<tr><td>Potable Water Supply (Desirable)</td><td>No</td></tr>
<tr><td>Potable Water Supply (Acceptable)</td><td>No</td></tr>
<tr><td>Potable Mineral Water Supply</td><td>N/A</td></tr>
<tr><td>Agriculture, Parks and Gardens</td><td>No</td></tr>
<tr><td>Stock Watering</td><td>No</td></tr>
<tr><td>Primary Contact Recreation</td><td>No</td></tr>
<tr><td>Industrial water use</td><td>No</td></tr>
<tr><td>Buildings and Structures</td><td>No</td></tr>
</table></td></tr>
</table>

Historical land use	Residential
Current land use	Recently redeveloped into a police station
Proposed future land use	Police station
Surrounding land use – north	Progress Drive then commercial, with low density residential beyond A service station is located to the north-east of the site
Surrounding land use – south	Proposed residential (Lot B1) and public open space (Lot C) Child care centre and tyre retailer then commercial A service station is located south-east of the site
Surrounding land use – east	Road Reserve, proposed residential (Lot B3), then Dick Ward Drive
Surrounding land use – west	Vacant land and laneway then commercial
Proposed land use zoning	Specific Use (SU) zone SD49
Nearest surface water receptor – name	Outer Estuary of Darwin Harbour
Nearest surface water receptor – distance (m)	160 m
Nearest surface water receptor – direction	West
Likely point of groundwater discharge	Outer Estuary of Darwin Harbour, 160 m west of the site
Site aquifer formation	Unconsolidated soils
Groundwater flow direction	West
Groundwater TDS range (mg/L)	120 to 430 mg/L
Groundwater Segment	Segment A1
Are there multiple aquifers impacted by pollution at the site	n/a
Perched groundwater depth – upper (metres below ground level (mbgl))	n/a
Perched groundwater depth – lower (mbgl)	n/a

Regional groundwater depth – upper (mbgl)	6
Regional groundwater depth – lower (mbgl)	10
Number of bores within 2 km	46
Closest extractive use (distance in m)	Bore RN000130 (300 m from the site).
Zone of groundwater plume influence (m from site boundary)	Not applicable – non-source site
Year groundwater last monitored	2020
Have you attached electronic copies of Current Groundwater Analytical Results presented as a summary table?	Yes, refer to Appendix A

In notifying EPA of the completion of an environmental audit and issuing of a statement of environmental audit, I state that:

I am not aware of any conflict of interest that would preclude me from completing the environmental audit or issuing a certificate/statement (*select appropriate*) of environmental audit for the above site.

I have not had prior involvement in any assessment or cleanup works at the site, which would preclude me from completing the environmental audit or issuing a certificate/statement (*select appropriate*) of environmental audit for the above site.

Yours sincerely,



Signed: _____

JEAN PAUL PEARCE

ENVIRONMENTAL AUDITOR

(APPOINTED PURSUANT TO *THE ENVIRONMENT PROTECTION ACT 1970*)

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Groundwater Analytical Results

	Unit	EQL	ADWG 2018 Health	ADWG 2018 Aesthetic	ANZECC 2000 FW 95%	ANZECC 2000 FW 99%	ANZECC 2000 MW 90%	ANZECC 2000 MW 95%	ANZECC 2000 Recreational water quality and aesthetics	ANZECC 2000 Irrigation Long-term trigger value (LTV)	ANZECC 2000 Irrigation Short-term trigger value (STV)	NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay 2-4m	NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay 4-8m	NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay 2-4m	NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay 4-8m	WHO DWQG 4th Ed	JF1066_MW01_201021	JF1066_MW02_201022	JF1066_MW03_201022	JF1066_MW04_201022
Field ID																	JF1066_MW01_201021	JF1066_MW02_201022	JF1066_MW03_201022	JF1066_MW04_201022
Date																	21/01/2020	22/01/2020	22/01/2020	22/01/2020
Lab Report Number																	698341	698341	698341	698341
Sample Comments																				
Metals																				
Arsenic (filtered)	mg/L	0.001	0.01						0.05	0.1	2					0.01	0.002	<0.001	<0.001	<0.001
Beryllium (filtered)	mg/L	0.001	0.06							0.1	0.5						<0.001	<0.001	<0.001	<0.001
Boron (filtered)	mg/L	0.05	4		0.37	0.09			1	0.5						2.4	<0.05	<0.05	<0.05	<0.05
Cadmium (filtered)	mg/L	0.0002	0.002		0.0002	0.00006	0.014	0.0055	0.005	0.01	0.05					0.003	<0.0002	<0.0002	<0.0002	<0.0002
Calcium	mg/L	0.5															11	7.7	5.3	5.7
Chromium (III+VI) (filtered)	mg/L	0.001							0.05	0.1	1					0.05	0.014	<0.001	<0.001	<0.001
Cobalt (filtered)	mg/L	0.001					0.014	0.001		0.05	0.1						0.006	0.002	0.005	0.002
Potassium	mg/L	0.5															1.9	1.0	0.6	<0.5
Copper (filtered)	mg/L	0.001	2	1	0.0014	0.001	0.003	0.0013	1	0.2	5					2	0.017	0.001	0.006	0.004
Magnesium	mg/L	0.5															10	3.5	2.7	4.6
Lead (filtered)	mg/L	0.001	0.01		0.0034	0.001	0.0066	0.0044	0.05	2	5					0.01	0.035	0.009	0.005	0.002
Manganese (filtered)	mg/L	0.005	0.5	0.1	1.9	1.2			0.1	0.2	10						0.21	0.19	0.14	0.032
Mercury (filtered)	mg/L	0.0001	0.001		0.0006	0.00006	0.0007	0.0004	0.001	0.002	0.002					0.006	<0.0001	<0.0001	<0.0001	<0.0001
Nickel (filtered)	mg/L	0.001	0.02		0.011	0.008	0.2	0.07	0.1	0.2	2					0.07	0.12	0.009	0.025	0.016
Selenium (filtered)	mg/L	0.001	0.01		0.011	0.005			0.01	0.02	0.05					0.04	<0.001	<0.001	<0.001	<0.001
Zinc (filtered)	mg/L	0.005		3	0.008	0.0024	0.023	0.015	5	2	5						0.26	0.044	0.093	0.034
PAH																				
Benzo(b+j)fluoranthene	µg/L	1															<1	<1	<1	<1
Benzo(k)fluoranthene	µg/L	1															<1	<1	<1	<1
Acenaphthylene	µg/L	1															<1	<1	<1	<1
Anthracene	µg/L	1															<1	<1	<1	<1
Benz(a)anthracene	µg/L	1															<1	<1	<1	<1
Acenaphthene	µg/L	1															<1	<1	<1	<1
Naphthalene	µg/L	1			16	2.5	90	70									<1	<1	<1	<1
Benzo(a) pyrene	µg/L	1	0.01						0.01							0.7	<1	<1	<1	<1
Benzo(g,h,i)perylene	µg/L	1															<1	<1	<1	<1
Chrysene	µg/L	1															<1	<1	<1	<1
Dibenz(a,h)anthracene	µg/L	1															<1	<1	<1	<1
Fluoranthene	µg/L	1															<1	<1	<1	<1
Fluorene	µg/L	1															<1	<1	<1	<1
Indeno(1,2,3-c,d)pyrene	µg/L	1															<1	<1	<1	<1
Phenanthrene	µg/L	1															<1	<1	<1	<1
PAHs (Sum of total)	µg/L	1															<1	<1	<1	<1
Pyrene	µg/L	1															<1	<1	<1	<1
BTEX																				
Toluene	µg/L	1	800	25												700	<1	<1	<1	<1
Xylene Total	µg/L	3	600	20												500	<3	<3	<3	<3
Benzene	µg/L	1	1		950	600	900	700	10			30,000	30,000	5,000	5,000	10	<1	<1	<1	<1
Ethylbenzene	µg/L	1	300	3												300	<1	<1	<1	<1
Xylene (m & p)	µg/L	2															<2	<2	<2	<2
Xylene (o)	µg/L	1			350	200											<1	<1	<1	<1
TRH																				
C6-C10	µg/L	20															<20	<20	<20	<20
C6-C10 (F1 minus BTEX)	µg/L	20															<20	<20	<20	<20
C10-C16	µg/L	50															80	<50	<50	<50
C16-C34	µg/L	100															200	200	<100	<100
C34-C40	µg/L	100															<100	<100	<100	<100
C10-C40 (Sum of total)	µg/L	100															280	200	<100	<100
C10-C16 (F2 minus Naphthalene)	µg/L	50															80	<50	<50	<50
TRH - 2013 NEPM Fractions (after silica gel clean-up)																				
TRH >C10-C16 (after silica gel clean-up)	µg/L	50															<50	-	-	-
TRH >C16-C34 (after silica gel clean-up)	µg/L	100															<100	-	-	-
TRH >C34-C40 (after silica gel clean-up)	µg/L	100															<100	-	-	-
TPH																				
C6-C9	µg/L	20															<20	<20	<20	<20
C10-C14	µg/L	50															80	<50	<50	<50
C15-C28	µg/L	100															300	200	<100	<100
C29-C36	µg/L	100															<100	<100	<100	<100
+C10-C36 (Sum of total)	µg/L	100															380	200	<100	<100
TRH - 1999 NEPM Fractions (after silica gel clean-up)																				
TRH C10-C14 (after silica gel clean-up)	µg/L	50															<50	-	-	-
TRH C10-C36 (Total) (after silica gel clean-up)	µg/L	100															<100	-	-	-
TRH C15-C28 (after silica gel clean-up)	µg/L	100															<100	-	-	-
TRH C29-C36 (after silica gel clean-up)	µg/L	100															<100	-	-	-
Organochlorine Pesticides																				
Aldrin + Dieldrin	µg/L	0.1	0.3													0.03	<0.1	<0.1	<0.1	<0.1
chlordane	µg/L	1	2		0.08	0.03			6							0.2	<1	<1	<1	<1
Endrin ketone	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
Organochlorine pesticides EPAVic	µg/L	1															<1	<1	<1	<1
Toxaphene	mg/L	0.01			0.0002	0.0001											<0.01	<0.01	<0.01	<0.01
Other organochlorine pesticides EPAVic	µg/L	1															<1	<1	<1	<1
Hexachlorobenzene	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
4,4-DDE	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
Endrin	µg/L	0.1			0.02	0.01	0.01	0.008	1							0.6	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	µg/L	0.1															<0.1	<0.1	<0.1	<0.1

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Groundwater Analytical Results

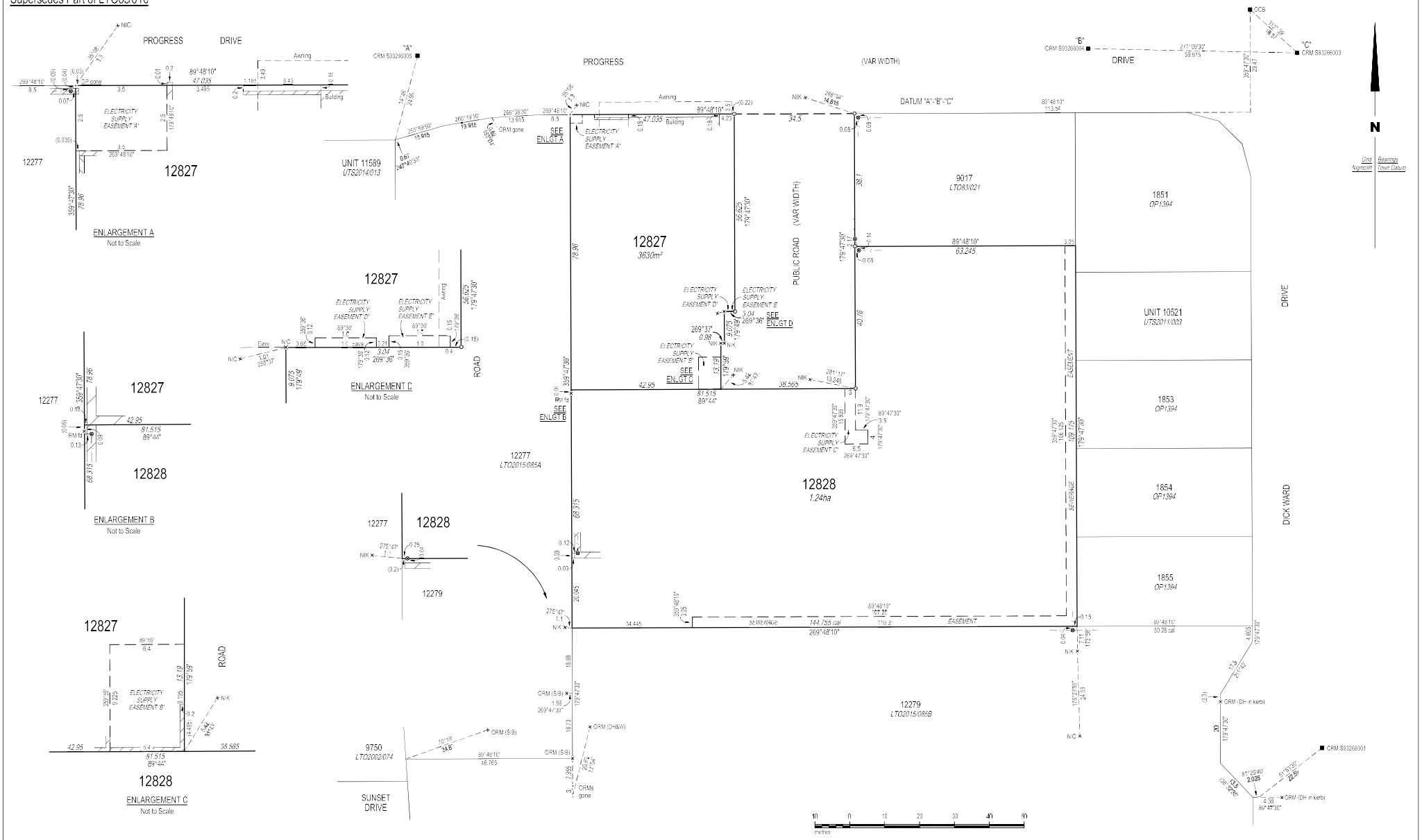
	Unit	EQL	ADWG 2018 Health	ADWG 2018 Aesthetic	ANZECC 2000 FW 95%	ANZECC 2000 FW 99%	ANZECC 2000 MW 90%	ANZECC 2000 MW 95%	ANZECC 2000 Recreational water quality and aesthetics	ANZECC 2000 Irrigation Long-term trigger value (LTV)	ANZECC 2000 Irrigation Short-term trigger value (STV)	NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay 2-4m	NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay 4-8m	NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay 2-4m	NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay 4-8m	WHO DWQG 4th Ed	JF1066_MW01_201021	JF1066_MW02_201022	JF1066_MW03_201022	JF1066_MW04_201022
Field ID																				
Date																	21/01/2020	22/01/2020	22/01/2020	22/01/2020
Lab Report Number																	698341	698341	698341	698341
Sample Comments																				
Aldrin	µg/L	0.1							1								<0.1	<0.1	<0.1	<0.1
g-BHC (Lindane)	µg/L	0.1	10		0.2	0.07			10							2	<0.1	<0.1	<0.1	<0.1
DDT+DDE+DDD	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
Heptachlor	µg/L	0.1	0.3		0.09	0.01			3								<0.1	<0.1	<0.1	<0.1
Heptachlor epoxide	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
a-BHC	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
b-BHC	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
d-BHC	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
DDD	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
DDT	µg/L	0.1	9		0.01	0.006			3								<0.1	<0.1	<0.1	<0.1
Dieldrin	µg/L	0.1							1								<0.1	<0.1	<0.1	<0.1
Endosulfan I	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
Endosulfan II	µg/L	0.1															<0.1	<0.1	<0.1	<0.1
Methoxychlor	µg/L	0.1														20	<0.1	<0.1	<0.1	<0.1
Organophosphorous Pesticides																				
Azinophos methyl	µg/L	2	30		0.02	0.01			10								<2	<2	<2	<2
Bolstar (Sulprofos)	µg/L	2	10						20								<2	<2	<2	<2
Chlorfenvinphos	µg/L	2	2						10								<2	<2	<2	<2
Chlorpyrifos-methyl	mg/L	0.002															<0.002	<0.002	<0.002	<0.002
Coumaphos	µg/L	20															<20	<20	<20	<20
Demeton-O	µg/L	2															<2	<2	<2	<2
Demeton-S	µg/L	20															<20	<20	<20	<20
Diazinon	µg/L	2	4		0.01	0.00003			10								<2	<2	<2	<2
Dichlorvos	µg/L	2	5						20								<2	<2	<2	<2
Dimethoate	µg/L	2	7		0.15	0.1			100							6	<2	<2	<2	<2
Disulfoton	µg/L	2	4						6								<2	<2	<2	<2
Merphos	mg/L	0.002															<0.002	<0.002	<0.002	<0.002
EPN	µg/L	2															<2	<2	<2	<2
Methyl parathion	µg/L	2	0.7						6								<2	<2	<2	<2
Ethion	µg/L	2	4						6								<2	<2	<2	<2
Ethoprop	µg/L	2	1						1								<2	<2	<2	<2
Mevinphos (Phosdrin)	µg/L	2	5						6								<2	<2	<2	<2
Fenitrothion	µg/L	2	7		0.2	0.1			20								<2	<2	<2	<2
Fensulfothion	µg/L	2	10						20								<2	<2	<2	<2
Monocrotophos	µg/L	2	2						2								<2	<2	<2	<2
Fenthion	µg/L	2	7														<2	<2	<2	<2
Malathion	µg/L	2	70		0.05	0.002			100								<2	<2	<2	<2
Naled (Dibrom)	µg/L	2															<2	<2	<2	<2
Omethoate	µg/L	2	1						0.4								<2	<2	<2	<2
Phorate	µg/L	2															<2	<2	<2	<2
Pyrazophos	µg/L	2	20						1,000								<2	<2	<2	<2
Ronnel	µg/L	2							60								<2	<2	<2	<2
Terbufos	µg/L	2	0.9														<2	<2	<2	<2
Tetrachlorvinphos	mg/L	0.002	0.1														<0.002	<0.002	<0.002	<0.002
Tokuthion	mg/L	0.002															<0.002	<0.002	<0.002	<0.002
Trichloronate	µg/L	2															<2	<2	<2	<2
Chlorpyrifos	µg/L	20	10		0.01	0.00004	0.04	0.009	2							30	<20	<20	<20	<20
Phenols																				
2,4,5-Trichlorophenol	µg/L	10							1								<10	<10	<10	<10
3&4-Methylphenol (m&p-cresol)	µg/L	6															<6	<6	<6	<6
2,4-Dimethylphenol	µg/L	3															<3	<3	<3	<3
2,6-Dichlorophenol	µg/L	3															<3	<3	<3	<3
Phenols (Total Halogenated)	mg/L	0.01															<0.01	<0.01	<0.01	<0.01
2-Chlorophenol	µg/L	3	300	0.1	490	340											<3	<3	<3	<3
Tetrachlorophenols	µg/L	30															<30	<30	<30	<30
2-Methylphenol	µg/L	3															<3	<3	<3	<3
2,4-Dinitrophenol	mg/L	0.03			0.045	0.013											<0.03	<0.03	<0.03	<0.03
4,6-Dinitro-2-methylphenol	µg/L	30															<30	<30	<30	<30
4,6-Dinitro-o-cyclohexyl phenol	µg/L	100															<100	<100	<100	<100
4-chloro-3-methylphenol	µg/L	10															<10	<10	<10	<10
2,4-Dichlorophenol	µg/L	3	200	0.3	160	120											<3	<3	<3	<3
4-Nitrophenol	µg/L	30															<30	<30	<30	<30
Phenol	µg/L	3			320	85	520	400									<3	<3	<3	<3
2,4,6-Trichlorophenol	µg/L	10	20	2	20	3			10							200	<10	<10	<10	<10
2-Nitrophenol	µg/L	10															<10	<10	<10	<10
Pentachlorophenol	µg/L	10	10		10	3.6	33	22	10							9	<10	<10	<10	<10
Phenols (Total Non Halogenated)	mg/L	0.1															<0.1	<0.1	<0.1	<0.1
Chlorinated Hydrocarbons																				
1,1-dichloroethane	µg/L	1															<1	<1	<1	<1
1,2,3-trichloropropane	µg/L	1															<1	<1	<1	<1
1,1-dichloroethene	µg/L	1	30						0.3								<1	<1	<1	<1
1,2-dichloropropane	µg/L	1														40	<1	<1	<1	<1
1,2-dichloroethane	µg/L	1	3						10							30	<1	<1	<1	<1
1,3-dichloropropane	µg/L	1															<1	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	1															<1	<1	<1	<1
1,1,1-trichloroethane	µg/L	1															<1	<1	<1	<1
Chloroform	µg/L	5														300	6	10	<5	<5

AGON ENVIRONMENTAL

Groundwater Analytical Results

	Unit	EQL	ADWG 2018 Health	ADWG 2018 Aesthetic	ANZECC 2000 FW 95%	ANZECC 2000 FW 99%	ANZECC 2000 MW 90%	ANZECC 2000 MW 95%	ANZECC 2000 Recreational water quality and aesthetics	ANZECC 2000 Irrigation Long-term trigger value (LTV)	ANZECC 2000 Irrigation Short-term trigger value (STV)	NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay 2-4m	NEPM 2013 Table 1A(4) Comm/Ind HSL D GW for Vapour Intrusion, Clay 4-8m	NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay 2-4m	NEPM 2013 Table 1A(4) Res HSL A & B GW for Vapour Intrusion, Clay 4-8m	WHO DWQG 4th Ed	JF1066_MW01_201021	JF1066_MW02_201022	JF1066_MW03_201022	JF1066_MW04_201022
Field ID																	JF1066_MW01_201021	JF1066_MW02_201022	JF1066_MW03_201022	JF1066_MW04_201022
Date																	21/01/2020	22/01/2020	22/01/2020	22/01/2020
Lab Report Number																	698341	698341	698341	698341
Sample Comments																				
1,1,2,2-tetrachloroethane	µg/L	1															<1	<1	<1	<1
Chloromethane	µg/L	1															<1	<1	<1	<1
Dibromomethane	µg/L	1															<1	<1	<1	<1
cis-1,3-dichloropropene	µg/L	1															<1	<1	<1	<1
Tetrachloroethene	µg/L	1	50						10							40	<1	<1	<1	<1
Other chlorinated hydrocarbons EPAVic	µg/L	5															6	10	<5	<5
Trichloroethene	µg/L	1							30							20	<1	<1	<1	<1
Bromodichloromethane	µg/L	1														60	<1	<1	<1	<1
Dichloromethane	µg/L	1	4													20	<1	<1	<1	<1
Chlorinated hydrocarbons EPAVic	µg/L	5															6	10	<5	<5
cis-1,2-dichloroethene	µg/L	1															<1	<1	<1	<1
1,1,2-trichloroethane	µg/L	1			6,500	5,400	5,800	1,900									<1	<1	<1	<1
trans-1,3-dichloropropene	µg/L	1															<1	<1	<1	<1
Vinyl chloride	µg/L	1	0.3													0.3	<1	<1	<1	<1
Bromoform	µg/L	1														100	<1	<1	<1	<1
Carbon tetrachloride	µg/L	1	3						3							4	<1	<1	<1	<1
Chlorodibromomethane	µg/L	1														100	<1	<1	<1	<1
trans-1,2-dichloroethene	µg/L	1															<1	<1	<1	<1
Ethyl tert-Butyl Ether (ETBE)	µg/L	1															<1	<1	<1	<1
tert-Amyl Methyl Ether (TAME)	µg/L	1															<1	<1	<1	<1
tert-Butyl alcohol	µg/L	25															<25	<25	<25	<25
Halogenated Benzenes																				
1,2-dichlorobenzene	µg/L	1	1,500	1	160	120										1,000	<1	<1	<1	<1
1,3-dichlorobenzene	µg/L	1		20	260	160											<1	<1	<1	<1
1,4-dichlorobenzene	µg/L	1	40	0.3	60	40										300	<1	<1	<1	<1
Chlorobenzene	µg/L	1	300	10													<1	<1	<1	<1
Halogenated Hydrocarbons																				
Iodomethane	µg/L	1															<1	<1	<1	<1
Bromomethane	µg/L	1	1														<1	<1	<1	<1
1,2-dibromoethane	µg/L	1	1													0.4	<1	<1	<1	<1
Trichlorofluoromethane	µg/L	1															<1	<1	<1	<1
Herbicides																				
Dinoseb	µg/L	100															<100	<100	<100	<100
Pesticides																				
Parathion	µg/L	2	20		0.004	0.0007			30								<2	<2	<2	<2
Pirimiphos-methyl	mg/L	0.02	0.09						0.06								<0.02	<0.02	<0.02	<0.02
Inorganics																				
Alkalinity (Bicarbonate as CaCO3)	mg/L	20															<20	<20	<20	<20
Alkalinity (Hydroxide) as CaCO3	mg/L	20															<20	<20	<20	<20
Alkalinity (total) as CaCO3	mg/L	20															<20	<20	<20	<20
Chloride	mg/L	1		250					400								190	38	17	16
Sodium	mg/L	0.5		180					300								100	17	15	16
Alkalinity (Carbonate as CaCO3)	mg/L	10															<10	<10	<10	<10
Sulphate	mg/L	5		250					400								56	17	26	32
TDS	mg/L	10		600					1,000								430	120	120	150
pH (Lab)	-	0.1		6.5-8.5					6.5-8.5	6-8.5							6.1	6.2	4.5	4.9
Solvents																				
MTBE	mg/L	0.001															<0.001	<0.001	<0.001	<0.001
VOCs																				
Diisopropyl ether	mg/L	0.001															<0.001	<0.001	<0.001	<0.001

Supersedes Part of LTO83/010



SURVEYOR'S CERTIFICATE

I, Arielle John Expo

hereby certify that the survey represented on this plan was carried out by me or under my immediate supervision and was completed on 12/10/2021, and that this survey has been carried in accordance with the Licensed Surveyors Act and the directions thereunder.

Licensed Surveyor — 25/10/2021 Date

L.T.O. REGISTRATION

Lodged on ... at ...
Instrument Number ...
Registered on ... at ...
by me ...
Registrar General

EASEMENTS TO BE CREATED BY REGISTRATION OF THIS PLAN

DESCRIPTION	IN FAVOUR OF
ELECTRICITY SUPPLY 'A'	POWER AND WATER CORPORATION
ELECTRICITY SUPPLY 'B'	POWER AND WATER CORPORATION
ELECTRICITY SUPPLY 'C'	POWER AND WATER CORPORATION
ELECTRICITY SUPPLY 'D'	POWER AND WATER CORPORATION
ELECTRICITY SUPPLY 'E'	CITY OF DARWIN

EXISTING EASEMENTS

DESCRIPTION	IN FAVOUR OF	ORIGIN
SEWERAGE	POWER AND WATER CORPORATION	LTO83/010

SURVEY APPROVAL

I, Robert Ian Sarib the Surveyor-General, being satisfied that Parts of the Planning Act have been complied with:

(i) approve the survey under section 49 of the Licensed Surveyors Act;

(ii) acknowledge, on behalf of the Service Authorities designated, the existing and the Service Easements shown hereon; and

(iii) accept on behalf of the Service Authorities specified, the land dedicated as roads or reserves for road created thereby (Section 54 of the Planning Act and section 7 of the Control of Roads Act

Surveyor-General — 3 November 2021 Date

Note
Dimensions of unmarked boundaries and connections are original unless otherwise shown
Public Road is vested in the City of Darwin
denotes Concrete Wall
NIC denotes Nail in Concrete
NIK denotes Nail in Kerb
S/B denotes Spike in Bitumen

Version 1 - survey plan as lodged

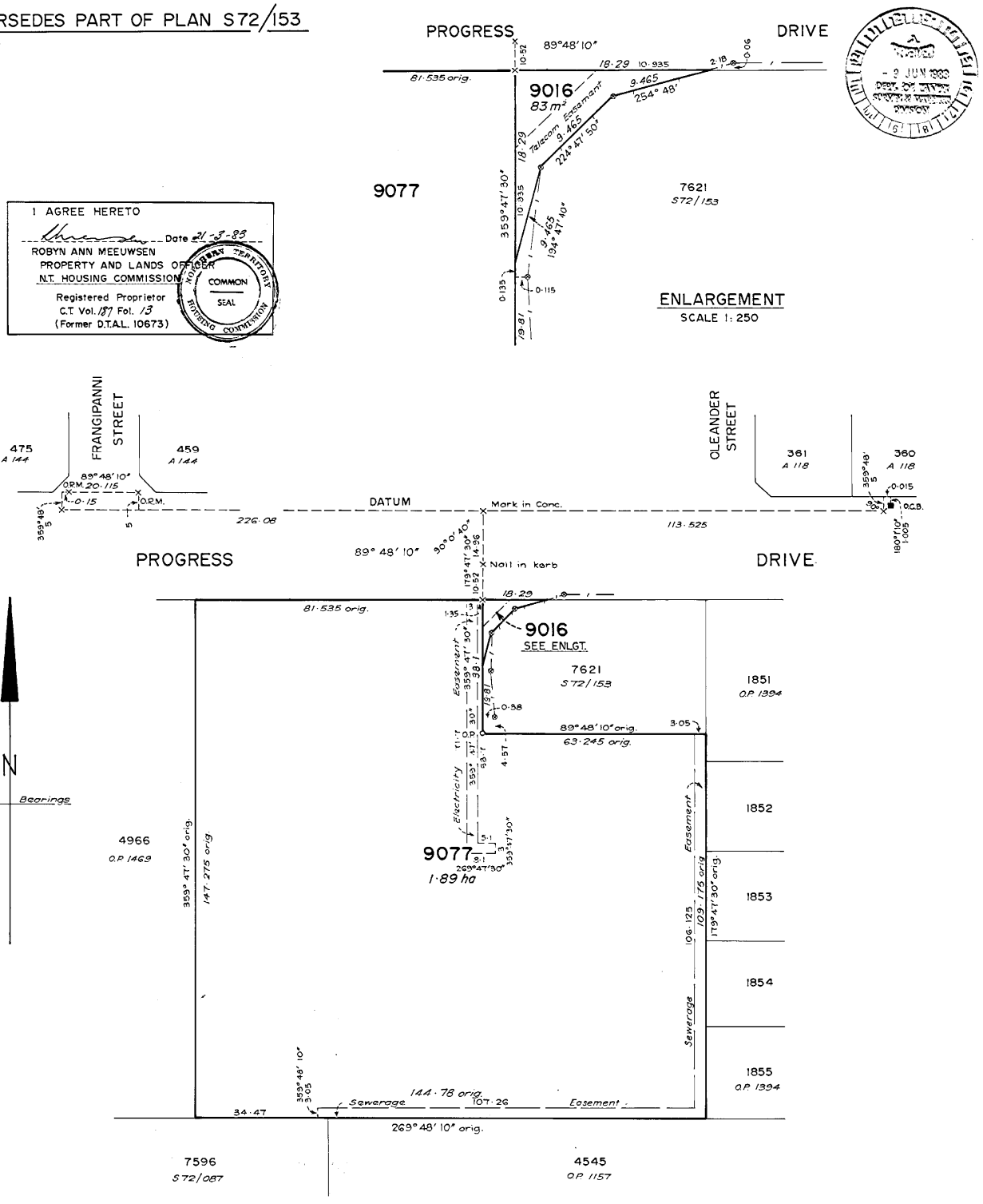
LOTS 12827 AND 12828
SUBDIVISION OF LOT 9077
TOWN OF NIGHTCLIFF

Drawn by: Earl James & Associates (11934) 13/10/2021
Checked: Earl James & Associates 21/10/2021
Map Reference
AZIMUTH Assumed from LTS2014/013 Observed at
SCALE 1:1000 (A3)

LTO2021/022

Appendix B
Certificate of Title

SUPERSEDES PART OF PLAN S72/153



Note : Sewerage Easement shown hereon is in favour of the Northern Territory of Australia.
Electricity Easement shown hereon is in favour of the Northern Territory Electricity Commission.
Telecom Easement shown hereon is in favour of the Australian Telecommunications Commission.

METRES 20 0 20 40 60 80

No	REFERENCE	DETAILS	APPROVED	DATE
2	File LTO 83/10 folio 27	Telecom Easement added to Lot 9016		23/9/83
1	File LTO 83/10 folio 27	Electricity Easement added to Lot 9077		23/9/83

AMENDMENTS

SURVEYOR'S CERTIFICATE

I, COLIN JOHN JONES hereby certify that the survey represented on this plan was carried out by me or under my immediate supervision and was completed on 2 February 1983 and that this survey has been executed in accordance with the Licensed Surveyors Act and the Regulations thereunder.

Licensed Surveyor 28/2/83 Date

File No L.T.O. 83/10
Field Book No L.T.O. 83/10
Drawn by S.M. Willshire 9-2-83
Charted on I.P. DARWIN 2500, SHEET 30-27
Examined by W Schneider 14-7-83
Charted on P.P. DARWIN 2500, SHEET 30-27

SURVEY APPROVED

Surveyor-General 11·8·1983 Date

PASSED

CHIEF DRAFTSMAN (T) 11·8·83 Date

SURVEY MAPPING

LOTS 9016 AND 9077
SUBDIVISION OF LOT 7622
TOWN OF NIGHTCLIFF

HUNDRED OF BAGOT COUNTY OF PALMERSTON

LEGEND
Concrete Block ■
Concrete Post □
Wooden Post, Peg or Stake O
Reference Mark X
Lockspit ⊢
Fence Post ⊗

AZIMUTH
A. Assumed from S72/153
B. Observed at
Latitude Datum

SCALE
1 : 750

L.T.O. 83/10

COPY TO L.T.O. 12-8-83 AMENDED COPY TO LTO 30-9-83

N/N 2254

Appendix C
Consultant's Reports

VALIDATION REPORT

John Stokes Square Redevelopment
Lot A

Prepared for:

HK Solutions (on Behalf of Department of Infrastructure, Planning and Logistics)
Building 2, Level 1
631 Stuart Highway
Berrimah NT 0828



SLR Ref: 680.10679-R02
Version No: -v3.0
November 2021

PREPARED BY

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BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with HK Solutions (on Behalf of Department of Infrastructure, Planning and Logistics) (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
680.10679-R02-v3.0	19 November 2021	Julie McDowell	Julie McDowell	Paul Turyn
680.10679-R02-v2.0	24 August 2021	Julie McDowell	Julie McDowell	Paul Turyn
680.10679-R02-v1.0	25 February 2021	Sarah Doherty/ Julie McDowell	Julie McDowell	Paul Turyn

EXECUTIVE SUMMARY

The Department of Infrastructure, Planning and Logistics (DIPL), through Project Management consultants Harris Kmon Solutions Pty Ltd (HK Solutions) commissioned SLR Consulting Australia Pty Ltd (SLR) to provide environmental consultancy services relating to the redevelopment of John Stokes Square, located at 47 Progress Drive Nightcliff, Darwin, Northern Territory (herein referred to as the "Project Area").

The Project Area is planned to be subdivided as part of the redevelopment project, with varying land use classifications including high density residential, public open space, community and commercial. Works were undertaken across the Project Area to characterise, remediate and validate the newly defined land parcels to ensure suitability for the proposed land uses.

This report outlines the remediation and validation assessment works that were undertaken on land parcel Lot A (herein referred to as "the Site"). The purpose of the remediation and validation works undertaken at the Site was to confirm the Site's suitability for commercial use (i.e. police station). Results of the remediation and validation works undertaken within other areas of the Project Area are included under separate cover in the reports titled "Validation Report, John Stokes Square Redevelopment, Proposed Residential Lots B1, B2 and B3" (SLR ref: 680.10679.00100-R05) and "Validation Report, John Stokes Square Redevelopment, Road Reserve and Lot C" (SLR ref: 680.10679.00200-R06).

This report has been prepared for endorsement by the appointed Auditor (as defined in Part 9 of the Waste Management Pollution Control Act, 1998) for the Site, Jean-Paul Pearce (Australian Environmental Auditor, "the Auditor") and in accordance with the Northern Territory Contaminated Land Guidelines NT EPA, June 2017, Version 1.0. The main role of the Auditor is to evaluate the environmental conditions of the Site at the date of signing the certificate of statement and to form an opinion, on which others can rely upon, regarding the suitability of the Site for future land uses. In doing so, the Auditor is required to review the environmental site assessment undertaken by environmental consultants in relation to site contamination to confirm the remediation objectives have been met prior to redevelopment of the Site.

Previous contaminated land investigations have been undertaken at the Site prior to SLR's engagement. SLR understands that DIPL commenced demolition of former public housing buildings in mid-2019, which were distributed across the Project Area. Majority of demolition waste from the Site was removed and a portion of crushed concrete rubble was screened and spread across the Site as general fill. The Northern Territory Environmental Protection Authority raised concerns that pesticides may have been historically used under the building's foundations, and that ACM contaminated fill material may have been historically imported to the Site. As such, contaminated land investigations were undertaken at the Site. These investigations confirmed that soil contamination was present at the Site, which included asbestos (bonded fragments and fibres) and pesticides (aldrin and dieldrin) in soil.

The remediation and validation activities undertaken at the Site have been completed in accordance with the technical memorandum: Remediation Strategy – John Stokes Square – Lot A (ref: 680.30002.00000 Remediation Strategy 20200422.docx), which was provided on 22 April 2020 and subsequently approved by the CLA on 24 April 2020. Remediation works conducted at the Site involved the following key activities.

- Inspecting and validating the earthworks that had already been completed prior to SLR mobilising to the Site. At the time of SLR mobilising to the Site, crushed concrete that was present within the Site had been removed and stockpiled, and the northern portion of the Site had been stripped of geotechnically unsuitable material. SLR inspected the area that had already been stripped for evidence of asbestos containing material (ACM). Where ACM was found, the areas were flagged to prevent access to the area. The ACM debris was removed for identification and a sieve sample of the surround soil was collected to determine if asbestos fines/friable asbestos was present.
- Stripping and excavating uncontrolled fill material to a depth of approximately 0.3 m below ground surface across the remainder of the Site. Visually inspecting the spoil and resultant excavations during the stripping and excavations works for evidence of ACM or other chemicals of potential concern. Based on visual observations, progressively segregating the potentially impacted spoil to be stockpiled separately from non-impacted spoil.
- Visually inspecting the surfaces of, and collecting validation samples from, the remediated areas of the Site (i.e., resultant excavation). Collecting details of the areas remediated at the Site including extent and depth of excavations, validation sample locations, sample identification numbers, date sampled and photographic logs. Submitting validation samples to be analysed by a NATA accredited laboratory.
- Screening geotechnically unsuitable anthropogenic waste materials such as construction and demolition rubble from the stockpile spoil. Visually inspecting the spoil throughout the screening process for visual evidence of ACM. Placing the screened spoil into smaller stockpiles to facilitate characterisation sampling to inform if the spoil is suitable for beneficial reuse onsite or requires offsite disposal.

The following outlines the deviations that occurred from the proposed remediation strategy and advice provided by SLR and the CLA during Site works.

- The Civil Contractor reinstated and compacted the excavated areas at the Site without the presence of a SLR Consultant. Subsequently visual clearance of the surface of each compacted lift during reinstatement of the excavated areas could not be provided.
- Further assessment was recommended by SLR to determine if stockpiled crushed concrete could be reused onsite from a contamination perspective, or at least receive advice/endorsement from the CLA that previous investigation works conducted on this material was sufficient to enable its reuse. The material was reused at the Site without being resampled, prior to CLA advice or endorsement being received.
- Based on the stockpile characterisation results, SLR recommended further segregation works be undertaken for three stockpiles to ensure their suitability for reuse on Site. The Civil Contractor has been unable to confirm if asbestos impacted areas identified within three of the characterised stockpiles had been segregated and disposed of offsite. .

Due to deviations from the remediation strategy, SLR does not have sufficient evidence to provide comment on the suitability of material blended and used to backfill the excavated areas within Lot A. However, given that future users of the police station will have no to very limited access to soil due to the substantial concrete surfaces that will be established as part of this facility's design and construct – if asbestos impacted material was inadvertently used to reinstate excavated areas of Lot A, it is not considered to pose an undue exposure risk to the aforementioned site users, provided this surface covering is maintained and access to soil is prevented.

Likewise, any persons conducting future excavations at the Site (Lot A) may encounter asbestos impacted soils or fragments of ACM debris, if asbestos impacted material was used to backfill/reinstate excavated areas within Lot A. As a precautionary measure the following should be included in the workplans of any persons/contractor conducting excavation works at the Site (Lot A) to ensure appropriate controls are implemented in the event unexpected asbestos is encountered.

- Safe work method statements and/or work-specific management plans addressing exposure to potentially asbestos impacted soils
- Unexpected finds protocol
- Associated training.

In conclusion, subject to the Limitations outlined in this report, based on the field observations and analytical results obtained for the remediation and validation activities conducted at the Site, SLR considers that Lot A has been suitably remediated and validated for the proposed commercial land use (i.e. police station) provided access to soil is restricted (i.e. concreted/paved surface coverings, minimal gardens).

CONTENTS

1 INTRODUCTION 8
1.1 Purpose and Objectives 8
1.2 Scope of Works 9
1.3 Legislative Framework 10
2 BACKGROUND 10
2.1 Site identification 10
2.2 Surrounding Environment 11
2.2.1 Surrounding Land Uses and Activities 11
2.2.2 Regional Geology 11
2.2.3 Regional Topography 11
2.2.4 Registered Groundwater Bore Information 12
2.3 Previous Environmental Investigations 12
2.3.1 Limited Soil Investigation (July 2019, Greencap) 13
2.3.2 Detailed Soil Investigation (September 2019, Greencap) 13
2.3.3 Additional Soil Investigation (October 2019; Greencap) 14
2.3.4 Detailed Site Investigation (February 2020; Agon) 14
3 REMEDIATION AND VALIDATION METHODOLOGY 15
3.1 Remediation Strategy and Deviations 15
3.2 Soil Sampling Methodology 18
3.3 Analytical Assessment 19
3.4 Screening Criteria 19
3.5 Air Monitoring 20
4 RESULTS 21
4.1 Field Observations 21
4.2 Summary of Analytical Results 22
4.3 Spoil Management 24
4.4 Air Monitoring 31
4.5 Data Quality Review 31
4.5.1 Field Duplicate Samples 31
4.5.2 Equipment Rinsates 32
4.5.3 QA/QC Conclusions 32
5 CONCEPTUAL SITE MODEL 32
6 CONCLUSION 37
7 LIMITATIONS 37

8 REFERENCES 38

DOCUMENT REFERENCES

TABLES

Table 1 Summary of property information 10
Table 2 Summary of Surrounding Land Uses 11
Table 3 Summary of registered bore search 12
Table 4 Summary of correspondence related to the remediation works at Lot A 16
Table 5 Soil sampling methodology 18
Table 6 Air Monitoring Action Levels 20
Table 7 Summary of Validation Samples 23
Table 8 Stockpile Summary 26
Table 9 Summary of QC combinations 31
Table 10 Summary of RPDs exceeding the acceptable limit 31
Table 11 Conceptual Site Model 34

APPENDICES

Appendix A Figures
Appendix B Remediation Strategy and Email Correspondence
Appendix C Analytial Results from Previous Environmental Investigations
Appendix D Stockpile Characterisation Memorandums
Appendix E Photographic Log
Appendix F Analytical Results Tables
Appendix G Certified Laboratory Documentation
Appendix H Imported Fill Memorandums
Appendix I Air Quality Monitoring Reports

1 Introduction

The Department of Infrastructure, Planning and Logistics (DIPL), through Project Management consultants Harris Kmon Solutions Pty Ltd (HK Solutions) commissioned SLR Consulting Australia Pty Ltd (SLR) to provide environmental consultancy services relating to the redevelopment of John Stokes Square, located at 47 Progress Drive Nightcliff, Darwin, Northern Territory (herein referred to as the "Project Area"). The locality of the Project Area is shown in Figure 1 (Appendix A).

The Project Area is planned to be subdivided as part of the redevelopment project with varying land use classifications, as shown in Figure 2 (Appendix A). This report outlines the remediation and validation assessment works that were undertaken on land parcel Lot A (herein referred to as "the Site").

SLR was engaged to provide environmental services in relation to the characterisation, remediation and validation of potential soil contamination at the Site, to ensure its suitability for the proposed land use. At the time of SLR mobilising to the Site, crushed concrete found across the Site had already been removed and stockpiled, and the northern portion of Lot A had been stripped of geotechnically unsuitable material.

Results of the remediation and validation works undertaken within other areas of the Project Area are included under separate cover in the reports titled "Validation Report, John Stokes Square Redevelopment, Proposed Residential Lots B1, B2 and B3" (SLR ref: 680.10679.00100-R05), and "Validation Report, John Stokes Square Redevelopment, Road Reserve and Lot C" (SLR ref: 680.10679.00100-R06).

This report has been prepared for endorsement by the appointed Contaminated Land Auditor (CLA) (as defined in Part 9 of the Waste Management Pollution Control Act, 1998) (WMPC Act) for the Site, Jean-Paul Pearce (Australian Environmental Auditor) and in accordance with the Northern Territory Contaminated Land Guidelines NT EPA, June 2017, Version 1.0. The main role of the CLA is to evaluate the environmental conditions of the Site at the date of signing the certificate of statement and to form an opinion, on which others can rely upon, regarding the suitability of the Site for future land uses. In doing so, the CLA is required to review the environmental site assessment undertaken by environmental consultants in relation to site contamination to confirm the remediation objectives have been met prior to redevelopment of the Site.

All remediation and validation activities undertaken at the Site have been completed in accordance with the technical memorandum: Remediation Strategy – John Stokes Square – Lot A (ref: 680.30002.00000 Remediation Strategy 20200422.docx), which was provided on 22 April 2020 and subsequently approved by the CLA on 24 April 2020. The details of the CLA's advice and a copy of the remediation strategy are included in Appendix B.

1.1 Purpose and Objectives

The purpose of this report is to document the remediation and validation works undertaken at the Site to confirm the Site's suitability for commercial use (police station). Furthermore, it is to ensure that remediation works have been accomplished in accordance with the remediation strategy and if so, whether the strategy's objectives have been met.

SLR understands the key objectives of the remediation strategy were as follows.

- Ensure all remedial and development works are undertaken in a manner that does not present an unacceptable risk to human health or the environment.

- Ensure the remedial and development works adhere to all applicable legislative requirements, guidelines, and standards.
- Effectively remediate and manage all identified soil impacts within the Site, enabling the Site to be utilised for its proposed future land use.
- Provide sufficient data for the CLA to provide a site audit statement.

1.2 Scope of Works

The following scope of works were undertaken by a suitably qualified and experienced SLR environmental consultant to meet the objectives of the remediation strategy developed for the Site.

- Oversaw the stripping and excavation of the remaining uncontrolled fill material to apparent natural soil conditions (either weathered rock or rock) across the Site. Inspected the spoil material and resultant excavation for evidence of any ACM or other contaminants of potential concern (COPC). Based on visual observations, potentially impacted spoil was progressively segregated and stockpiled separately from non-impacted spoil.
- Visually inspected and collected validation samples of the remediated areas of the Site (i.e., resultant excavations). Collated details of the areas remediated including the extent and depth of excavation, validation sample locations, sample identification numbers, date sampled and photographic logs.
- Inspected excavated spoil throughout the screening process for visual evidence of ACM contamination. The civil works contractor screened geotechnically unsuitable anthropogenic waste materials such as construction and demolition rubble from the stockpiled spoil. The screened spoil was then placed into smaller stockpiles and sampled by SLR's environmental consultant for characterisation purposes to inform either beneficial reuse onsite or offsite disposal. In the majority of cases stockpile material was not mixed with other stockpiled material until laboratory result were received, the material classified, and advice provided on appropriate reuse or disposal options.
- Maintained a log of stockpiles generated during the remediation works. Information collected included stockpile identification number, the origin of the material, stockpile locations, locations of all characterisation samples, stockpile volume, dates of sampling, further segregation (if required based on analytical results) and final destination being either offsite disposal or onsite reuse.
- Visual inspection, photographing and validation sampling of the remediated area.
- Samples were collected and analysed for one or more of the following CoPCs at a National Association of Testing Authorities (NATA) accredited laboratory.
  - Total Recoverable Hydrocarbons (TRH).
  - Benzene, Toluene, Ethylbenzene and Xylene (BTEX).
  - Organochlorine/ Organophosphate (OC/OP) pesticides.
  - Metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc, and mercury).
  - Asbestos.
- Comparison of laboratory analytical results with relevant Investigation Levels (ILs) as prescribed in the remediation strategy. In the event validation samples returned results above the nominated ILs, further excavations and validation sampling were undertaken to ensure the Site's remediation objectives were met.

- Air quality monitoring for the presence of air borne asbestos fibres was conducted during all remediation and validation works undertaken at the Site.
- Collation of all field notes, photographic logs, certified laboratory reports, soil movement logs, asbestos clearance certificates (where issued), waste disposal documentation and air quality monitoring results.
- Preparation of this validation report documenting all remediation and validation works undertaken at the Site.

It was also proposed that SLR personnel be present to oversee the reinstatement of screened material into the Site's excavation for the purpose of providing asbestos clearance certificates for each lift of backfill material, however this did not occur.

1.3 Legislative Framework

The soil remediation and validation works were undertaken in general accordance with the following regulatory requirements.

- ASC NEPM 2013, National Environmental Protection (Assessment of Site Contamination) Measures 1999, (as amended on 16 May 2013).
- Western Australian (WA) Department of Health (DOH) 2009, "Guideline for the Assessment, Remediation and Management of Asbestos - Contaminated Sites in Western Australia".
- Standards Australia AS 4482.1-2005, "Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil. Part 1 Non-volatile and semi volatile compounds".
- Northern Territory (NT) EPA 2017, "Northern Territory Contaminated Land Guidelines".
- Safe Work Australia 2020, "How to manage and control asbestos in the workplace Code of Practice".

2 Background

2.1 Site identification

A summary of Site identification information is detailed in Table 1. Refer to Figure 1 (Appendix A) for a plan of the locality surrounding the Project Area and Figure 2 (Appendix A) for the extent and boundary definition of the Site (i.e., Lot A area).

Table 1 Summary of property information

Site Information	Details
Site Owner	Northern Territory Government, Department of Local Government Housing and Community Development
Site Address	47 Progress Drive Nightcliff, Darwin, NT
Parcel Reference	Prior to subdivision, Lot 9077 Town of Nightcliff
Project Area Extent (approximate)	18,900m^2
Site Area (Lot A)	3,619 m^2
Current Occupier	DIPL

Site Information	Details
Current Land Use	Currently unoccupied, under redevelopment
Future Land Use	Commercial (Police Station)
Current Zoning	Rezoned from Medium Density Residential to Specific Use Zone to facilitate the redevelopment of the broader Project Area for a mix commercial, community, residential and public open space purposes.
Central GPS Coordinates (latitude and longitude)	-12.388828°, 130.851451°

2.2 Surrounding Environment

2.2.1 Surrounding Land Uses and Activities

A summary of the properties adjacent to the Project Area at the time of this assessment is detailed in Table 2.

Table 2 Summary of Surrounding Land Uses

Direction	Description
North	Progress Drive and a medium residential building, followed by commercial land uses and single dwelling residences.
South	Commercial land use including a childcare centre, shopping centre, service station, followed by single dwelling residences.
East	Commercial land use and medium density residential buildings including a fuel service station, Dick Ward Drive and further single dwelling residences.
West	A vacant lot zoned for commercial use, followed by high-density residential dwellings, vegetation and open water frontage.

2.2.2 Regional Geology

A review of the Darwin Northern Territory Australian 1:250,000 Geological Series map (NTDME, 1988) indicated the strata which underlay the Site consisted of unconsolidated sand, ferruginous and clayey, sandy and gravelly soils including pisolitic and mottled laterite from the early period of the Cainozoic era. Additional geological features of the Site included kaolinitic claystone, commonly raiolaria-rich, silty in places, montmorillonite, glauconitic and calcareous when fresh; basal conglomerate, minor bioturbated siltstone, carbonate, sandy claystone and clayey sandstone.

2.2.3 Regional Topography

The Nightcliff 5073 1:2,500 Topographic Map (DIPL, 2016) indicated the ground elevation drops approximately 3 metres from the north east corner to the south west corner, towards Darwin Harbour. At the time of this investigation, the proposed redevelopment project and associated remediation works included earthworks across all areas of the Site.

2.2.4 Registered Groundwater Bore Information

A search of the Department of Environment and Natural Resources (DENR) Natural Resource Maps online database (DENR, 2018) indicated that eight (8) registered groundwater bores existed within a 500m radius of the centre of the site. Note that information pertaining to the quality of groundwater was not provided within each registered bore report. Table 3 provides a summary of the location and details of the identified registered bores.

Table 3 Summary of registered bore search

Registered Number	Completion date	Completion depth (mbgl)	Water level (mbgl)	Location
RN038557	24-03-2014	15.4	6	Approximately 85m east of the Project Area boundary
RN001722	Nil	Nil	Nil	Approximately 430m south east of the Project Area boundary
RN038558	25-03-2014	15.8	6	Approximately 85m east of the Project Area boundary
RN001721	Nil	Nil	Nil	Approximately 270m south east of the Project Area boundary
RN000130	03-08-1944	67	9.1	Approximately 110m east of the Project Area boundary
RN008096	23-03-1973	Nil	Nil	Approximately 190m south east of the Project Area boundary
RN005203	03-12-1965	12.2	Nil	Approximately 300m north of the Project Area boundary
RN005204	03-12-1965	12.2	Nil	Approximately 300m north of the Project Area boundary

mbgl = metres below ground level
nil = no information listed

2.3 Previous Environmental Investigations

SLR understands that DIPL commenced demolition of former public housing buildings in mid-2019, which were distributed across the wider Project Area. Majority of demolition waste from the Site was removed and a portion of crushed concrete rubble was screened and spread across the Site as general fill. The EPA raised concerns that pesticides may have been historically used under the building's foundations, and that ACM contaminated fill material may have been historically imported to the Site. As such, the first limited site investigation was undertaken by Greencap Pty Ltd (Greencap) in June 2019 to assess the presence of contamination associated with termite control chemicals at the building block located in the northwest corner of the Project Area, and potential ACM, asbestos fines (AF) and fibrous asbestos (FA) contamination at the footprints of demolished building blocks. Furthermore, a DSI was undertaken by Greencap in September 2019 to assess the nature and broader extent of contamination associated with pesticides residue and ACM identified in fill material across the Site.

To further facilitate the environmental audit report for the Site, in February 2020 Agon Environmental Pty Ltd (Agon) conducted further investigations and remediation works at the Site to address previously identified asbestos and pesticide-related contamination.

A detailed review of these reports has been undertaken by SLR and summaries of these are provided in the sections below.

2.3.1 Limited Soil Investigation (July 2019, Greencap)

Greencap conducted a Limited Soil Investigation (ref. J163245, July 2019) at the Site to understand the presence of pesticides beneath the building block located in the northwest corner of the Project Area (Lot A) and ACM in the fill material across the Project Area. The soil samples collected near surface were analysed for organochlorine pesticides (OCP) and heavy metals, and samples collected at the maximum depth of 1 meter below ground level (mbgl) were analysed for the presence/absence of ACM. OCP were identified at seven of the eight near surface soil sampling locations and comprised of chlordane, aldrin, dieldrin and heptachlor epoxide. Concentrations of aldrin and dieldrin exceeded the nominated health-based IL for residential land use at three of the sample locations.

SLR understands that this investigation was limited in its scope and as such the sampling program undertaken did not provide a comprehensive understanding of the extent and nature of asbestos contamination across the Project Area. However, the investigation did identify that fill material was present across the Project Area to a maximum depth of 0.8 mbgl. The investigation did not assess the other areas of the Project Area where building blocks were once present, for OCP and arsenic based compounds.

Sample locations conducted in this investigation that relate directly to soil conditions within Lot A are summarised below.

- Testpit location: TP06, sample collected at 0.0-0.1 mbgl.
- Surface soil samples collected at depth 0.0 – 0.1 mbgl:
  - SS01-1, SS01-2, SS01-3, SS01-4; and
  - SS02-1, SS02-2, SS02-3, SS02-4.

Soil samples collected as part of this investigation within Lot A at depths less than 0.3 mbgl, have been excavated, screened and validated as part of the subsequent remediation works conducted at the Site.

2.3.2 Detailed Soil Investigation (September 2019, Greencap)

Greencap conducted a DSI (ref. J163803) to further evaluate the extent of termite control pesticides in near surface soils and the extent of potential asbestos impact within the fill material identified across the Project Area. Near surface samples collected from or adjacent to the footprint of 11 residential building blocks were analysed for OCP and heavy metals. Testpits were also progressed across the Project Area to assess potential asbestos impact. Soil samples collected from the testpits to a maximum depth of 1 mbgl were analysed for the presence/absence of asbestos where suspected (based on visual observations). The OCP concentrations were reported above the laboratory's detection levels in the majority of near surface soil samples with results exceeding the adopted health-based IL from two of the building footprints of the Site. Bonded asbestos was detected at six sample locations and friable asbestos was detected at one sample location.

Sample locations conducted in this investigation that relate directly to soil conditions within Lot A are summarised below.

- Surface soil samples: SS 1 – SS16, samples collected at depths ranging from 0.0 – 0.1 mbgl, that were collected to assess potential pesticide and heavy metal impact.

- Testpits TP01 (0.00-0.05 mbgl, 0.05-0.85 mbgl), TP02 (0.00 – 0.75 mbgl), TP04 (0.00-0.05 mbgl, 0.05-0.55 mbgl), TP05 (0.00-0.40 mbgl), TP07 (0.00-0.05 mbgl, 0.05-0.65 mbgl), TP08 (0.00-0.05 mbgl, 0.05-0.40 mbgl).

Soil samples collected as part of this investigation within Lot A at depths less than 0.3 mbgl, have been excavated, screened and validated as part of the subsequent remediation works conducted at the Site. Samples collected at depths greater than 0.3 mbgl, continue to represent soil conditions within Lot A. Specifically, the deeper soil samples collected from the testpits completed across Lot A that investigated the presence of asbestos. None of these deeper samples collected from Lot A reported asbestos above the laboratory's detection levels. Analytical results obtained for these samples are included in Appendix C.

2.3.3 Additional Soil Investigation (October 2019; Greencap)

Greencap conducted an Additional Soil Investigation (ref J163803-02) to:

- address data gaps in previous investigations undertaken within the Project Area;
- delineate the extent and nature of asbestos impact found within the fill material; and
- delineate the extent of OCP identified within the former building footprints and immediate surroundings.

OCP were detected under most building footprints across the Project Area. Many forms of bonded ACM fragments were identified across the Project Area and were associated with the layers of fill. It was also observed that ACM fragments were scattered sporadically across the surface of the Project Area possibly due to historical demolition works. Friable asbestos was also identified at several locations and concentrations detected exceeded the adopted health-based criteria.

Sample locations assessed in this investigation that relate directly to soil conditions within Lot A are summarised below.

- Surface soil samples: SS53, SS54, SS55, SS64, SS65, SS66, SS67, samples collected at depths ranging from 0.0 to 0.25 mbgl.

None of the testpits completed as part of this investigation were located on Lot A.

Soil samples collected as part of this investigation within Lot A at depths less than 0.3 mbgl, have been excavated, screened and validated as part of the subsequent remediation works conducted at the Site.

2.3.4 Detailed Site Investigation (February 2020; Agon)

Agon conducted a risk based DSI followed by remediation work within the Project Area. The investigation process was assessed by the Auditor to confirm if the Project Area is suitable for the proposed future development. The DSI included the investigation of asbestos, pesticides and groundwater to characterise the environmental condition of the Project Area. The findings were consistent with the previous investigations with fill material being encountered evenly across the Project Area.

Sample locations assessed in the Agon investigation that relate directly to soil and groundwater conditions within Lot A are summarised below.

- Testpits: TP01 (0.15 mbl), TP02 (0.1 mbgl, 0.8 mbgl), TP03 (0.1 mbgl, 0.8mbgl) TP04 (0.1 mbgl, 0.6mbgl), TP05 (0.1 mbgl, 0.72 mbgl), TP06 (0.1 mbgl, 1.2 mbgl), TP07 (0.1 mgl), TP08 (0.1 mbgl).
- Soil samples collected when installing monitoring well MW04 (4 mbgl, 5 mbgl, 6 mbgl).
- Groundwater samples collected from monitoring well MW04.

Soil samples collected as part of this investigation within Lot A at depths less than 0.3 mbgl, have been removed, screened and validated as part of the subsequent remediation works conducted at the Site. Samples collected at depths greater than 0.3 mbgl, continue to represent soil conditions within Lot A. None of the deeper samples reported analytes above the nominated ILs adopted for commercial land uses. Analytical results for these samples are included in Appendix C.

Minor concentrations of chloroform and TRH fractions were reported in the groundwater samples collected. However, silica gel clean-up was conducted on the highest results which reduced the TRH results to below the laboratory's limit of reporting (LOR). Groundwater samples collected from monitoring wells installed across the Project Area reported analytes' concentrations either below the laboratory's LOR or below the adopted assessment criteria. Some heavy metals exceeded the adopted assessment criteria in the groundwater samples collected, however they are not considered to pose a risk to future commercial users of Lot A as access to groundwater is considered unlikely.

During this investigation, Agon also oversaw the removal of surface soils that reported pesticide concentrations above the nominated health based ILs for residential land uses (but below the health based ILs specified for commercial/industrial land uses) from the wider Project Area. Soil from these "hotspot" areas were removed and relocated onto Lot A (proposed police station). In particular, pesticide impact reported in Agon testpit TP09 (09_0_0.1) and Greencap soil samples SS18, SS30, SS64, SS65, and SS69 were relocated to Lot A and spread across the surface. Agon estimated a total of 35 m^3 of material was relocated to Lot A.

Analytical results for these soil samples (TP09_0_0.1, SS18, SS30, SS64, SS65, and SS69) are included in Appendix C. It should be noted that these samples reported pesticide concentrations below the nominated IL adopted for commercial land uses. In addition, given that soil from these hotspots were spread across the surface of the Site, it is considered highly likely that this material has since been excavated, screened and validated as part of the subsequent remediation works conducted at the Site.

As part of the Agon's investigation and remediation works, asbestos material and soil containing bonded ACM and soils containing asbestos fines/fibrous asbestos (AF/FA) that exceeded the adopted criteria, were removed. The remediated areas were validated and cleared for the allotments being proposed for residential development and the Road Reserve.

3 Remediation and Validation Methodology

3.1 Remediation Strategy and Deviations

Remediation and validation activities undertaken at the Site were completed in general accordance with the remediation strategy (SLR ref: 680.10679.00000-M04-v2.0 20200603) endorsed by the Auditor and included in Appendix B.

The remediation strategy was developed in general accordance with the following guidelines and standards.

- ASC NEPM 2013, National Environmental Protection (Assessment of Site Contamination) Measures 1999, (as amended on 16 May 2013).
- WA DOH 2009, "Guideline for the Assessment, Remediation and Management of Asbestos - Contaminated Sites in Western Australia".
- Standards Australia AS 4482.1-2005, "Guide to the Investigation and Sampling of Sites with Potentially Contaminated Soil. Part 1 Non-volatile and semi volatile compounds".
- Northern Territory (NT) EPA 2017, "Northern Territory Contaminated Land Guidelines".
- Safe Work Australia 2020, "How to manage and control asbestos in the workplace Code of Practice".

In addition, SLR's SOPs were followed to ensure integrity was maintained and sampling procedures were completed in general accordance with the relevant guidelines and standards.

Civil works had already commenced prior to SLR being engaged to develop and implement the remediation strategy for the Site. To limit the impact on the Civil Contractor's project timeline, the remediation strategy was initially provided via email with additional advice, changes and requests for information also provided via email correspondence. Table 4 outlines a summary of the relevant email correspondence, with copies of the emails provided in Appendix B. Appendix B also includes a copy of the remediation strategy outlined in a technical memorandum, which was provided on 22 April 2020 and subsequently approved by the CLA on 24 April 2020.

Table 4 Summary of correspondence related to the remediation works at Lot A

Date and Author	Description
20 April 2020 – Paul Turyn (SLR)	Outline of proposed preliminary remediation strategy following phone conversations with CLA.
21 April 2020 – Shandel Coleman (CLA assistant)	Acceptance of preliminary remediation strategy with a list of minor clarifications. In this email the CLA requests inspection and issue of visual clearance certificates at the completion of each lift when reinstating material.
22 April 2020 – Paul Turyn (SLR)	Technical memorandum outlining further details of the remediation strategy was sent to the CLA, HK Solutions and DIPL.
22 April 2020 – Bill Kmon (HK Solutions)	Provision of the final Agon report (Agon DSI, 2020) and advice that it has been forwarded to the CLA for review. SLR had requested advice from the CLA in relation to the assessment of the validation works outlined in this report relating to the crushed concrete material and whether it was endorsed as suitable for reuse by the CLA based on this report.
22 April 2020 – Paul Turyn (SLR)	Request for information from Paul to HK Solutions. Request for characterisation information for the imported fill material stockpiled on site.
22 April 2020 – Bill Kmon (HK Solutions)	Providing information from AECOM (2019) relating to imported fill.
23 April 2020 – Paul Turyn (SLR)	Proposed change to validation sampling strategy based on findings in the field.
24 April 2020 – Jean-Paul Pearce (CLA)	CLA review letter of the proposed remediation strategy.

Date and Author	Description
24 April 2020 – Paul Turyn (SLR)	Advice from SLR (Paul Turyn) to HK Solutions. Recommendation that the contractor does not use the crushed concrete material until the auditor has confirmed that the material is suitable for onsite reuse, following their review of the most recent Agon report (Agon, 2020).
24 April 2020 – Sarah Doherty (SLR)	Advice to HK Solutions and the Civil Contractor (Halikos) that SLR still had not received confirmation that the crushed concrete material had been deemed as suitable for site reuse by the CLA.
28 April 2020 – Jean-Paul Pearce (CLA)	Written confirmation of SLR's email (Paul Turyn) summary of a phone conversation. Summary included proposed strategy for review of validation results by SLR.
29 April 2020 – Paul Turyn (SLR)	Response to CLA's comments on remediation strategy. Point 3 response "No, SLR are not proposing to sample the crushed concrete stockpile. SLR are of the understanding that this material has been characterised previously and that you have accepted that this material is suitable for reuse on site. If this is not the case, please advise as soon as possible as the contractor wants to reuse this material starting early next week."
30 April 2020 – Paul Turyn (SLR)	Advice provided to HK Solutions. Based on interpretation of validation data by SLR, the excavated area within Lot A had been successfully remediated and was deemed suitable for its proposed future land use. Review and interpretation of stockpile characterisation had not yet been finalised. Reuse of the stockpiled material was therefore not recommended until interpretation of SLR's sampling of the excavated spoil had been completed and advice from the CLA relating to the crushed concrete had been received.

The following outlines the deviations that occurred from the proposed remediation strategy and advice provided by SLR and the CLA during Site works.

- The Civil Contractor reinstated and compacted the excavated areas at the Site without the presence of a SLR Consultant. Subsequently visual clearance of the surface of each compacted lift during reinstatement of the excavated areas could not be provided. SLR are not aware of any monitoring for air borne asbestos fibres undertaken during the blending, reinstatement, and compaction of materials at the Site.
- Further assessment was recommended to determine if stockpiled crushed concrete could be reused onsite from a contamination perspective. Sampling of the crushed concrete was not proposed by SLR but was suggested by CLA in their response (24 April 2020). The Client and Civil Contractor asserted that the material had already been sampled and classified within the Agon report (Agon, 2020), which was to be endorsed by the CLA. A request for clarification on this point was made to CLA by Paul Turyn (SLR) within the response to comments on 29 April 2020. SLR advised the Client and Civil Contractor that reuse of the crushed concrete should not be undertaken until advice or endorsement from the CLA had been received. The material was reused at the Site without being resampled, while SLR were not on site and prior to CLA advice or endorsement being received.

- The Stockpile Characterisation memorandum (SLR report 680.10679-M02-v1.0), which recommended further segregation works be undertaken for three stockpiles to ensure their suitability for reuse on Site, is provided in Appendix D. The Civil Contractor has been unable to confirm if asbestos impacted areas identified within three of the characterised stockpiles had been segregated and disposed of offsite. A SLR representative was not present when the validated excavation was backfilled/reinstated.

3.2 Soil Sampling Methodology

Soil validation and characterisation sampling were undertaken in accordance with the remediation strategy, the details of which are provided in Table 5.

Table 5 Soil sampling methodology

Activity	Comment / Details
Soil sampling frequencies	• Spoil characterisation samples were collected from the excavated, stockpiled material at a frequency of 1 sample every 25 m^3 with a minimum of three samples should a stockpile be of less than 25m^3 in volume. • Validation samples were collected from the base of each excavation at a minimum rate of one sample per 25 m^2 of excavation base, with a minimum of one sample collected from each excavation base. • Coordinates of sample locations were recorded with a handheld GPS.
Field quality control and sampling	• Duplicate samples were collected at a rate of 1:20 for soil samples. • Equipment rinsate blanks (taken from re-useable equipment) collected for each day of sampling and analysed for COPC.
Sample collection	• Sample collection were collected in general accordance with Australian Standard AS4482.1-2005 and SLR's SOPs. Dedicated disposable nitrile gloves and laboratory supplied sample containers were used for sample collection. • In general accordance with NEPM 2013, stockpile soil samples were collected from approximately 200-300mm below the stockpile surface.
Sample preservation	• Samples were placed in laboratory supplied jars and stored as close to 4°C as practicable, in insulated chilled containers while on site and in transit to the laboratory.

Activity	Comment / Details
Sample submission	• Chain of custody (COC) documentation will be completed at the time of sample collection and will accompany the samples to the nominated laboratory. • All samples will be submitted to a NATA accredited laboratory for analysis. • 50% of spoil characterisation samples were submitted for analysis, with the rest held by the laboratory for further analysis if required should substantial[#1] variability in analytical results required further statistical assessment. • 50% of validation samples will be submitted for analysis, with the rest held by the laboratory for further analysis if required should substantial variability in analytical results required further statistical assessment. In the event a validation sample recorded asbestos impact, samples collected in the near vicinity of the validation sample were analysed to determine the extent of the residual impact.

#1 substantial variability will be assessed via a coefficient of variation (CV) assessment as per the NSW EPA Sampling Design Guidelines (1995) with stockpiles with a CV value >1 considered to have substantial variability.

3.3 Analytical Assessment

All samples were submitted to a laboratory (Eurofins Environment Testing Australia Pty Ltd (Eurofins)), NATA accredited for the analyses performed, and included:

- TRH
- TPH
- BTEXN
- OC/OP pesticides
- Priority metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc, and mercury)
- Asbestos.

All non-scheduled samples were placed on hold at the laboratory should further analysis be required as part of the characterisation and validation process.

3.4 Screening Criteria

The following criteria were used to assess the potential risk posed to current and future users of the Site and sites at which spoil materials could be reused. The nominated screening criteria were selected from the following guidelines.

ASC NEPM:

- Health Based Investigation Levels (HILs) D (Commercial/Industrial)
- Soil Health Screening Levels (HSLs) D (Commercial/Industrial) - via vapour intrusion, sand, 0-1m
- Ecological Investigation Levels (EILs) - Commercial and Industrial, fresh contaminant

- Ecological Screening Levels (ESLs) - Commercial and Industrial, coarse soil, 0-2m
- TRH Management Limits for Commercial / Industrial, coarse soil.

WA DoH:

- Soil Asbestos Screening Criteria for Fibrous Asbestos (FA) / Asbestos Fines (AF), all site uses.
- Soil Asbestos Screening Criteria for Asbestos Containing Material (ACM), non-sensitive commercial and industrial sites.

3.5 Air Monitoring

Air monitoring was conducted for the duration of the stripping, stockpiling and characterisation works undertaken at the Site as a precautionary measure. The airborne asbestos monitoring was conducted at the boundaries of the Site (north, south, east and west) and were static locations.

Monitors were setup at the commencement of the shift (approximately 0700) and collected at the completion of Site works (ranges from 1600 – 1700 on weekday and from 12 noon -1300 on Saturday).

Each monitor was calibrated as per SLR's internal NATA accredited procedure and set at a flow rate of 1 L/minute Monday to Friday and 2 L/min on Saturday (as the work shift was shorter, 0700 – 1300, so the flow rate was increased to ensure an appropriate sampling volume was achieved over the shorter shift).

SLR is NATA accredited in our Darwin laboratory to conduct all sampling and analysis of filters. SLR's accreditation number is 3130. Air monitoring was conducted in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust, 2nd Edition [NOHSC: 3003 (2005)].

Consideration was given to the asbestos air-quality limit of 0.01 fibres/mL, for protecting the public around contaminated sites as endorsed by the enHealth Council in Management of asbestos in the non-occupational environment 2005 document (enHealth 2005).

In the event results of the airborne asbestos monitoring showed respirable asbestos fibre levels in excess of the levels outlined in Table 6, action was taken immediately.

Table 6 Air Monitoring Action Levels

Action Level	Control	Action
Less than 0.01 fibres/mL	No new control measures are necessary	• Continue with current measures.
At 0.01 fibres/mL or more than 0.01 fibres/mL but less than or equal to 0.02 fibres/mL	1. Review	• Review control measures.
	2. Investigate	• Investigate the cause.
	3. Implement	• Implement additional or alternative controls to eliminate or minimise exposure and prevent further releases. • Communicate any additional controls during daily pre-start meeting.
More than 0.02 fibres/mL	1. Stop removal works	• Cease excavation/transport of material.

Action Level	Control	Action
	2. Notify Regulator	• Notify the Head Contractor, followed by the regulator (NT WorkSafe) both verbally and in written communication.
	3. Investigate the cause	• Conduct a thorough assessment across the Site to determine the cause. • Consult with all personal involved in the works. • Determine ongoing mitigation measures. • Continue to carry out air-monitoring to ensure further controls have mitigated the problem.

Table adopted form the Code of Practice under Section 274 of the Work Health and Safety (National Uniform Legislation) Act 2011 (the WHS Act): How to safely remove Asbestos

4 Results

Civil works undertaken at the Site were completed by the Principal Contractor (Halikos Group). Civil works at the Site commenced on 22 April 2020.

SLR was engaged to provide environmental services in relation to the characterisation, remediation and validation of potential soil contamination at the Site, to ensure the Site's suitability for the proposed land use. SLR mobilised to the Site on 23 April 2020. At the time of SLR mobilising to the Site, crushed concrete found within the Site had been removed and stockpiled, and the northern portion of the Site had been stripped of geotechnically unsuitable material.

Field observations and summaries of the analytical results obtained for the remediation and validation activities undertaken at the Site and overseen by SLR, are provided below.

4.1 Field Observations

A photographic log of the remediation works is provided in Appendix E. Field observations discussed in this section are shown in Figure 3 (Appendix A). The extent of excavation works completed as part of the remediation activities undertaken at the Site are shown in Figure 4 (Appendix A).

Key field observations noted during the remediation works at the Site are summarised as follows.

- Near surface soil across the Site consisted typically of fill material. Various inclusions of building rubble (concrete rubble, concrete building footings, plastics, scrap metal, ceramic tiles, concrete pipes and plastic conduit) were observed within the fill material excavated.
- The final excavation at the Site had an area of approximately 3,619 m^2 and generally extended down into the natural red soils to a maximum depth of 0.3 m. It should be noted that the natural red soils to which the excavation extended into was a combination of undisturbed natural red soils and assumed reworked natural red soils.
- Any underground services encountered within the fill material at depths less than 0.3 m, were removed. Any deeper underground services that may be present beneath the Site were not removed as part of the remediation and validation works detailed herein.

- On 23 April 2020, the SLR consultant found one fragment of suspected ACM debris when inspecting the civil works that had been completed at the Site prior to SLR's engagement (shown as ACM1 in Figure 3 (Appendix A)). Flagging was erected to prevent further works in this area. The fragment was removed and, along with a sieved sampled of the surrounding soils, submitted for laboratory analysis to confirm the asbestos content of the fragment and determine if asbestos fines were present.
- While collecting validation samples on 27 April 2020, fragments of suspected ACM were identified at one location within the Site, near validation sample V133. These fragments and surrounding soils were sampled (shown as ACM5 in Figure 3 (Appendix A)) to confirm the asbestos content of the fragment and determine if asbestos fines were present in the surrounding soils. Where asbestos impact was detected in the validation samples, further excavation and validation sampling occurred and the area was reinspected for evidence of visible ACM.
- In addition to the collection of validation samples, the extents of the excavation (both base and walls) were visually inspected by SLR's environmental consultant for evidence of visible asbestos (i.e. ACM fragments/debris). An inspection of the excavation's walls confirmed that uncontrolled fill material that was present across the surface of the Site appeared to extend beyond the boundaries of the Site (i.e. fill material was noted in the northern, southern and western walls of the excavation), however no visible ACM was identified during these inspections.
- Fragments of suspected ACM were identified beyond the boundaries of the Site (shown as ACM2, ACM3 and ACM4 in Figure 3 (Appendix A)). This material was sampled to confirm the asbestos content and the information was used to inform the remediation strategy being prepared at the time for these areas.
- No stained or odorous soils were encountered across the Site during earthworks.

Based on anecdotal information received by the Civil Contractor, excavated areas within the Site were reinstated using screened spoil characterised as being suitable for reuse on Site. A crushed concrete stockpile was also used to reinstate the areas however the contamination status of this stockpile had not been clearly established at the time it was used to reinstate the Site's excavated areas. SLR were not present when the excavated areas were reinstated therefore the surface of each lift of reinstated material could not be visually inspected for the presence of any ACM.

4.2 Summary of Analytical Results

A tabulated summary of the analytical laboratory results compared to the nominated ILs is included in Appendix F. The laboratory certificates of analysis are provided in Appendix G.

A summary of the validation samples collected for the Site is provided in Table 7. Sample locations are shown on Figure 4 (Appendix A). A summary of analytical results is as follows.

- A total of 144 validation samples were collected from the base of the resultant excavation at the Site. Of the samples collected, 74 samples were submitted for laboratory analysis. All samples that were submitted for laboratory analyses reported concentrations of COPC below the nominated ILs.
- Validation sample V6 detected chrysotile asbestos (FA) at a concentration of 0.00035%w/w, which is less than the nominated IL. Asbestos was not detected in any of the other validation samples analysed.

- The ACM fragment identified during the initial site inspection was collected as well as a sieved sample of the surrounding soils. The fragment and soil sample (ACM1) were submitted for laboratory analysis to confirm the asbestos content of the fragment and determine if asbestos fines were present. The fragment was confirmed to contain asbestos, while no asbestos fines (AF/FA) were reported within the soil sample. Following receipt of these laboratory analytical results, and further visual inspection of the area by a suitable experienced SLR consultant, the area was excavated and screened as part of the wider remediation works undertaken at the Site. Validation sample V34 that was collected in the vicinity of sample location ACM1 did not report any asbestos impact. SLR considers the ACM impact encountered at sample location ACM1 to have been adequately removed.
- The ACM fragments identified during validation sampling (near validation sample V133) were collected as well as a sieved sample of the surrounding soils. The fragments and soil sample (ACM5) were submitted for laboratory analysis to confirm the asbestos content of the fragment and determine if asbestos fines were present. Chrysotile asbestos was identified within the fragments and no asbestos fines (AF/FA) were reported within the soil sample. Further excavation was undertaken around this sample location which resulted in removing soil from a $1m^2$ area to a depth of 0.005m. An additional validation sample was collected from the resultant excavation ("Val_A"). No fragments or asbestos fines were detected in the additional validation sample Val_A. SLR considers the ACM impact encountered at location "ACM5" to have been adequately removed.
- Hydrocarbon fractions (TRH C_{10}-C_{16}, TRH C_{16}-C_{34} and/or TRH C_{34}-C_{40}) were detected in 13 of the validation samples analysed although the concentrations reported were below the nominated human health based ILs for commercial/industrial land uses. One sample (V34) reported a concentration of TRH C_{10}-C_{16} above the nominated ESL for terrestrial ecosystems in a commercial/industrial setting. Given the design of the proposed police station involves minimal gardens and limited access to soil, no further assessment with respect to TRH C_{10}-C_{16} concentrations has been undertaken as a complete exposure pathway is considered unlikely.
- BTEXN compounds were not detected in any of the samples analysed.
- OC pesticides (aldrin and dieldrin) were reported in 32 samples analysed although the concentrations reported were below the nominated ILs.
- Metals were detected in all validation samples submitted for analyses. The concentrations detected were below the nominated ILs. Metals detected included arsenic, total chromium (III+IV), copper, lead, nickel and zinc. Metals cadmium and mercury were not detected in any of the samples analysed.

Table 7 Summary of Validation Samples

Sample Type	Sample Identification	Analysis
Characterisation sample	Char_VAL	*Characterisation as per the ASC NEPM

Sample Type	Sample Identification	Analysis
Base samples – main excavation	V1, V3, V5, V6, V8, V10, V11, V13, V16, V17, V19, V21, V23, V25, V26, V29, V31, V34, V36**, V38, V41, V42, V44, V46, V47, V49, V51, V52, V55, V56, V57, V59, V61, V62, V63, V65, V66, V68, V70, V71, V74, V76, V77, V79, V81, V82, V85, V86, V88, V90, V91, V93, V95, V96, V98, V100, V101, V103, V105, V106, V108, V111, V112, V113, V114, V115, V116, V121, V126, V129, V130, V131, V136, V141 **only analysed for asbestos	*TRH/TPH *BTEXN *OC/OP pesticides *Metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc, and mercury) *FA/AF – V1, V6, V11, V16, V21, V26, V31, V111, V116, V121, V126, V131, V136, V141 only *Presence/absence of asbestos - only those samples that were not analysed for FA/AF
	V2, V4, V7, V9, V12, V14, V15, V18, V20, V22, V24, V27, V28, V30, V32, V33, V35, V37, V39, V40, V43, V45, V48, V50, V53, V54, V58, V60, V64, V67, V69, V72, V73, V75, V78, V80, V83, V84, V87, V89, V92, V94, V97, V99, V102, V104, V107, V109, V110, V117, V118, V119, V120, V122, V123, V124, V125, V127, V128, V132, V133, V134, V135, V137, V138, V139, V140, V142, V143, V144	On hold
Hotspot (ACM5) validation sample	Val_A	*FA/AF
Debris characterisation	ACM1 (fragment and soil) ACM5 (fragments and soil)	*FA/AF
Field QC samples – field duplicates	V5/DUP1 V112/QC12 V113/QC10 V114/QC6 V115/QC5 V129/QC7 V130/QC9 V131/QC8	*TRH/TPH *BTEXN *OC/OP pesticides *Metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc, and mercury) *Presence/absence of asbestos *FA/AF
Field QC samples – equipment rinsate blanks	R1 – 23-Apr-20 R2 – 24-Apr-20 R3 – 25-Apr-20 R4 – 27-Apr-20 RIN5 – 28-Apr-20 (sample lost in transit)	*TRH/TPH *BTEXN *OC/OP pesticides *Metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc, and mercury)

4.3 Spoil Management

Table 8 summarises the stockpiles of spoil material that were generated from the excavations and characterised by SLR. Prior to SLR undertaking characterisation sampling, construction/demolition rubble from the stockpiles were screened and separated from the soil material. Further details of the stockpile characterisation work undertaken by SLR and associated results are included in the memorandums included in Appendix D.

The crushed concrete material that was stockpiled prior to SLR's involvement was determined to be suitable for Site reuse within the Agon DSI report (2020). However, endorsement by the CLA to reuse this material had not yet been provided at the time it was used to reinstate excavated areas within the Site. Resampling of this material to confirm its suitability for Site reuse was recommended by the CLA.

Asbestos was detected above the nominated ILs in fragment (bulk) and/or soil samples collected from stockpiles STP1, STP3 and STP7. SLR recommended the removal of soil adjacent to where the impact was detected in these stockpiles for offsite disposal. SLR also recommended that the stockpiles to be reinspected by an experienced asbestos assessor. Once segregation and reinspection had occurred, SLR considered that the remaining stockpiled material would have been suitable for re-use on Site.

Approximately 1,000 tonnes (approximately 625,000 m^3, assuming a soil density of 1.6) of imported fill material was brought to the Site by the Civil Contractor. SLR understands that this material was intended to be used to reinstate validated excavations at the Site. According to the information provided by the Civil Contractor, this material was excess spoil generated during the Department of Defence's Larrakeyah Barracks Redevelopment Temporary Base Entry project. This material was assessed by AECOM Australia Pty Ltd (AECOM) as being suitable for beneficial reuse. AECOM's soil characterisation memorandum is provided in Appendix H.

Communications with the Civil Contractor have confirmed that the following methodology was used to reinstate the validated excavation.

- Stockpiles STP1 – STP9 were blended with the crushed concrete material and imported fill prior to being used to reinstate the validated excavation.
- The blended material was placed at depths from approximately 0.5m up to surface level and compacted in "lifts" to meet the geotechnical engineering requirements.
- The reinstatement of the excavation was completed under the Civil Contractor's unexpected finds protocol and overseen by a geotechnical engineer.

The Civil Contractor has been unable to confirm if asbestos impacted areas identified within three of the characterised stockpiles had been segregated and disposed of offsite. A SLR representative was not present when the validated excavation was backfilled/reinstated. As SLR was not present during the reinstatement of the excavated areas, visual clearance of the surface of each compacted lift could not be provided.

Table 8 Stockpile Summary

Stockpile identification	Volume m^3	Description	Characterisation samples	Analysis	Summary of Analytical Results	Final Status
STP_TS	35	Topsoil material scrapped from the surface of the Site. Contains between 25-35% of vegetation/organic matter.	STP_TS-1 STP_TS-2 STP_TS-3	*Asbestos in soils *FA/AF *TPH/TRH *BTEXN *OCP/OPP *metals	*All samples reported COPC<ILs	Shoal Bay Waste Management Facility (SBWMF) – clean fill (geotechnically unsuitable for Site reuse)
STP1	40	Lot A excavation	STP1_1 STP1_2 STP1_3 STP1_4	*Asbestos in soils *FA/AF *TPH/TRH *PAHs *BTEXN *OCP/OPP *metals	*Sample STP1_2 reported asbestos impact (ACM) above the nominated IL *All other samples reported COPC<ILs	SLR recommended the removal of soil adjacent to where the STP1_2 was collected for offsite disposal, and the stockpile to be reinspected by an experienced asbestos assessor. Once segregation/reinspection occurred, the remaining stockpiled material would have been considered suitable for re-use on Site. Civil Contractor has been unable to confirm if segregation had occurred. SLR was not present when the excavation was backfilled and therefore unable to verify if the stockpiles that reported asbestos concentrations above the nominated ILs were used as part of the backfilling/reinstatement works.

Stockpile identification	Volume m^3	Description	Characterisation samples	Analysis	Summary of Analytical Results	Final Status
STP2	100	Lot A excavation	STP2_1/QC2 STP2_2 STP2_3 STP2_4/QC3	*Asbestos in soils *FA/AF *TPH/TRH *PAHs *BTEXN *OCP/OPP *metals	*All samples reported COPC<ILs	Suitable for reuse on Site
STP3	200	Lot A excavation	STP3_1 STP3_2 STP3_3 STP3_4 STP3_5 STP3_6 STP3_7 STP3_8	*Asbestos in soils *FA/AF *TPH/TRH *PAHs *BTEXN *OCP/OPP *metals	*Sample STP3_5 reported asbestos impact (FA) above the nominated IL *All other samples reported COPC<ILs	SLR recommended the removal of soil adjacent to where the STP3_5 was collected for offsite disposal, and the stockpile to be reinspected by an experienced asbestos assessor. Once segregation/reinspection occurred, the remaining stockpiled material would have been considered suitable for re-use on Site. Civil Contractor has been unable to confirm if segregation had occurred. SLR was not present when the excavation was backfilled and therefore unable to verify if the stockpiles that reported asbestos concentrations above the nominated ILs were used as part of the backfilling/reinstatement works.

Stockpile identification	Volume m^3	Description	Characterisation samples	Analysis	Summary of Analytical Results	Final Status
STP4	<100	Lot A excavation	STP4_E STP4_N STP4_S STP4_W/QC13	*Asbestos in soils *FA/AF *TPH/TRH *PAHs *BTEXN *OCP/OPP *metals	*Sample STP4_5 reported asbestos impact (AF), however the concentration detected is below the nominated IL. *All samples reported COPC<ILs	Suitable for reuse on Site
STP5	250	Lot A excavation	STP5_1 STP5_2 STP5_3 STP5_4 STP5_5 STP5_6 STP5_7 STP5_8 STP5_9 STP5_10	*Asbestos in soils *FA/AF *TPH/TRH *PAHs *BTEXN *OCP/OPP *metals	*Sample STP5_8 reported asbestos impact (AF), however the concentration detected is below the nominated IL. *All samples reported COPC<ILs	Suitable for reuse on Site

Stockpile identification	Volume m^3	Description	Characterisation samples	Analysis	Summary of Analytical Results	Final Status
STP6	275	Lot A excavation	STP6_1 STP6_2 STP6_3 STP6_4 STP6_5 STP6_6 STP6_7 STP6_8 STP6_9 STP6_10 STP6_11	*Asbestos in soils *FA/AF *TPH/TRH *PAHs *BTEXN *OCP/OPP *metals	*All samples reported COPC<ILs	Suitable for reuse on Site
STP7	275	Lot A excavation	STP7_1 STP7_2 STP7_3 STP7_4 STP7_5 STP7_6 STP7_7 STP7_8/STP7_8B STP7_9 STP7_10 STP7_11/STP7_11B	*Asbestos in soils *FA/AF *TPH/TRH *PAHs *BTEXN *OCP/OPP *metals	*One ACM fragment (chrysotile) was identified when sieving sample STP7_11. *Analysis of fragment sample STP7_8 did not detect any asbestos. *Asbestos impact (FA) was detected in sample STP7_6 however the concentrations detected did not exceed the nominated IL. *All other samples reported COPC<ILs	SLR recommended the removal of soil adjacent to where the STP7_11 was collected for offsite disposal, and the stockpile to be reinspected by an experienced asbestos assessor. Once segregation/reinspection occurred, the remaining stockpiled material would have been considered suitable for re-use on Site. Civil Contractor has been unable to confirm if segregation had occurred. SLR was not present when the excavation was backfilled and therefore unable to verify if the stockpiles that reported asbestos concentrations above the nominated ILs were used as part of the backfilling/reinstatement works.

Stockpile identification	Volume m^3	Description	Characterisation samples	Analysis	Summary of Analytical Results	Final Status
STP8	250	Lot A excavation	STP8_1 STP8_2 STP8_3 STP8_4 STP8_5 STP8_6 STP8_7 STP8_8** STP8_9 STP8_10	*Asbestos in soils *FA/AF *TPH/TRH *PAHs *BTEXN *OCP/OPP *metals	*Sample STP8_10 reported asbestos impact (AF), however the concentration detected is below the nominated IL. *All samples reported COPC<ILs	Suitable for reuse on Site
STP9	125	Lot A excavation	STP9_1 STP9_2 STP9_3 STP9_4 STP9_5	*Asbestos in soils *FA/AF *TPH/TRH *PAHs *BTEXN *OCP/OPP *metals	*All samples reported COPC<ILs	Suitable for reuse on Site
STW		Soil and construction and demolition (C&D) waste screened during excavation works at Lot A	STPW_1 STPW_2 STPW_3 STPW_4/QC4 STPW_5 STPW_6 STPW_7 STPW_8 STPW_9 STPW_10	*Asbestos in soils *FA/AF *TPH/TRH *PAHs *BTEXN *OCP/OPP *metals	*All samples reported COPC<ILs	Shoal Bay Waste Management Facility (SBWMF) – general waste due to percentage of C&D material within the stockpile (geotechnically unsuitable for Site reuse)

4.4 Air Monitoring

Air monitoring for airborne fibres was conducted for each day intrusive works were carried as part of the remediation works (20 July – 28 September 2020). Monitoring results did not report airborne fibres above the detection limit of the method used, which is 0.01 fibres/ml. Air monitoring reports are included in Appendix I.

4.5 Data Quality Review

4.5.1 Field Duplicate Samples

A total of eight duplicate samples were collected and submitted for laboratory analysis. The primary and duplicate sample combinations are listed below in Table 9 and assessment is provided in the results tables in Appendix F.

Table 9 Summary of QC combinations

Parent Sample	Duplicate
V5	DUP1
V112	QC12
V113	QC10
V114	QC6
V115	QC5
V129	QC7
V130	QC9
V131	QC8

With the exception of the analytes listed below in Table 10, the remaining relative percent differences (RPDs) were considered acceptable for the primary and duplicate sample combination. For the purpose of this investigation, a 50% RPD acceptance criteria has been adopted.

Table 10 Summary of RPDs exceeding the acceptable limit

Parent sample	Sample date	Duplicate	Analyte	RPD %
V5	24-04-2020	DUP1	Dieldrin	73.68%
V115	28-04-2020	QC5	Zinc	90.00%
V115	28-04-2020	QC5	Chromium	51.34%

SLR considers the elevated RPDs of samples V115 and V5 to be representative of the heterogenous nature of dieldrin, chromium and zinc concentrations across Lot A.

4.5.2 Equipment Rinsates

Five equipment rinsate samples were collected for quality assurance purposes. Unfortunately, one equipment rinsate (RIN5) was not included in the samples submitted to the laboratory. No analytes were detected in any of the equipment rinsate blanks. Refer to Appendix G for a copy of the Certified Laboratory Reports, and Appendix F for a summary of laboratory results including rinsates.

4.5.3 QA/QC Conclusions

Based on the review of the field and laboratory QA/QC results, SLR recommends the analytical data is suitable for its intended purpose.

5 Conceptual Site Model

The Site's Conceptual Site Model (CSM) has been updated considering the remediation and validation works conducted at the Site (and presented in this report), as well as the results from previous environmental investigations undertaken at the Site.

The CSM prepared for the Site and surrounds is presented below in Table 11 in tabulated form.

In developing the CSM, the following aspects were considered.

- The resultant excavation has been validated through either soil and/or visual inspections, as detailed in this report.
- As the validated excavation at the Site was backfilled without an SLR representative being present, SLR is unable to verify whether asbestos impact reported in discrete areas of three of the characterised stockpiles had been segregated and disposed of offsite. The Civil Contractor has been unable to provide information on the status of the spoil material that was characterised by SLR, and whether the stockpiles that reported asbestos concentrations above the nominated ILs were used as part of the backfilling/reinstatement works. As such, as a conservative measure, the CSM presented in Table 11 assumes that this material was used to backfill/reinstate the excavation created as part of the remediation works.
- Pesticide impact (aldrin and dieldrin) detected at the Site during previous environmental investigations and reported in soil brought onto the Site (Lot A) from adjacent allotments associated with the wider Project Area, are below the human health-based IL specified for Residential B (high density), and commercial/industrial land uses.
- Heavy metal impact above the nominated ILs was not detected in any of the soil samples collected from the Site during previous investigations undertaken by Greencap and Agon, or validation/characterisation samples collected as part of the remediation works detailed herein. As a result of these investigations, the CSM does not consider heavy metals in soils to be COPC for the Site.
- Hydrocarbon impact detected at the Site are below the human health-based IL specified for commercial/industrial land uses. Hydrocarbon impact (TRH C_{10}-C_{16}) was detected at a concentration above the ESL specified for protection of terrestrial ecosystems within a commercial/industrial setting. Given the design of the police station and limited gardens, this pathway was considered incomplete.

- Groundwater beneath the wider Project Area was intersected at depths between 2.69 and 3.72 mbgl and inferred to flow in a westerly direction towards coastal mangrove community and outer estuary of Darwin Harbor (located approximately 160 m from the Project Area) (Agon DSI 2020). According to the Agon DSI report (2020), groundwater samples reported dissolved heavy metal concentrations above the nominated ILs adopted for assessing potential impacts to groundwater users and marine aquatic ecosystems.
- Future users of the Site will have no to very limited access to soil due to the substantial concrete surfaces that will be established as part of the proposed police station design and construct. Therefore, even though asbestos may be present in the soil, it is not considered to pose an exposure risk to future users of the police station, provided this covering is maintained and access to soil prevented.
- Future users of the Site will not extract and use groundwater from beneath the Site and as such groundwater impact in the form of dissolved heavy metals, is not considered to pose an exposure risk to future users of the police station.
- Any persons conducting future excavations at the Site may encounter asbestos impacted soils or fragments of ACM debris. As a precautionary measure the following should be included in the workplans of any persons/contractor conducting excavation works at the Site to ensure appropriate controls are implemented in the event unexpected asbestos is encountered.
  - Safe work method statements and/or work-specific management plans addressing exposure to potentially asbestos impacted soils
  - Unexpected finds protocol
  - Associated training.

Table 11 Conceptual Site Model

Sources		Exposure	Receptors			Complete Source-Pathway-Receptor (SPR) Linkage
Primary Source	Secondary Sources	Transport Mechanism Possible and Routes of Exposure	Person or Ecological Receptor Potentially Exposed	Receptor Present		
				On-site	Off-site	
All primary sources of impact have been removed (building material constructed out of ACM products).	Soil contamination: Potential that stockpiles that reported asbestos impact may have been used to reinstate excavations created as part of the remediation works.	Dispersion • Uptake via plants • Dermal contact • Incidental ingestion • Leaching via percolation Wind Erosion: • Inhalation of dust Volatilisation • Inhalation	Residents	✗	✓	✗ *does not exist as concrete surfaces established as part of the Police Station design and construct will minimise offsite movement of soil/dust.
			Commercial workers	✓	✓	✗ *does not exist as concrete surfaces established as part of the Police Station design and construct will prevent access to soil onsite and offsite movement of soil/dust.
			Intrusive workers	✓	✓	Potentially Complete As a precautionary measure the following should be included in the workplan(s) of any persons/contractor conducting excavation works at the Site to ensure appropriate controls are implemented in the event unexpected asbestos is encountered. • Safe work method statements and/or work-specific management plans addressing exposure to potentially asbestos impacted soils • Unexpected finds protocol • Associated training.
			People in open spaces	✗	✓	✗ *does not exist as concrete surfaces established as part of the Police Station design and construct will minimise offsite movement of soil/dust.

Sources		Exposure	Receptors			Complete Source-Pathway-Receptor (SPR) Linkage
Primary Source	Secondary Sources	Transport Mechanism Possible and Routes of Exposure	Person or Ecological Receptor Potentially Exposed	Receptor Present		
				On-site	Off-site	
	Concentrations of pesticides (i.e. pesticides aldrin and dieldrin), hydrocarbons or heavy metals were not detected above the human health investigation levels specified for commercial land uses. One sample reported a hydrocarbon concentration (TRH C_{10} C_{16}) above the ESL specified for commercial land uses.		Ecological receptors (terrestrial biota)	×	✓	× *does not exist as very limited gardens will be established as part of the Police Station design.
	Groundwater Contamination: • Heavy metals	Migration of groundwater and its extraction • Dermal contact • Incidental ingestion • Inhalation	Residents	×	✓	× *although bores exist within the locality, the SPR linkage is not considered viable as groundwater within the locality is not expected to be used for domestic purposes especially given the availability of a reticulated, treated (mains) water supply and low groundwater yield.

Sources		Exposure	Receptors			Complete Source-Pathway-Receptor (SPR) Linkage
Primary Source	Secondary Sources	Transport Mechanism Possible and Routes of Exposure	Person or Ecological Receptor Potentially Exposed	Receptor Present		
				On-site	Off-site	
		• Terrestrial/ aquatic Groundwater impact is not volatile and therefore exposure pathway associated with the "migration of groundwater – volatilisation – inhalation" is not considered to exist.	Commercial workers	✓	✓	× *although bores exist within the locality, the SPR linkage is not considered viable as groundwater within the locality is not expected to be used for commercial purposes especially given the availability of a reticulated, treated (mains) water supply and low groundwater yield. There is no design to establish a bore onsite for future users of the Site.
			Intrusive workers	✓	✓	× *does not exist as groundwater is located at depths greater than 2.69 mbgl and as such is unlikely to enter typical excavations/underground service pits located either on site or within the surrounding locality.
			People in open spaces	×	✓	× *does not exist as groundwater is not expected to be used by users of public open spaces.
			Ecological receptors (terrestrial and aquatic biota)/ recreational users of Darwin Harbour	× (terrestrial only)	✓	Potentially Complete *possible that ground impact (dissolved heavy metals) could migrate offsite to the coastal mangrove communities located approximately 160 m west of the Project Area.

6 Conclusion

Due to deviations from the remediation strategy (listed in Section 3.1) SLR does not have sufficient evidence to provide comment on the suitability of material blended and used to backfill the excavated areas within Lot A. However, given that future users of the police station will have no to very limited access to soil due to the substantial concrete surfaces that will be established as part of this facility's design and construct – if asbestos impacted material was inadvertently used to reinstate excavated areas of Lot A, it is not considered to pose an undue exposure risk to the aforementioned site users, provided this surface covering is maintained and access to soil is prevented.

Likewise, any persons conducting future excavations at the Site (Lot A) may encounter asbestos impacted soils or fragments of ACM debris, if asbestos impacted material was used to backfill/reinstate excavated areas within Lot A. As a precautionary measure the following should be included in the workplans of any persons/contractor conducting excavation works at the Site (Lot A) to ensure appropriate controls are implemented in the event unexpected asbestos is encountered.

- Safe work method statements and/or work-specific management plans addressing exposure to potentially asbestos impacted soils
- Unexpected finds protocol
- Associated training.

In conclusion, subject to the Limitations outlined in Section 7, based on the field observations and analytical results obtained for the remediation and validation activities conducted at the Site, SLR considers that Lot A has been suitably remediated and validated for the proposed commercial land use (i.e. police station) provided access to soil is restricted (i.e. concreted/paved surface coverings, minimal gardens).

7 Limitations

The following information will assist in understanding the uncertainties relating to the interpretation of the data obtained during this investigation and the recommendations presented in the report and help with assessment and interpretation of the report.

SLR assumes no responsibility for the quality or accuracy of data obtained from external sources, or for occurrences outside the scope of works defined in this report.

All work conducted, and reports produced by SLR are prepared for a particular Client's objective and are based on a specific scope, conditions and limitations, as agreed upon between SLR and the Client. Information and/or report(s) prepared by SLR may therefore not be suitable for any use other than the intended objective.

Before passing on to a third party any information and/or report(s) prepared by SLR, the Client is to inform fully the third party of the objective and scope, and all limitations and conditions, including any other relevant information which applies to the information and/or report(s) prepared by SLR.

It is the responsibility of third parties to investigate fully to their satisfaction if any information and/or report(s) prepared by SLR, is suitable for a specific objective.

Services were conducted in a conscientious and professional manner. The nature of the task, however, and the likely disproportion between any damage or loss which might arise from the work and any report prepared as a result and the cost of our services is such that SLR cannot guarantee that all issues of concern/contamination have been identified.

The report(s) and/or information produced by SLR should not be reproduced and/or presented/reviewed except in full.

8 References

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WA Department of Health 2019, "Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia, Consultation Draft", November 2019.

APPENDIX A

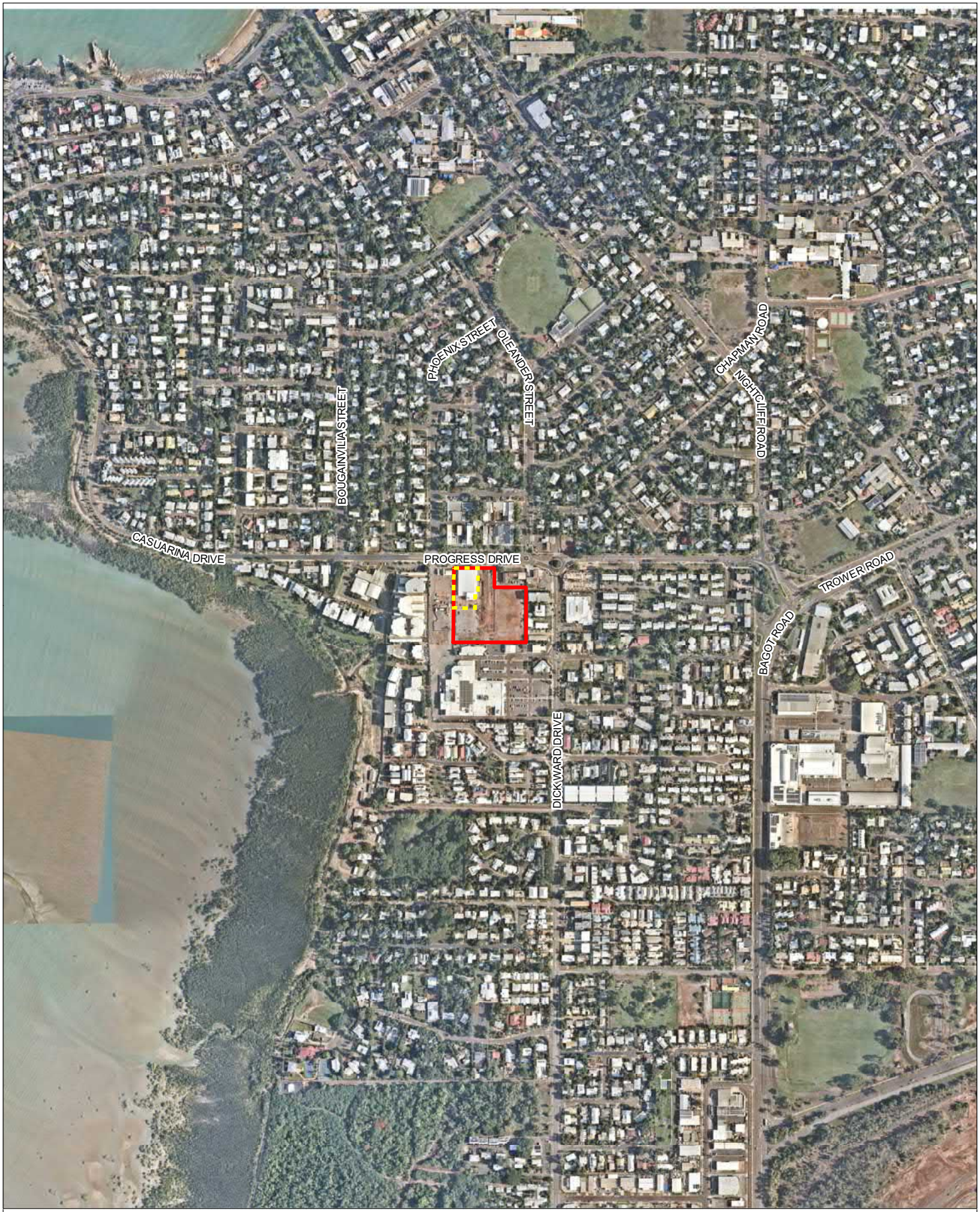
Figures

Figure 1 Site locality

Figure 2 Subdivision plan

Figure 3 ACM Finds during Lot A remediation

Figure 4 Validation sample locations



0 50 100 m

Proposed Residential Allotments - Lot A

Project Area

Coordinate System:	GDA 1994 MGA Zone 52
Scale:	1:10,000 at A4
Project Number:	680.10679
Date:	24-Feb-2021
Drawn by:	JG

SLR

JOHN STOKES SQUARE

Site Locality

FIGURE 1

\\au.slr.local\Corporate\Projects-SLR\620-BNE\680-DRW\680.10679 - John Stokes Square\GIS\680.10679 F01 Site Locality.mxd



H:\Projects-SLR\680-DRW\680.10679 DIPL John Stokes Square ERA\16 SLR Data\01 CAD\GIS\GIS\D SLR Rand LotC.mxd

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Project No.:	680.10679
Date:	25-Jun-2020
Drawn by:	Sarah Doherty
Scale:	1:1,000
Sheet Size:	A4
Projection:	GDA 1994 MGA Zone 52

N
W E
S

Imagery sourced from Nearmaps June 2020

Figure 2

0 5 10 20 Metres

Future Land Use Classifications



C:\Users\seperkins\Documents\saa_GIS\JSS\Ltd AUSS - Lot A - Site locality.mxd

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Scale:	1:1,000
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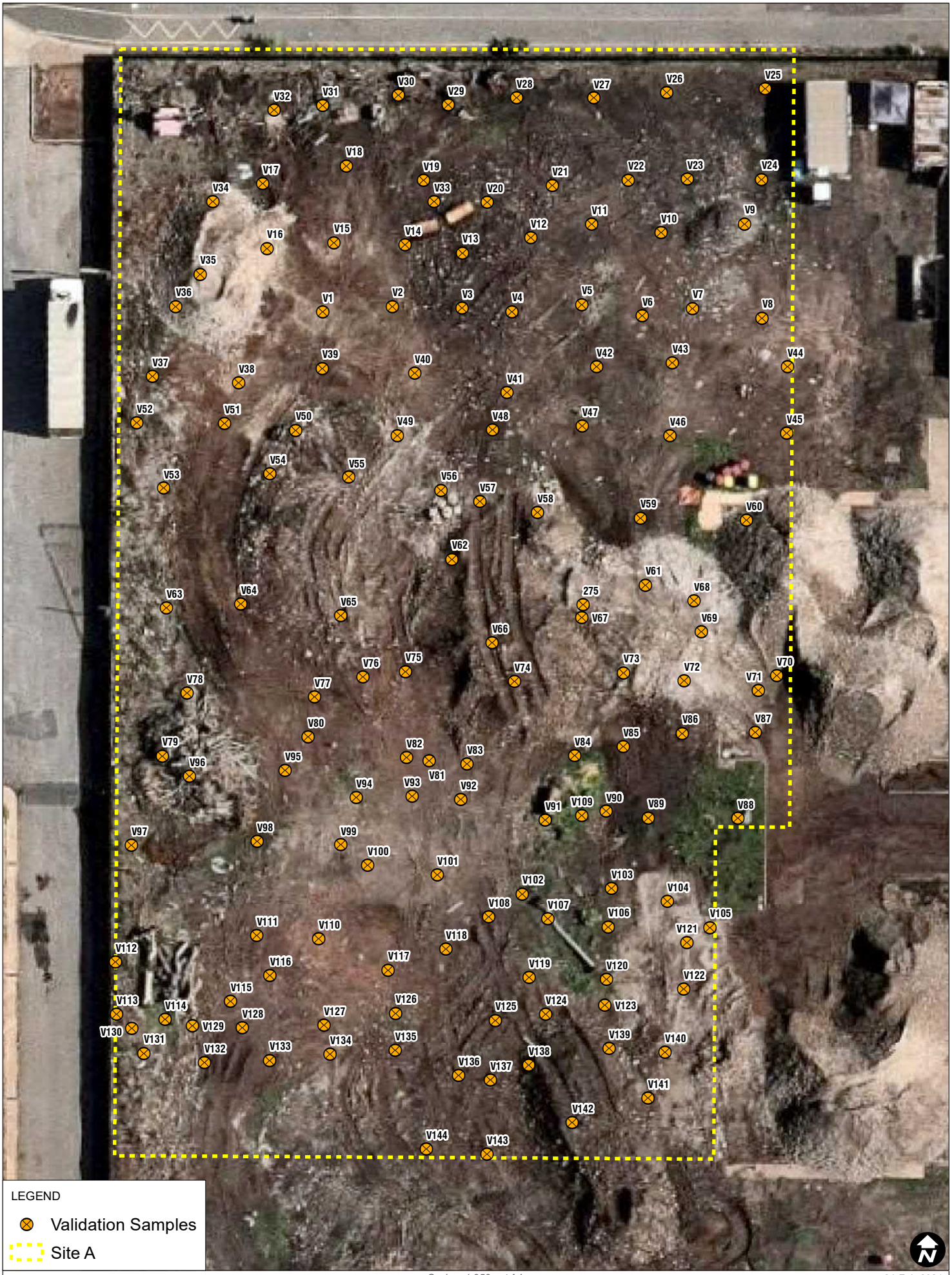
N
W
E
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Imagery sourced from Nearmaps October 2020

Figure 3

0 5 10 20
Metres

ACM finds



LEGEND

Validation Samples

Site A

0 5 10 Meters

Scale: 1:350 at A4
GDA 1994 MGA Zone 52

24-Feb-2021
680.10679

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Data Source: © Nearmap Imagery
Image Date: 3/11/2029

Site A
Sampling Locations

Figure 4

\\au.slr.local\Corporate\Projects-SLR\620-BNE\680-DRW\680.10679 - John Stokes Square\GIS\68010679 Site A Sampling locations.mxd

APPENDIX B

Remediation Strategy and Email Correspondence

Memorandum

To:	Bill Kmon	**At:**	Harris Kmon Solutions Pty Ltd
From:	Sarah Doherty	**At:**	SLR Consulting Australia Pty Ltd
Date:	22 April 2020	**Ref:**	680.30002.00000 Remediation Strategy 20200422.docx
Subject:	Remediation Strategy John Stokes Square - Lot A		

CONFIDENTIALITY

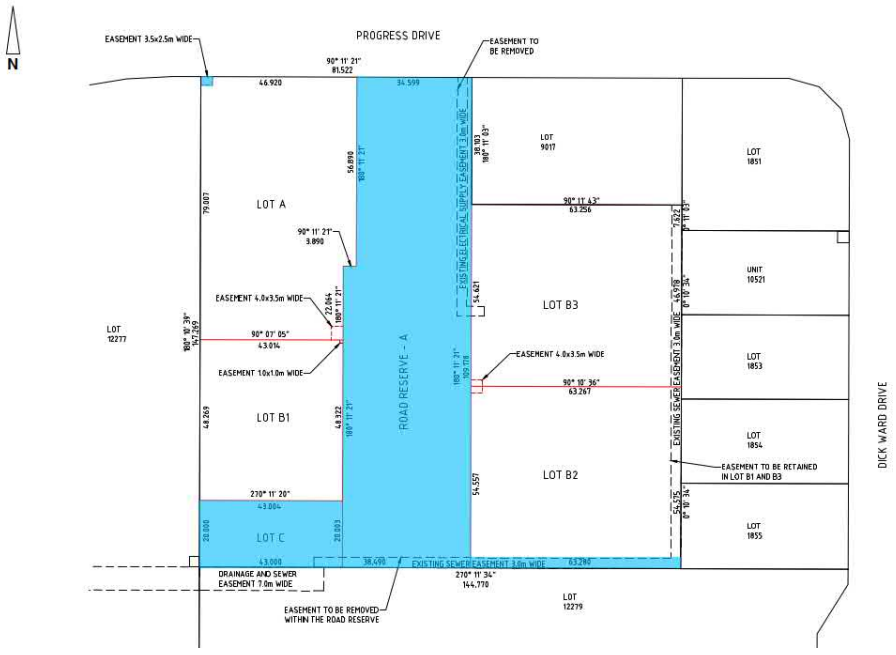
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SLR Consulting Australia Pty Ltd (SLR) have been engaged to provide environmental consulting services to support the development works at John Stokes Square in Nightcliff of the Northern Territory. This technical memorandum is intended to provide the Contaminated Lands Auditor (CLA) with a proposed strategy for review prior to commencement of works.

1 Background

John Stokes Square is a recently subdivided parcel of land in the suburb of Nightcliff. The location and subdivided land parcels are shown in **Figure 1.**

Figure 1 Layout and location of John Stokes Square (drawing provided by client)



Following subdivision, SLR understands that John Stokes Square will be subject to a multiple future land uses, as described in **Table 1**. Investigation Levels (ILs) and remediation criteria will be applied as required for each area with consideration of these varying land uses.

Table 1 Proposed future land uses of John Stokes Square

Lots or Parcels as described in Figure 1	Proposed future landuse
Lot A	Commercial Industrial (Police Station)
Lots B1, B2, B3	High Density Residential
Road Reserve A, Lot C & blue easements	Land to be gifted to various Authorities unencumbered

Several previous environmental investigations have been undertaken at John Stokes Square, which SLR have reviewed to inform the development of this strategy, including:

- Limited Soil Investigation – Greencap, July 2019
- Detailed Soil Investigation – Greencap, September 2019
- Additional Soil Investigation – Greencap, October 2019
- Detailed Site Investigation – Agon, February 2020
- Detailed Site Investigation revision – Agon, April 2020

SLR understands that Agon Environmental (Agon) carried out remediation works across John Stokes Square, details of which are included within the Detailed Site Investigation report/s. SLR also understands that these works are currently being assessed by CLA Jean-Paul Pearce and request that outcomes and recommendations be shared with SLR when available.

2 Scope

The strategy described in this technical memorandum is intended to support the development of Lot A, as shown in **Figure 1** (The Site). The remainder of John Stokes Square is intended to be managed separately to reduce the impact on construction timing.

3 Objectives

SLR understands the key objectives of this strategy are as follows:

- Ensure all remedial and development works are undertaken in a manner that does not present an unacceptable risk to human health or the environment.
- Ensure the remedial and development works adhere to all applicable legislative requirements, guidelines, and standards.
- Effectively remediate and manage all identified soil impacts within Lot A, enabling The Site to be utilised for its proposed future land use.

4 Legislative Framework

This site-specific remediation strategy was developed in general accordance with the following guidelines and standards.

- ASC NEPM 2013, "National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended in 2013". National Environment Protection Council.
- WA Department of Health 2009, "Guidelines for the assessment, Remediation and management of Asbestos-contaminated sites in Western Australia"
- AS 4482.1-2005 "Guide to the Sampling and Investigation of Potentially Contaminated Soil. Part 1: Non-volatile and semi-volatile compounds"
- VIC EPA 2009, "Industrial Waste Resource Guidelines – Soil Sampling"
- NSW EPA 2014, "Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 – The excavated natural material order 2014."

5 Remediation Strategy – Lot A

5.1 Earthworks

Based on visual assessment undertaken during a site inspection by SLR representatives on 22 April 2020 and discussions with stakeholders involved in the development, SLR has determined that there are distinct soil material types requiring management within Lot A, potentially including:

- Crushed concrete
- Geotechnically unsuitable topsoil material with organic inclusions
- Soil containing uncontrolled fill including construction/demolition waste
- ACM impacted material
- Pesticide impacted material
- Natural soil material geotechnically suitable for the proposed land use

Based on site observations on 22 April 2020, it is evident that not all of the above soil material types are in distinct layers, or in known locations, as such, SLR propose to manage to the visibly different soil layers/lenses as much as practicable to segregate the materials into the following groups –

- Crushed concrete
- Topsoil and vegetation stockpile/s
- Uncontrolled fill material
- Natural material (if required to be excavated to achieve design depth, however this is not considered necessary at this time).

The contractor has recently revised their onsite ESCP and provided an indicative site plan identifying proposed stockpile laydown areas and spoil processing/screening area (refer **Attachment A**).

The contractor intends to screen construction and demolition rubble from the uncontrolled fill material which may then be suitable for beneficial reuse onsite, pending characterisation sampling and analysis.

SLR recommend that any screened material should be further segregated into small, manageable stockpile volumes and not mixed together until laboratory results are received and the material is deemed suitable for resue onsite (or offsite). The intent of this segregation is to minimise the amount of material which is deemed unsuitable for reuse onsite (or offsite) which may need to be disposed of as waste.

Stockpiles will be segregated and sampled with information recorded within a soil tracking spreadsheet including:

- Stockpile ID label
- Stockpile location
- Estimated volume
- Material description based on visual assessment
- Number of samples collected / sampling frequency achieved

Further to this, all material excavated that is required to remain on site for either segregation processing, characterisation, or beneficial reuse must be transferred to the contractor proposed stockpile laydown areas. The location of the stockpile laydown area should reduce the need for double handling of the material and not impede upon the later construction/development works on site.

Further stockpile management requirements stipulated within the *Northern Territory Contaminated Land Guidelines* (NTEPA, 2017) includes the following.

- Maintain a log of stockpile locations, the origin of the material, locations of all characterisation and validation sample locations and corresponding sample results;
- Use of an effective liner (such as high-density polyethylene (HDPE) liner) or a sealed surface underneath each stockpile in combination with bunding to prevent run-off, soil erosion, or leaching of contaminants to the underlying strata;
- Restrict the maximum height of each stockpile to be no more than three (3) metres, or lower than boundary fence/hoarding heights when within five (5) metres of the boundary;
- Avoiding locating stockpiles:
    - adjacent to, or in close proximity to, site boundaries; and
    - in close proximity to sensitive receptors.
- Ensure stockpiles remain on site for the shortest amount of time;
- Maintain an effective dust and/or odour mitigation cover; and
- Maintain appropriate soil moisture content to reduce dust emissions (particularly during handling).

It is further recommended that if asbestos is observed during the excavation, stockpiling or the characterisation sampling process that stockpile should be securely covered using a geofabric liner. This will mitigate that potential health risk associated with the aerial dispersion of any asbestos fines/fibres.

5.2 Supervision onsite

SLR will supervise stripping, excavation and stockpiling works of Lot A, segregating material based on visual assessment in accordance with this remediation strategy.

SLR staff supervising works are deemed to be suitably experienced and competent for asbestos works as per WA DoH (2009) asbestos guidelines.

All field staff involved in this project have successfully carried out similar assessments and remediations that have been successfully completed, reviewed and signed off by previous Contaminated Land Auditors (Mark Stuckey, Anthony Lane)

5.3 Soil sampling

Samples were collected in accordance with the methodology outlined in **Table 2**.

Table 2 Soil sampling methodology

Activity	Comment / Details
Soil sampling frequencies	• Spoil characterisation samples will collected from the excavated, stockpiled material a frequency of 1 sample every 25 m^3 with a minimum of three samples should a stockpile be of less than 25m^3 in volume. • Validation samples will be collected from the walls of each excavation at a minimum rate of one per every 10 linear metres for every metre of depth, with a minimum of one sample collected from each excavation wall. • Validation samples will be collected from the base of each excavation at a minimum rate of one sample per 25 m^2 of excavation base, with a minimum of one sample collected from each excavation base. • Duplicate samples will be collected at a rate of 1:20 for soil samples. • One equipment rinsate (taken from re-useable equipment) will be collected and analysed for each day of sampling. • Where practicable, coordinates of sample locations will be recorded with a handheld GPS.
Sample collection	• Sample collection will be undertaken in general accordance with AS4482.1-2005 and SLR SOPs. Dedicated disposable nitrile gloves and laboratory supplied sample containers will be used for sample collection.
Sample preservation	• Samples will be placed in laboratory supplied jars and stored as close to 4°C as practicable, in insulated chilled containers while on site and in transit to the laboratory.
Sample submission	• Chain of custody (COC) documentation will be completed at the time of sample collection and will accompany the samples to the nominated laboratory. • All samples will be submitted to a National Association of Testing Authorities (NATA) accredited laboratory for analysis. • 50% of spoil characterisation samples will be submitted for analysis, with the rest held by the laboratory for further analysis if required should substantial variability in analytical results require further statistical assessment. • 50% of validation samples will be submitted for analysis, with the rest held by the laboratory for further analysis if required should substantial variability in analytical results require further statistical assessment.

5.4 Analytical assessment

Spoil characterisation and validation samples will be submitted to a NATA accredited laboratory for analysis.

Scheduled soil samples will be analysed for:

- Total Recoverable Hydrocarbons (TRH)
- Benzene, toluene, ethylbenzene and xylene (BTEX)
- OCP/OPP
- Asbestos (WA DoH/NEPM samples)
- 8 priority metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc)

- Representative samples will be analysed for soil characterisation as per the ASC NEPM

All non-scheduled samples will be placed on hold at the laboratory should further analysis be required as part of the characterisation and validation process.

5.5 Screening criteria

The nominated screening criteria will be selected to assess the potential risks posed to current and future users of the Site and sites at which material may be reused. The nominated screening criteria will be selected from the following:

ASC NEPM[1]:

- Health based Investigation Levels (HIL) for commercial/industrial sites
- Soil Health Screening Levels (HSL) for vapour intrusion – commercial/industrial sites
- Ecological Investigation Level (EIL) for commercial/industrial sites
- Ecological Screening Level (ESL) for commercial/industrial sites
- Management limits for Total Petroleum Hydrocarbon (TPH) fractions in soil, commercial/industrial sites
- Groundwater Investigation Levels (GIL) for Marine Waters

WA DoH[2]:

- General Contamination Criteria for protecting the public from asbestos-contaminated sites.

5.6 Air monitoring

Air monitoring will be conducted for the duration of the stripping, stockpiling and characterisation works as a precautionary measure.

Air monitoring will be undertaken SLR and the installation of air monitors in appropriate positions at the site.

Air monitoring will be conducted in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust, 2nd Edition [NOHSC: 3003 (2005)].

- Where the results of the airborne asbestos monitoring show that respirable asbestos fibre levels exceed the action levels outlined in

[1] National Environment Protection Council MAY 2013, "*National Environment Protection (Assessment of Site Contamination) Measure 1999*".
[2] Western Australian Department of Health (WA DOH) MAY 2009, "*Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*".

Table 3, action must be taken immediately.

- Refer to

Table 3 for the required controls and actions at each action level, as determined by the results of the air monitoring.

Table 3 Air monitoring action levels

Action Level	Control	Action
Less than 0.01 fibres/ml	No new control measures are necessary	• Continue with current control measures
At 0.01 fibres/ml or more than 0.01 fibres/ml but less than or equal to 0.02 fibres/ml	1. Review	• Review control measures
	2. Investigate	• Investigate the cause
	3. Implement	• Implement additional or alternative controls to eliminate or minimise exposure and prevent further release • Communicate any additional controls during daily pre-start meeting
More than 0.02 fibres/ml	4. Stop removal work	• Cease excavation / transport of material
	5. Notify Regulator	• Notify the Head Contractor, followed by the regulator (NT WorkSafe) both verbally and in written communication
	6. Investigate the cause	• Conduct a thorough assessment across the Site to determine the cause. • Consult with all personnel involved in the works • Determine ongoing mitigation measures • Continue to carry out air-monitoring to ensure further controls have mitigated the problem

Table adapted from the Code of Practice: *How to Safely Remove Asbestos*

6 Closure

We trust the above remediation strategy is adequate for the next phase of works at the John Stokes Square redevelopment project.

If you have any further queries or would like to discuss any of the above in detail, please do not hesitate in contacting either myself or Paul Turyn discuss.

Yours sincerely



SARAH DOHERTY
Environmental Project Consultant
0417 647 498

Checked/
Authorised by: PT

From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Wednesday, 22 April 2020 3:22 PM
To: Paul Turyn; Sarah Doherty
Cc: kristin.grumelart@nt.gov.au; Daryl Browne
Subject: RE: C901 Nightcliff Police Station - TRA No. 038 - Updated Erosion & Sediment Control Plans
Attachments: Nightcliff Police Station - Soil Stockpile Results from Larrakeyah; Nightcliff Police Station - Select Fill on Site

Hi Paul

Info attached are two emails that have all the info for the imported fill.

Regards

Bill Kmon
MBA CPPM MAIPM
Director/Project Manager

bill.kmon@hksolutions.com.au
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Harris Kmon Solutions Pty Ltd.

Doing our part and working safely from home through COVID-19

From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Wednesday, 22 April 2020 1:14 PM
To: Bill Kmon <bill.kmon@hksolutions.com.au>; Sarah Doherty <sdoherty@slrconsulting.com>
Cc: kristin.grumelart@nt.gov.au; Daryl Browne <Daryl.Browne@nt.gov.au>
Subject: RE: C901 Nightcliff Police Station - TRA No. 038 - Updated Erosion & Sediment Control Plans

Thanks Bill,

Can you please also provide a copy of the report Halikos have been provided for the imported fill material currently located onsite (I think they said this morning that AECOM provided them a report?).

We will need this to review and include in our remediation strategy if Halikos propose to mix the crushed concrete, stockpiled fill and screened material for reuse/compaction onsite.

Indicative photo of stockpiled material attached. There are three stockpiles which are separate, so I am assuming that there is three separate reports perhaps?

Thanks,

SLR

Paul Turyn
Northern Australia Operations Manager

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WINNERS: RoSPA Gold Award, 2017 WINNERS: International Business Excellence Award, 2016

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From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Wednesday, 22 April 2020 11:37 AM
To: Paul Turyn <pturyn@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>
Cc: kristin.grumelart@nt.gov.au; Daryl Browne <Daryl.Browne@nt.gov.au>
Subject: FW: C901 Nightcliff Police Station - TRA No. 038 - Updated Erosion & Sediment Control Plans

Hi Paul and Sarah

Please find attached Halikos updated ESCP as discussed on site.

Regards

Bill Kmon
MBA CPPM MAIPM
Director/Project Manager

bill.kmon@hksolutions.com.au
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From: Chris Giannikouris <chris.giannikouris@halikos.com.au>
Sent: Wednesday, 22 April 2020 10:35 AM
To: Bill Kmon <bill.kmon@hksolutions.com.au>
Cc: Kristin Grumelart <Kristin.Grumelart@nt.gov.au>; com-inbound-nightcliff-police-station@procoretech.com; Rohan Turner <rohan.turner@halikos.com.au>; Brian Hogbin <brian.hogbin@halikos.com.au>; Stephen Parker <stephen.parker@halikos.com.au>; Brad White <brad.white@halikos.com.au>; Mikaela Nugent <mikaela.nugent@halikos.com.au>
Subject: C901 Nightcliff Police Station - TRA No. 038 - Updated Erosion & Sediment Control Plans

Hi Bill,

Further to your email below (dated 21 April 20202), please find attached TRA No. 038 which transmits the Updated Erosion & Sediment Control Plans, which address Halikos site activities relating to the remediation of existing fill debris, for your review and issue to SLR.

We note we met with SLR on site this morning, which discussed the material handling processes described on the attached plans. Please advise if SLR require any further information on the attached documentation.

Please contact the undersigned should you require further information.

Regards,

Chris

Chris Giannikouris
General Manager
Halikos Construction

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mobile 0427 471 444
Unit 1/19 College Road, Berrimah NT 0828
GPO BOX 1970 Berrimah NT 0828
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https://www.halikos.com.au/downloads/construction
Halikos Pty Ltd is compliant with the Building Code 2016. Copies of the Building Code and Supporting Guidelines are available at:
https://www.abcc.gov.au/building-code/building-code-2016

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From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Tuesday, 21 April 2020 10:57 AM
To: Chris Giannikouris <chris.giannikouris@halikos.com.au>
Cc: kristin.grumelart@nt.gov.au; Brad White <brad.white@halikos.com.au>
Subject: FW: John Stokes Square - Lot A remediation discussion

Hi Chris

Below is the proposed strategy for the Police remediation after discussions with the Auditor.
We are still waiting of approval of this procedure however want to keep you in the loop so there are no surprises.

Regards

Bill Kmon
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Director/Project Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Monday, 20 April 2020 3:14 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; Sinead Redmond <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi AEA team,

Thanks for your time on the phone this afternoon to talk through the proposed remediation and further investigation strategy for the John Stokes Square redevelopment site.

This email is proposed to address the remediation strategy for the Police Station site (Lot A) in the attached map, I will provide a further email separately to address the proposed further investigation across the remainder site.

As discussed, the construction phase of Lot A has commenced and there is some concern regarding the discovery of geotechnically unsuitable and potentially contaminated material onsite.

DIPL would like to see us progress a remediation strategy to –

A. Appropriately manage any contamination onsite whilst facilitating construction as quickly as possible
B. Remove and segregate geotechnically unsuitable material/uncontrolled fill and characterise for either beneficial reuse (onsite or offsite) or disposal
C. Validate any remediated contamination and reinstate both geotechnically and environmentally suitable material to facilitate the construction works.

To address the above, SLR propose to conduct a supervised remediation strategy onsite to expediate these works as follows –

Strip back and stockpile the crushed concrete from the surface of Lot A (nominally 200 mm across site (but depth reportedly varies between 100 – 300mm) – noting that you have still not received or reviewed the latest Agon report which stipulates that the concrete has been appropriately sampled and validated to be clean of asbestos.
Strip back the top soil onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back uncontrolled fill onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back any further geotechnically unsuitable material (where is exists) onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Validate final surfaces where apparent natural material is encountered – noting that these surfaces should be investigated to reasonable depth to ensure that they are indeed natural material/s
Validate or quantify residual insitu uncontrolled fill in areas where continued excavation on is unwarranted or becomes too onerous - e.g. if a lens of uncontrolled fill or visibly contaminated material is encountered at depth (say 1.5 – 2 m) which appears to be geotechnically suitable (or can be accepted as part of the design /compaction procedures onsite) this material could be

considered to remain insitu if appropriate testing, delineation, management (such as capping) and a risk assessment is undertaken.

Points to note during remediation works would be as follows –

The asbestos emergency procedure under the existing EMP does not sufficiently address the control measures required to appropriately segregate different material types and further information/detail is to be developed and provided to the onsite contractor to facilitate an appropriate segregation and stockpiling procedure. This procedure would be reviewed with the onsite contractor to ensure they are aware of the requirements.
All stripping works would be supervised by SLR to ensure that layers of materials are not blended to ensure that all materials are appropriately segregated and characterised
All stockpiled material heights and erosion control measures are to be managed appropriately in accordance with the project EMP and section 12.2.5 of the NT EPA Contaminated Land Guidelines, version 1.0 (June 2017)
Characterisation of stockpiled material will be undertaken on an ongoing basis with laboratory turn around times fast tracked to allow quick characterisation of materials generated as part of the excavation works to allow for offsite disposal or beneficial reuse (either onsite or offsite).

Can you please review the above and provide any further commentary or advice in relation to the above approach.

Once reviewed, SLR will formalise the above in a Remediation Action Plan or a technical memorandum of understanding.

Please feel free to call me to discuss if you have any queries.

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Friday, 17 April 2020 2:57 PM
To: scoleman@envaud.com.au
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Christophe Grumelart <Christophe.Grumelart@nt.gov.au>; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: John Stokes Square - Lot A remediation discussion

Hi Shandel,

SLR have been engaged by HK Solutions, to assist in the remediation and validation of Lot A of the John Stokes Square redevelopment.

I would like the opportunity to catch up with you to discuss a remediation strategy to ensure that you and JP are comfortable that it will sufficient to close out the site audit for this Lot.

Subsequent to this scope, HK solutions are also engaging SLR to undertake further detailed site investigations across the remainder site to inform future remediation requirements.

We have had some internal and team discussions as to what this would need to look like, however I would also like to discuss that with you to ensure that the final deliverables are suitable to inform a RAP and subsequent remediation works to also close out these lots –

Lot B1, Lot B2, Lot B3 and Lot B4
Lot C
Road Reserve – A (plus associated easements.

If you could please give me a call when you have the opportunity (or advise a time for me to set up a tele/video conference) that would be great.

Thanks in advance.

Sincerely,

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Chris Giannikouris <chris.giannikouris@halikos.com.au>
Sent: Thursday, 2 April 2020 2:38 PM
To: Bill Kmon
Cc: kristin.grumelart@nt.gov.au; com-inbound-nightcliff-police-station@procoretech.com; Rohan Turner; Brian Hogbin; Brad White; Russell Burns
Subject: Nightcliff Police Station - Soil Stockpile Results from Larrakeyah
Attachments: 60517252_TM_TempBaseEntryStockpile_0_190212.pdf; 60517252_TM_TempBaseEntryStockpile_1_190314.pdf

Hi Bill,

As requested, please find below email from AECOM confirming the total number of samples taken and the total number of tests conducted. The test results are provided in the attachments.

Please find below email from Connor Newble, which confirms that the material removed from site for the Nightcliff Police Station site came from the Norforce compound referred to in the AECOM email.

We also confirm that no material will be removed off site until its been assessed as clean.

Regards,

Chris

Chris Giannikouris
General Manager
Halikos Construction

phone 08 8947 1444
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From: Connor Newble <connor.newble@halikos.com.au>
Sent: Monday, 23 March 2020 12:19 PM
To: Chris Giannikouris <chris.giannikouris@halikos.com.au>
Subject: FW: Soil Stockpile Results from Larrakeyah

Hi Chris/Rohan,

Please find below email from Aecom (dated 23rd March), confirming the total number of samples taken and the total number of tests conducted. The test results are provided in the attachments.

We confirm that the material removed from site for the Nightcliff Police Station site came from the Norforce compound referred to in the below email.

Regards,

Connor Newble
Senior Project Manager
Halikos Construction

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From: Court, Alana <Alana.Court@aecom.com>
Sent: Monday, 23 March 2020 11:50 AM
To: Stephen Parker <stephen.parker@halikos.com.au>
Subject: RE: Soil Stockpile Results from Larrakeyah

Hi Steve,

I have had a call from Natalie Calder in relation to the clean fill taken to your other project site in Darwin. My understanding is the soils you took from Larrakeyah Barracks came from the Temporary Base Entry works area. Prior to construction this area was considered a low risk for contamination following Contamination Investigations in 2017 and then confirmed during your activities through a soil sampling program on the stockpiles (memos attached).

The stockpile testing completed within this area all indicated that the material was clean fill. The additional testing completed in February 2019 also indicated clean fill, with only minor PFOS hits separated away from the main stockpiles and reused back on the Defence Base. The rest of the material was temporarily secured near the Norforce compound.

You can advise Natalie that the sample program was based on the 95% UCL values with 10 samples minimum requirement 2,500 m^3. In total across the stockpiles on the TBE we actually collected 32 samples and analysed 18 (plus 4 Quality Control Samples) which is above the requirements.

Table 3: Minimum number of samples for soil volumes greater than 200m³ (1:25 or 95%UCL)

Soil volume, m^3	No. of samples at 1:25m^3	Minimum No. of samples 95%UCLaverage[4]
300	12	10
400	16	10
500	20	10
600	24	10
700	28	10
800	32	10
900	36	10
1000	40	10
1500	60	10
2000	80	10
2500	100	10
3000	120	12 (1:250)
4000	160	16 (1:250)
4500	180	18 (1:250)
5000	200	20 (1:250)
>5000	1:25	1:250

Map of the sample sites in relation to the stockpiles and TBE works area is provided below.



If you need any additional advice, please don't hesitate to contact me.

Kind Regards

Alana Court
Environment Team Leader - Darwin
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From: Chris Giannikouris <chris.giannikouris@halikos.com.au>
Sent: Monday, 16 March 2020 11:16 AM
To: Bill Kmon
Cc: Kristin Grumelart; com-inbound-nightcliff-police-station@procoretech.com; Rohan Turner; Brian Hogbin; Mikaela Giannikouris; enda@themining.com.au
Subject: Nightcliff Police Station - Select Fill on Site
Attachments: Nightcliff Police Station - Transmittal - Material Clearance Certificate for Proposed Fill ; RE: Nightcliff Police Station - Available Material for Nightcliff; Imported FIll Material Test Report - 677638.00-17.pdf

Hi Bill,

Further to your email below, please find our responses to your queries in green text and advice from WGA dated 16 March 2020 (below).

Regards,

Chris

Chris Giannikouris
General Manager
Halikos Construction

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mobile 0427 471 444
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From: Russell Burns <russell@rfpeng.com>
Sent: Monday, 16 March 2020 9:10 AM
To: Chris Giannikouris <chris.giannikouris@halikos.com.au>
Cc: Rory Hinton <rory@rfpeng.com>; Themeli Mousellis <themeli@rfpeng.com>; Rohan Turner <rohan.turner@halikos.com.au>; com-inbound-nightcliff-police-station@procoretech.com; enda@themining.com.au
Subject: RE: Nightcliff Police Station - Select Fill on Site

Hi Chris

A comparison of the soil samples with select fill material is given in the below table:

Particle Size Distribution				
Sieve Size	**Select Fill Material**	**Sample 1**	**Sample 2**	**Average**
75mm	100%	100%	97%	99%
9.5mm	30%-100%	74%	70%	72%
2.36mm	15%-65%	51%	41%	46%
0.075mm	5%-25%	11%	3%	7%
Atterberg Limits and CBR				
CBR	30% Min	50%	40%	45%
Plasticity Index	2%-15%	7%	7%	7%
Linear Shrikage	2%-6%	3.5%	3%	3.25%

As such, it is anticipated that the blended sample will conform with select fill material as defined in the NTG standard specification. As you stated below, this will need to be confirmed once the material has been placed (to ensure all oversize has broken up/been removed). As per our previous advice, we recommend that this procedure is accepted by the Superintendent/DIPL representative.

Regards,
Russell Burns CIVIL ENGINEER
Wallbridge Gilbert Aztec RFP
PHONE 08 8941 1678
MOBILE 0401 356 108
ABN 15 088 045 229 | Rodeghiero Fong and Partners Pty Ltd trading as Wallbridge Gilbert Aztec RFP www.wga.com.au
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From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Friday, 13 March 2020 10:43 AM
To: Chris Giannikouris <chris.giannikouris@halikos.com.au>
Cc: Kristin Grumelart <kristin.grumelart@nt.gov.au>
Subject: Select fill on site NightCliff Police

Hi Chris

The following comments came out of the test report for your select fill. Can you please confirm the following.

Is the fill clean? Yes the fill is clean. The material was stockpiled then tested. Please find attached a further copy of the Material Clearance Certificate.

Looks like the fill is coming from a stockpile on Larrakeyah Naval Base. Correct, the material was created from trenching on site and then stockpiled. Defence would not allow the material to be removed off site until it was third party certified as clean.

Can we get a clean fill certificate, which may require weed and or chemical analysis. The Material Clearance Certificate previously provided (refer attached) details that the product is completely clean.

We had significant management responsibilities for PFAS and ACM at Rapid Creek. Wouldn't want to inherit any more problems. The material has been certified as being free from PFAS and ACM.

- What spec would you be comparing the results with to confirm compliance? Can you confirm it is in accordance with the RFT and DIPL Natspec. The material has been accepted by our civil engineers as compliant to the performance required under the contract please find attached the email (previously provided) which concurs with this statement. Please also find further WGA email above, dated 16 March 2020 which reconfirms this advice.
    - What type of fill is it being classified as? (standard, select etc.) The material is classified as select fill. We note that some of the material is oversized, however we intend to install the product using a sheep foot roller which will crush the larger material down. This will be verified by the insitu testing of the material once in place.
- The material properties (PSD's, atterbergs, LS & CBR) are in general compliance with Select Fill. Refer WGA email above dated 16 March 2020.

Regards

Bill Kmon
MAIPM CPPM
Director / Project Manager
Harris Kmon Solutions Pty Ltd
bill.kmon@hksolutions.com.au | 0459 840 588 | PO Box 213 PALMERSTON 0831

From: Paul Turyn
Sent: Wednesday, 22 April 2020 1:14 PM
To: Bill Kmon; Sarah Doherty
Cc: kristin.grumelart@nt.gov.au; Daryl Browne
Subject: RE: C901 Nightcliff Police Station - TRA No. 038 - Updated Erosion & Sediment Control Plans
Attachments: IMG_1076.jpg

Thanks Bill,

Can you please also provide a copy of the report Halikos have been provided for the imported fill material currently located onsite (I think they said this morning that AECOM provided them a report?).

We will need this to review and include in our remediation strategy if Halikos propose to mix the crushed concrete, stockpiled fill and screened material for reuse/compaction onsite.

Indicative photo of stockpiled material attached. There are three stockpiles which are separate, so I am assuming that there is three separate reports perhaps?

Thanks,

Paul Turyn
Northern Australia Operations Manager

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e pturyn@slrconsulting.com

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21 Parap Rd, Parap, NT, Australia, 0820

From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Wednesday, 22 April 2020 11:37 AM
To: Paul Turyn <pturyn@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>
Cc: kristin.grumelart@nt.gov.au; Daryl Browne <Daryl.Browne@nt.gov.au>
Subject: FW: C901 Nightcliff Police Station - TRA No. 038 - Updated Erosion & Sediment Control Plans

Hi Paul and Sarah

Please find attached Halikos updated ESCP as discussed on site.

Regards

Bill Kmon
MBA CPPM MAIPM
Director/Project Manager

bill.kmon@hksolutions.com.au
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Harris Kmon Solutions Pty Ltd.

Doing our part and working safely from home through COVID-19

From: Chris Giannikouris <chris.giannikouris@halikos.com.au>
Sent: Wednesday, 22 April 2020 10:35 AM
To: Bill Kmon <bill.kmon@hksolutions.com.au>
Cc: Kristin Grumelart <Kristin.Grumelart@nt.gov.au>; com-inbound-nightcliff-police-station@procoretech.com; Rohan Turner <rohan.turner@halikos.com.au>; Brian Hogbin <brian.hogbin@halikos.com.au>; Stephen Parker <stephen.parker@halikos.com.au>; Brad White <brad.white@halikos.com.au>; Mikaela Nugent <mikaela.nugent@halikos.com.au>
Subject: C901 Nightcliff Police Station - TRA No. 038 - Updated Erosion & Sediment Control Plans

Hi Bill,

Further to your email below (dated 21 April 20202), please find attached TRA No. 038 which transmits the Updated Erosion & Sediment Control Plans, which address Halikos site activities relating to the remediation of existing fill debris, for your review and issue to SLR.

We note we met with SLR on site this morning, which discussed the material handling processes described on the attached plans. Please advise if SLR require any further information on the attached documentation.

Please contact the undersigned should you require further information.

Regards,

Chris

Chris Giannikouris
General Manager
Halikos Construction

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From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Tuesday, 21 April 2020 10:57 AM
To: Chris Giannikouris <chris.giannikouris@halikos.com.au>
Cc: kristin.grumelart@nt.gov.au; Brad White <brad.white@halikos.com.au>
Subject: FW: John Stokes Square - Lot A remediation discussion

Hi Chris

Below is the proposed strategy for the Police remediation after discussions with the Auditor.
We are still waiting of approval of this procedure however want to keep you in the loop so there are no surprises.

Regards

Bill Kmon
MBA CPPM MAIPM
Director/Project Manager

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Harris Kmon Solutions Pty Ltd.

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Monday, 20 April 2020 3:14 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; Sinead Redmond <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi AEA team,

Thanks for your time on the phone this afternoon to talk through the proposed remediation and further investigation strategy for the John Stokes Square redevelopment site.

This email is proposed to address the remediation strategy for the Police Station site (Lot A) in the attached map, I will provide a further email separately to address the proposed further investigation across the remainder site.

As discussed, the construction phase of Lot A has commenced and there is some concern regarding the discovery of geotechnically unsuitable and potentially contaminated material onsite.

DIPL would like to see us progress a remediation strategy to –

A. Appropriately manage any contamination onsite whilst facilitating construction as quickly as possible
B. Remove and segregate geotechnically unsuitable material/uncontrolled fill and characterise for either beneficial reuse (onsite or offsite) or disposal
C. Validate any remediated contamination and reinstate both geotechnically and environmentally suitable material to facilitate the construction works.

To address the above, SLR propose to conduct a supervised remediation strategy onsite to expediate these works as follows –

Strip back and stockpile the crushed concrete from the surface of Lot A (nominally 200 mm across site (but depth reportedly varies between 100 – 300mm) – noting that you have still not received or reviewed the latest Agon report which stipulates that the concrete has been appropriately sampled and validated to be clean of asbestos.
Strip back the top soil onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back uncontrolled fill onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back any further geotechnically unsuitable material (where is exists) onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Validate final surfaces where apparent natural material is encountered – noting that these surfaces should be investigated to reasonable depth to ensure that they are indeed natural material/s
Validate or quantify residual insitu uncontrolled fill in areas where continued excavation on is unwarranted or becomes too onerous - e.g. if a lens of uncontrolled fill or visibly contaminated material is encountered at depth (say 1.5 – 2 m) which appears to be geotechnically suitable (or can be accepted as part of the design /compaction procedures onsite) this material could be considered to remain insitu if appropriate testing, delineation, management (such as capping) and a risk assessment is undertaken.

Points to note during remediation works would be as follows –

The asbestos emergency procedure under the existing EMP does not sufficiently address the control measures required to appropriately segregate different material types and further information/detail is to be developed and provided to the onsite contractor to facilitate an appropriate segregation and stockpiling procedure. This procedure would be reviewed with the onsite contractor to ensure they are aware of the requirements.
All stripping works would be supervised by SLR to ensure that layers of materials are not blended to ensure that all materials are appropriately segregated and characterised
All stockpiled material heights and erosion control measures are to be managed appropriately in accordance with the project EMP and section 12.2.5 of the NT EPA Contaminated Land Guidelines, version 1.0 (June 2017)
Characterisation of stockpiled material will be undertaken on an ongoing basis with laboratory turn around times fast tracked to allow quick characterisation of materials generated as part of the excavation works to allow for offsite disposal or beneficial reuse (either onsite or offsite).

Can you please review the above and provide any further commentary or advice in relation to the above approach.

Once reviewed, SLR will formalise the above in a Remediation Action Plan or a technical memorandum of understanding.

Please feel free to call me to discuss if you have any queries.

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Friday, 17 April 2020 2:57 PM
To: scoleman@envaud.com.au
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Christophe Grumelart <Christophe.Grumelart@nt.gov.au>; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: John Stokes Square - Lot A remediation discussion

Hi Shandel,

SLR have been engaged by HK Solutions, to assist in the remediation and validation of Lot A of the John Stokes Square redevelopment.

I would like the opportunity to catch up with you to discuss a remediation strategy to ensure that you and JP are comfortable that it will sufficient to close out the site audit for this Lot.

Subsequent to this scope, HK solutions are also engaging SLR to undertake further detailed site investigations across the remainder site to inform future remediation requirements.

We have had some internal and team discussions as to what this would need to look like, however I would also like to discuss that with you to ensure that the final deliverables are suitable to inform a RAP and subsequent remediation works to also close out these lots –

Lot B1, Lot B2, Lot B3 and Lot B4
Lot C
Road Reserve – A (plus associated easements.

If you could please give me a call when you have the opportunity (or advise a time for me to set up a tele/video conference) that would be great.

Thanks in advance.

Sincerely,

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn
Sent: Thursday, 23 April 2020 12:38 PM
To: Shandel Coleman; Jean-Paul Pearce
Cc: Bill Kmon; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan; Ruairi Hanly; Sarah Doherty; 'Sinead Redmond'
Subject: RE: John Stokes Square - Lot A remediation discussion

Importance: High

Hi Shandel and JP,

We'd like to propose a change to the sampling strategy for the JSS site due to material types being observed onsite and changes to he depth of excavation down to (presumably) natural material as follows –

Reduce the number of sieved samples (some to be presence/absence only) in area where there is no visible asbestos cement debris present to surfaces (for validation) or no visible ACM debris within excavated spill. Would suggest that perhaps we reduce this to 1 in 5 samples, with asbestos presence/absence samples collected as the other four samples. Obviously DoH sampling will be taken whenever ACM debris is identified other on a surface or within excavated spoil.
Change validation sampling frequency to be 1:25m^2 including walls rather than o/10m section of excavation walls. This adjustment is suggested as the uncontrolled fill across the site (so far) has reduced in depth. So we were assuming that we would get to ~0.8 maximum, but we are observing that the depth is some areas is <0.3m.

If you could please consider the above and advise at your easiest convenience that would be appreciated, noting that we have commenced the 1 in 5 sieved samples and asbestos presence/absence in between as of this.

Thanks,

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Wednesday, 22 April 2020 4:56 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Sorry team,

Just realised that I didn't attached the ESCP drawing as Attachment A

Apologies.

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Wednesday, 22 April 2020 4:37 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi Shandel,

Please see attached technical memorandum providing further detail with regard to the remediation strategy as requested.

Please don't hesitate in contacting either Sarah or myself if you would like to discuss further.

Sincerely,

Paul Turyn
Northern Australia Operations Manager

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From: Shandel Coleman <scoleman@envaud.com.au>
Sent: Tuesday, 21 April 2020 4:51 PM
To: Paul Turyn <pturyn@slrconsulting.com>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi Paul

Thanks for your email and discussion regarding the identification of geotechnically unsuitable material in Lot A.

We note that a strategy was in place that we had accepted, but an alternative approach is being undertaken due to identified geotechnically unsuitable materials and with the aim of further reducing the level of residual contamination at the site.

We agree with the approach, with a few minor clarifications:

Objective C – We presume the reinstatement will be done in layers (i.e. 200mm lifts and compacted with level 1 geotech) which can provide an efficient opportunity for inspection of ACM, issue visual clearance certificates on each lift, etc when being reused.
Agon reporting - Recommend we are provided the report as a priority, but if residual uncertainty remains (or we don't get the report) some validation sampling may warranted.
Please provide the segregation/stockpile procedure for review
Supervision of works – please ensure the SLR personnel supervising the works have the required experience/competency for asbestos works as per WA DoH (2009) asbestos guidelines
Please provide additional information regarding the proposed analysis suite and will this differ for on site reuse/off site reuse/ waste classification
We recommend airborne asbestos fibre monitoring be conducted during the works.

Please note the auditor is also waiting to have a discussion with DIPL regarding the approach and audit outcomes, but don't see this as delaying the process.

Regards
Shandel

Shandel Coleman | Qld Contaminated Land Auditor, Principal Audit Support, WA Manager, National WHS Manager
T 08 6268 0181 M 0412 230 147
scoleman@envaud.com.au

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AUSTRALIAN ENVIRONMENTAL AUDITORS

From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Monday, 20 April 2020 3:44 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi AEA team,

Thanks for your time on the phone this afternoon to talk through the proposed remediation and further investigation strategy for the John Stokes Square redevelopment site.

This email is proposed to address the remediation strategy for the Police Station site (Lot A) in the attached map, I will provide a further email separately to address the proposed further investigation across the remainder site.

As discussed, the construction phase of Lot A has commenced and there is some concern regarding the discovery of geotechnically unsuitable and potentially contaminated material onsite.

DIPL would like to see us progress a remediation strategy to –

A. Appropriately manage any contamination onsite whilst facilitating construction as quickly as possible
B. Remove and segregate geotechnically unsuitable material/uncontrolled fill and characterise for either beneficial reuse (onsite or offsite) or disposal
C. Validate any remediated contamination and reinstate both geotechnically and environmentally suitable material to facilitate the construction works.

To address the above, SLR propose to conduct a supervised remediation strategy onsite to expediate these works as follows –

Strip back and stockpile the crushed concrete from the surface of Lot A (nominally 200 mm across site (but depth reportedly varies between 100 – 300mm) – noting that you have still not received or reviewed the latest Agon report which stipulates that the concrete has been appropriately sampled and validated to be clean of asbestos.
Strip back the top soil onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back uncontrolled fill onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back any further geotechnically unsuitable material (where is exists) onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Validate final surfaces where apparent natural material is encountered – noting that these surfaces should be investigated to reasonable depth to ensure that they are indeed natural material/s
Validate or quantify residual insitu uncontrolled fill in areas where continued excavation on is unwarranted or becomes too onerous - e.g. if a lens of uncontrolled fill or visibly contaminated material is encountered at depth (say 1.5 – 2 m) which appears to be geotechnically suitable (or can be accepted as part of the design /compaction procedures onsite) this material could be considered to remain insitu if appropriate testing, delineation, management (such as capping) and a risk assessment is undertaken.

Points to note during remediation works would be as follows –

The asbestos emergency procedure under the existing EMP does not sufficiently address the control measures required to appropriately segregate different material types and further information/detail is to be developed and provided to the onsite contractor to facilitate an appropriate segregation and stockpiling procedure. This procedure would be reviewed with the onsite contractor to ensure they are aware of the requirements.
All stripping works would be supervised by SLR to ensure that layers of materials are not blended to ensure that all materials are appropriately segregated and characterised
All stockpiled material heights and erosion control measures are to be managed appropriately in accordance with the project EMP and section 12.2.5 of the NT EPA Contaminated Land Guidelines, version 1.0 (June 2017)
Characterisation of stockpiled material will be undertaken on an ongoing basis with laboratory turn around times fast tracked to allow quick characterisation of materials generated as part of the excavation works to allow for offsite disposal or beneficial reuse (either onsite or offsite).

Can you please review the above and provide any further commentary or advice in relation to the above approach.

Once reviewed, SLR will formalise the above in a Remediation Action Plan or a technical memorandum of understanding.

Please feel free to call me to discuss if you have any queries.

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Friday, 17 April 2020 2:57 PM
To: scoleman@envaud.com.au
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Christophe Grumelart <Christophe.Grumelart@nt.gov.au>; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: John Stokes Square - Lot A remediation discussion

Hi Shandel,

SLR have been engaged by HK Solutions, to assist in the remediation and validation of Lot A of the John Stokes Square redevelopment.

I would like the opportunity to catch up with you to discuss a remediation strategy to ensure that you and JP are comfortable that it will sufficient to close out the site audit for this Lot.

Subsequent to this scope, HK solutions are also engaging SLR to undertake further detailed site investigations across the remainder site to inform future remediation requirements.

We have had some internal and team discussions as to what this would need to look like, however I would also like to discuss that with you to ensure that the final deliverables are suitable to inform a RAP and subsequent remediation works to also close out these lots –

Lot B1, Lot B2, Lot B3 and Lot B4
Lot C
Road Reserve – A (plus associated easements.

If you could please give me a call when you have the opportunity (or advise a time for me to set up a tele/video conference) that would be great.

Thanks in advance.

Sincerely,

Paul Turyn
Northern Australia Operations Manager

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From: Jean-Paul Pearce <jppearce@envaud.com.au>
Sent: Friday, 24 April 2020 12:41 PM
To: Paul Turyn; Shandel Coleman
Cc: Bill Kmon; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan; Ruairi Hanly; Sarah Doherty; 'Sinead Redmond'
Subject: RE: John Stokes Square - Lot A remediation discussion
Attachments: EA0729_C2 auditor advice.pdf

Hi Sinead and Paul,
Please find attached review letter EA0729_C2 in relation to the SLR remediation and validation strategy for Lot A.

Please don't hesitate to contact Shandel or myself if you have any questions.

Kind Regards,

Jean-Paul Pearce | Contaminated Sites Auditor (SA, VIC, NT, ACT & QLD)
T 08 8223 3488 M 0412 854 635
jppearce@envaud.com.au

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AUSTRALIAN ENVIRONMENTAL AUDITORS

From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Thursday, 23 April 2020 12:38 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion
Importance: High

Hi Shandel and JP,

We'd like to propose a change to the sampling strategy for the JSS site due to material types being observed onsite and changes to he depth of excavation down to (presumably) natural material as follows –

> Reduce the number of sieved samples (some to be presence/absence only) in area where there is no visible asbestos cement debris present to surfaces (for validation) or no visible ACM debris within excavated spill. Would suggest that perhaps we reduce this to 1 in 5 samples, with asbestos presence/absence samples collected as the other four samples. Obviously DoH sampling will be taken whenever ACM debris is identified other on a surface or within excavated spoil.
> Change validation sampling frequency to be 1:25m^2 including walls rather than o/10m section of excavation walls. This adjustment is suggested as the uncontrolled fill across the site (so far) has reduced in depth. So we were assuming that we would get to ~0.8 maximum, but we are observing that the depth is some areas is <0.3m.

If you could please consider the above and advise at your easiest convenience that would be appreciated, noting that we have commenced the 1 in 5 sieved samples and asbestos presence/absence in between as of this.

Thanks,

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Wednesday, 22 April 2020 4:56 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Sorry team,

Just realised that I didn't attached the ESCP drawing as Attachment A

Apologies.

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Wednesday, 22 April 2020 4:37 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi Shandel,

Please see attached technical memorandum providing further detail with regard to the remediation strategy as requested.

Please don't hesitate in contacting either Sarah or myself if you would like to discuss further.

Sincerely,

Paul Turyn
Northern Australia Operations Manager

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Subject: RE: John Stokes Square - Lot A remediation discussion

Hi Paul

Thanks for your email and discussion regarding the identification of geotechnically unsuitable material in Lot A.

We note that a strategy was in place that we had accepted, but an alternative approach is being undertaken due to identified geotechnically unsuitable materials and with the aim of further reducing the level of residual contamination at the site.

We agree with the approach, with a few minor clarifications:

- Objective C – We presume the reinstatement will be done in layers (i.e. 200mm lifts and compacted with level 1 geotech) which can provide an efficient opportunity for inspection of ACM, issue visual clearance certificates on each lift, etc when being reused.
- Agon reporting - Recommend we are provided the report as a priority, but if residual uncertainty remains (or we don't get the report) some validation sampling may warranted.
- Please provide the segregation/stockpile procedure for review
- Supervision of works – please ensure the SLR personnel supervising the works have the required experience/competency for asbestos works as per WA DoH (2009) asbestos guidelines
- Please provide additional information regarding the proposed analysis suite and will this differ for on site reuse/off site reuse/ waste classification
- We recommend airborne asbestos fibre monitoring be conducted during the works.

Please note the auditor is also waiting to have a discussion with DIPL regarding the approach and audit outcomes, but don't see this as delaying the process.

Regards
Shandel

Shandel Coleman | Qld Contaminated Land Auditor, Principal Audit Support, WA Manager, National WHS Manager
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scoleman@envaud.com.au

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To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi AEA team,

Thanks for your time on the phone this afternoon to talk through the proposed remediation and further investigation strategy for the John Stokes Square redevelopment site.

This email is proposed to address the remediation strategy for the Police Station site (Lot A) in the attached map, I will provide a further email separately to address the proposed further investigation across the remainder site.

As discussed, the construction phase of Lot A has commenced and there is some concern regarding the discovery of geotechnically unsuitable and potentially contaminated material onsite.

DIPL would like to see us progress a remediation strategy to –

A. Appropriately manage any contamination onsite whilst facilitating construction as quickly as possible
B. Remove and segregate geotechnically unsuitable material/uncontrolled fill and characterise for either beneficial reuse (onsite or offsite) or disposal
C. Validate any remediated contamination and reinstate both geotechnically and environmentally suitable material to facilitate the construction works.

To address the above, SLR propose to conduct a supervised remediation strategy onsite to expediate these works as follows –

Strip back and stockpile the crushed concrete from the surface of Lot A (nominally 200 mm across site (but depth reportedly varies between 100 – 300mm) – noting that you have still not received or reviewed the latest Agon report which stipulates that the concrete has been appropriately sampled and validated to be clean of asbestos.
Strip back the top soil onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back uncontrolled fill onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back any further geotechnically unsuitable material (where is exists) onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Validate final surfaces where apparent natural material is encountered – noting that these surfaces should be investigated to reasonable depth to ensure that they are indeed natural material/s
Validate or quantify residual insitu uncontrolled fill in areas where continued excavation on is unwarranted or becomes too onerous - e.g. if a lens of uncontrolled fill or visibly contaminated material is encountered at depth (say 1.5 – 2 m) which appears to be geotechnically suitable (or can be accepted as part of the design /compaction procedures onsite) this material could be considered to remain insitu if appropriate testing, delineation, management (such as capping) and a risk assessment is undertaken.

Points to note during remediation works would be as follows –

The asbestos emergency procedure under the existing EMP does not sufficiently address the control measures required to appropriately segregate different material types and further information/detail is to be developed and provided to the onsite contractor to facilitate an appropriate segregation and stockpiling procedure. This procedure would be reviewed with the onsite contractor to ensure they are aware of the requirements.
All stripping works would be supervised by SLR to ensure that layers of materials are not blended to ensure that all materials are appropriately segregated and characterised
All stockpiled material heights and erosion control measures are to be managed appropriately in accordance with the project EMP and section 12.2.5 of the NT EPA Contaminated Land Guidelines, version 1.0 (June 2017)
Characterisation of stockpiled material will be undertaken on an ongoing basis with laboratory turn around times fast tracked to allow quick characterisation of materials generated as part of the excavation works to allow for offsite disposal or beneficial reuse (either onsite or offsite).

Can you please review the above and provide any further commentary or advice in relation to the above approach.

Once reviewed, SLR will formalise the above in a Remediation Action Plan or a technical memorandum of understanding.

Please feel free to call me to discuss if you have any queries.

SLR

Paul Turyn
Northern Australia Operations Manager

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Sent: Friday, 17 April 2020 2:57 PM
To: scoleman@envaud.com.au
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Christophe Grumelart <Christophe.Grumelart@nt.gov.au>; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: John Stokes Square - Lot A remediation discussion

Hi Shandel,

SLR have been engaged by HK Solutions, to assist in the remediation and validation of Lot A of the John Stokes Square redevelopment.

I would like the opportunity to catch up with you to discuss a remediation strategy to ensure that you and JP are comfortable that it will sufficient to close out the site audit for this Lot.

Subsequent to this scope, HK solutions are also engaging SLR to undertake further detailed site investigations across the remainder site to inform future remediation requirements.

We have had some internal and team discussions as to what this would need to look like, however I would also like to discuss that with you to ensure that the final deliverables are suitable to inform a RAP and subsequent remediation works to also close out these lots –

Lot B1, Lot B2, Lot B3 and Lot B4
Lot C
Road Reserve – A (plus associated easements.

If you could please give me a call when you have the opportunity (or advise a time for me to set up a tele/video conference) that would be great.

Thanks in advance.

Sincerely,

SLR

Paul Turyn
Northern Australia Operations Manager

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AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C2 24 April 2020

Ms Sinead Redmond
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics

Email: sinead.redmond@hksolutions.com.au

Auditor advice
John Stokes Square Redevelopment
47 Progress Drive, Nightcliff, Northern Territory

Dear Sinead,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

I previously approved a strategy regarding the management of the construction works on Lot A (the police stations site). Following discussions with DIPL we understand that due to the identification of geotechnically unsuitable material during excavations and with the aim of further reducing the level of residual contamination, the proposed strategy has changed. I am supportive of undertaking additional works which will result in a lower level of long term risk to the community.

The following documents were reviewed:

- SLR (22 April 2020) Memorandum: Remediation Strategy, John Stokes Square – Lot A (ref. 680.30002.00000 Remediation Strategy 20200422.docx); and
- Email from SLR (23 April 2020) proposing changes to the sampling strategy due to material types being observed onsite and changes to the depth of excavation.

I provide the following comments:

1. General. Please note that weathered ACM and AF/FA has been identified in previous investigations at the site. How will this material be identified and managed, including risks to onsite workers and if mechanical screening is being used?
2. Section 5.2: Please provide additional detail on the proposed site supervision and how this ties into the objectives of the works. For example, if the objective is to ensure the fill is as completely free of asbestos as possible, then a higher level of supervision would be necessary than if the objective is to remove geotechnically unsuitable material and any asbestos observed with risks from any residual asbestos observed managed via capping, etc.
3. Section 5.3, Table 2:
   a) The sampling density is supported, but please note that EPA Publication IWRG702 also supports lower sampling densities in some circumstances.
   b) Please verify what 'substantial variability' means in terms of decision making on additional analysis.
   c) Where possible, please track and incorporate existing insitu data or include justification why this is not proposed.

d) Is it proposed to sample the existing crushed concrete? If not, it is recommended that some sampling for asbestos would be beneficial to verify the material is free of asbestos as previously reported.
e) Presume that standard NEPM/AS4482.1 QA/QC requirements will be complied with (i.e. duplicate sampling, etc).

4. Section 5.4. Will a broader analyte suite be necessary to facilitate waste classification and offsite disposal? Based on previous sampling, asbestos and OCPs are the key contaminants of concern and any further reduction in analysis should not apply to these contaminants.
5. Section 5.5. Please specify the criteria for ACM (this is specific to land use) and AF/FA.
6. Section 5.6. Please provide additional details regarding the airborne asbestos fibre monitoring such as the locations of monitors, duration of monitoring per day and flow rates to ensure compliance with NOHSC method, and whether personal or static.
7. If static monitoring at site boundaries, then it should be compliant with the DoH public health criteria of 0.01 f/mL.
8. How will the decision regarding material reuse on-site/reuse off-site/disposal be reported?
9. Will the footprint of the stockpile locations be validated?

Please contact me if you have any questions regarding this letter.

Regards,

Australian Environmental Auditors



Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

From: Sarah Doherty
Sent: Friday, 24 April 2020 5:06 PM
To: Bill Kmon; Brad.white@halikos.com.au; stephen.parker@halikos.com.au; Sinead Redmond
Cc: Paul Turyn; Liam Munro
Subject: JSS daily summary
Attachments: JSS Daily summary 20200424.pdf

Good afternoon,

Attached is the daily soil tracker/summary of enviro works for John Stokes Square 24 April 2020.

SLR understands based on conversations with Halikos today that excavation works in Lot A will be completed tomorrow.

SLR will begin validation sampling tomorrow. No further works can be carried out in these areas until validation data is received and the Auditor is comfortable that the area has been remediated appropriately.

As discussed, and as referenced in the attached email from Paul Turyn, SLR have not received confirmation that the crushed concrete material has been deemed as suitable for reuse by the Auditor.

Please feel free to get in touch if you'd like to discuss.

Thanks,
Sarah

SLR

Sarah Doherty
Project Consultant - Land Quality & Remediation

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From: Paul Turyn
Sent: Friday, 24 April 2020 2:20 PM
To: Bill Kmon (bill.kmon@hksolutions.com.au); 'Sinead Redmond'
Cc: Sarah Doherty; Liam Munro; Gemma Sheridan; Ruairi Hanly; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au
Subject: 680.30002 - John Stokes Square crushed concrete
Attachments: EA0729_C2 auditor advice.pdf

Importance: High

Hi HK team,

Sarah has rung me today to discuss the fact that Halikos want to start reusing the crushed concrete stockpile onsite as of Monday.

I would strongly recommend that you advise them that they can not use this material until the auditor has confirmed that the material is suitable for use onsite, following their review of the most recent Agon report.

In JP's auditor advice received today, he has also suggested that we sample this material to confirm that the material is free of asbestos (Comment 3d) copied below with reference to the attached).

d) Is it proposed to sample the existing crushed concrete? If not, it is recommended that some sampling for asbestos would be beneficial to verify the material is free of asbestos as previously reported.

I will try to contact JP (or Shandel) to understand why he has included this comment and whether this is necessary this afternoon.

Additional to the above, the Halikos contacts we met onsite on Wednesday advised that they were proposing to mix the crushed concrete, imported fill and suitable site won materials (which have been characterised and deemed suitable for reuse).

I also suggest that we get the contractor to advise us of how the y propose to do this mixing/blending and get the auditor to agree to this process (in writing) prior to this being conducted. I don't see this as a real issue if all materials are deemed suitable for reuse – however it needs to be clarified and accepted by the auditor.

Thanks,

Paul Turyn
Northern Australia Operations Manager

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From: Jean-Paul Pearce <jppearce@envaud.com.au>
Sent: Tuesday, 28 April 2020 3:19 PM
To: Paul Turyn; Shandel Coleman
Cc: Bill Kmon (bill.kmon@hksolutions.com.au); Sarah Doherty; Ruairi Hanly; Geoffrey Thomas
Subject: RE: 680.10679 - JSS excavation validation

Hi Paul,
Confirm this is as per our discussion.
Please send through the tabulated results and mud map once received and we will prioritise the review nonetheless.

Kind Regards,

Jean-Paul Pearce | Contaminated Sites Auditor (SA, VIC, NT, ACT & QLD)
T 08 8223 3488 M 0412 854 635
jppearce@envaud.com.au

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Adelaide SA 5000
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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Tuesday, 28 April 2020 3:16 PM
To: Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon (bill.kmon@hksolutions.com.au) <bill.kmon@hksolutions.com.au>; Sarah Doherty <sdoherty@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Geoffrey Thomas <Geoffrey.Thomas@nt.gov.au>
Subject: 680.10679 - JSS excavation validation

Hi JP,

Just so everyone's on the same page with the validation approach onsite at John Stokes Square, we discussed and agreed that you are comfortable in the first instance for SLR to provide reoccupation of Lot A presuming all validation results received were below the nominated investigation criteria for HIL D.

You did note that there is a project risk of us proceeding with reoccupying this area without your final review and endorsement, however we agree that this this risk is minor as long as the results are interpreted correctly.

Should we encounter something a bit weird in the results (e.g. asbestos fines or pesticides), we will need to hold fast on the contractor reoccupying Lot A until we can discuss these results with you and we have agreed on a way forward.

Please feel free to call me if you have any further comments wrt to the above.

Thanks for your time on the phone.

Sincerely,

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn
Sent: Wednesday, 29 April 2020 2:54 PM
To: Sarah Doherty
Subject: FW: John Stokes Square - Lot A remediation discussion
Attachments: 680.30002.00000 M02 v1.0 20200424.pdf; JSS Daily summary 20200423.pdf; JSS Daily summary 20200424.pdf; 680.30002.00000 Remediation Strategy 20200429.docx

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Friday, 24 April 2020 5:10 PM
To: 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

As discussed, this needs to go to the auditor this afternoon.

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Jean-Paul Pearce <jppearce@envaud.com.au>
Sent: Friday, 24 April 2020 12:41 PM
To: Paul Turyn <pturyn@slrconsulting.com>; Shandel Coleman <scoleman@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi Sinead and Paul,
Please find attached review letter EA0729_C2 in relation to the SLR remediation and validation strategy for Lot A.

Please don't hesitate to contact Shandel or myself if you have any questions.

Kind Regards,

Jean-Paul Pearce | Contaminated Sites Auditor (SA, VIC, NT, ACT & QLD)
T 08 8223 3488 M 0412 854 635
jppearce@envaud.com.au

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Quality ISO 9001 Environment ISO 14001 Health & Safety AS/NZS 4801

From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Thursday, 23 April 2020 12:38 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>

Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion
Importance: High

Hi Shandel and JP,

We'd like to propose a change to the sampling strategy for the JSS site due to material types being observed onsite and changes to he depth of excavation down to (presumably) natural material as follows –

> Reduce the number of sieved samples (some to be presence/absence only) in area where there is no visible asbestos cement debris present to surfaces (for validation) or no visible ACM debris within excavated spill. Would suggest that perhaps we reduce this to 1 in 5 samples, with asbestos presence/absence samples collected as the other four samples. Obviously DoH sampling will be taken whenever ACM debris is identified other on a surface or within excavated spoil.
> Change validation sampling frequency to be 1:25m^2 including walls rather than o/10m section of excavation walls. This adjustment is suggested as the uncontrolled fill across the site (so far) has reduced in depth. So we were assuming that we would get to ~0.8 maximum, but we are observing that the depth is some areas is <0.3m.

If you could please consider the above and advise at your easiest convenience that would be appreciated, noting that we have commenced the 1 in 5 sieved samples and asbestos presence/absence in between as of this.

Thanks,

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Wednesday, 22 April 2020 4:56 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Sorry team,

Just realised that I didn't attached the ESCP drawing as Attachment A

Apologies.

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Wednesday, 22 April 2020 4:37 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi Shandel,

Please see attached technical memorandum providing further detail with regard to the remediation strategy as requested.

Please don't hesitate in contacting either Sarah or myself if you would like to discuss further.

Sincerely,

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Shandel Coleman <scoleman@envaud.com.au>
Sent: Tuesday, 21 April 2020 4:51 PM
To: Paul Turyn <pturyn@slrconsulting.com>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi Paul

Thanks for your email and discussion regarding the identification of geotechnically unsuitable material in Lot A.

We note that a strategy was in place that we had accepted, but an alternative approach is being undertaken due to identified geotechnically unsuitable materials and with the aim of further reducing the level of residual contamination at the site.

We agree with the approach, with a few minor clarifications:

Objective C – We presume the reinstatement will be done in layers (i.e. 200mm lifts and compacted with level 1 geotech) which can provide an efficient opportunity for inspection of ACM, issue visual clearance certificates on each lift, etc when being reused.
Agon reporting - Recommend we are provided the report as a priority, but if residual uncertainty remains (or we don't get the report) some validation sampling may warranted.
Please provide the segregation/stockpile procedure for review
Supervision of works – please ensure the SLR personnel supervising the works have the required experience/competency for asbestos works as per WA DoH (2009) asbestos guidelines
Please provide additional information regarding the proposed analysis suite and will this differ for on site reuse/off site reuse/ waste classification
We recommend airborne asbestos fibre monitoring be conducted during the works.

Please note the auditor is also waiting to have a discussion with DIPL regarding the approach and audit outcomes, but don't see this as delaying the process.

Regards
Shandel

Shandel Coleman | Qld Contaminated Land Auditor, Principal Audit Support, WA Manager, National WHS Manager
T 08 6268 0181 M 0412 230 147
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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Monday, 20 April 2020 3:44 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi AEA team,

Thanks for your time on the phone this afternoon to talk through the proposed remediation and further investigation strategy for the John Stokes Square redevelopment site.

This email is proposed to address the remediation strategy for the Police Station site (Lot A) in the attached map, I will provide a further email separately to address the proposed further investigation across the remainder site.

As discussed, the construction phase of Lot A has commenced and there is some concern regarding the discovery of geotechnically unsuitable and potentially contaminated material onsite.

DIPL would like to see us progress a remediation strategy to –

A. Appropriately manage any contamination onsite whilst facilitating construction as quickly as possible
B. Remove and segregate geotechnically unsuitable material/uncontrolled fill and characterise for either beneficial reuse (onsite or offsite) or disposal
C. Validate any remediated contamination and reinstate both geotechnically and environmentally suitable material to facilitate the construction works.

To address the above, SLR propose to conduct a supervised remediation strategy onsite to expediate these works as follows –

Strip back and stockpile the crushed concrete from the surface of Lot A (nominally 200 mm across site (but depth reportedly varies between 100 – 300mm) – noting that you have still not received or reviewed the latest Agon report which stipulates that the concrete has been appropriately sampled and validated to be clean of asbestos.
Strip back the top soil onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back uncontrolled fill onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back any further geotechnically unsuitable material (where is exists) onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Validate final surfaces where apparent natural material is encountered – noting that these surfaces should be investigated to reasonable depth to ensure that they are indeed natural material/s
Validate or quantify residual insitu uncontrolled fill in areas where continued excavation on is unwarranted or becomes too onerous - e.g. if a lens of uncontrolled fill or visibly contaminated material is encountered at depth (say 1.5 – 2 m) which appears to be geotechnically suitable (or can be accepted as part of the design /compaction procedures onsite) this material could be considered to remain insitu if appropriate testing, delineation, management (such as capping) and a risk assessment is undertaken.

Points to note during remediation works would be as follows –

The asbestos emergency procedure under the existing EMP does not sufficiently address the control measures required to appropriately segregate different material types and further information/detail is to be developed and provided to the onsite contractor to facilitate an appropriate segregation and stockpiling procedure. This procedure would be reviewed with the onsite contractor to ensure they are aware of the requirements.
All stripping works would be supervised by SLR to ensure that layers of materials are not blended to ensure that all materials are appropriately segregated and characterised

All stockpiled material heights and erosion control measures are to be managed appropriately in accordance with the project EMP and section 12.2.5 of the NT EPA Contaminated Land Guidelines, version 1.0 (June 2017)
Characterisation of stockpiled material will be undertaken on an ongoing basis with laboratory turn around times fast tracked to allow quick characterisation of materials generated as part of the excavation works to allow for offsite disposal or beneficial reuse (either onsite or offsite).

Can you please review the above and provide any further commentary or advice in relation to the above approach.

Once reviewed, SLR will formalise the above in a Remediation Action Plan or a technical memorandum of understanding.

Please feel free to call me to discuss if you have any queries.

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Friday, 17 April 2020 2:57 PM
To: scoleman@envaud.com.au
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Christophe Grumelart <Christophe.Grumelart@nt.gov.au>; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: John Stokes Square - Lot A remediation discussion

Hi Shandel,

SLR have been engaged by HK Solutions, to assist in the remediation and validation of Lot A of the John Stokes Square redevelopment.

I would like the opportunity to catch up with you to discuss a remediation strategy to ensure that you and JP are comfortable that it will sufficient to close out the site audit for this Lot.

Subsequent to this scope, HK solutions are also engaging SLR to undertake further detailed site investigations across the remainder site to inform future remediation requirements.

We have had some internal and team discussions as to what this would need to look like, however I would also like to discuss that with you to ensure that the final deliverables are suitable to inform a RAP and subsequent remediation works to also close out these lots –

Lot B1, Lot B2, Lot B3 and Lot B4
Lot C
Road Reserve – A (plus associated easements.

If you could please give me a call when you have the opportunity (or advise a time for me to set up a tele/video conference) that would be great.

Thanks in advance.

Sincerely,

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn
Sent: Thursday, 30 April 2020 11:51 AM
To: Bill Kmon
Cc: Sarah Doherty; Ruairi Hanly; Sinead Redmond
Subject: RE: Halikos EMP for Information
Attachments: 680.10679 Val Chem data 20200430.pdf; 68010679 Lot A validation figure 20200430.pdf; 716051-S_report.pdf; 716051-AID.pdf; 716056-AID.pdf; 716056-S_report.pdf

Importance: High

Bill,

Please see validation data and figure attached.

All results have come within the nominated criteria for the site as agreed with the auditor.

I do note that we did get a detection for fibrous asbestos at Val 6, however this was below the reporting limit of the laboratory and also below the nominated criteria as well.

As such, based on the validation data attached – the northern half of Lot A (as shown in green in the attached figure) is deemed suitable to be handed back to the contractor for works to continue.

We will formalise this in a more detailed letter once the remainder of the validation data has been received and we can finalise that also.

Please do not hesitate in contacting me if you have any further queries.

Sincerely,

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Thursday, 30 April 2020 5:41 AM
To: Bill Kmon <bill.kmon@hksolutions.com.au>
Cc: Sarah Doherty <sdoherty@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sinead Redmond <sinead.redmond@hksolutions.com.au>
Subject: RE: Halikos EMP for Information

Hi Bill,

As per my text yesterday evening, due to issues with the laboratory servers – the results we were waiting on for the northern half of the site came in between 10:30 and 11:00pm.

I've started to review the data and on first pass everything looks OK for the validation areas.

I will work with the team this morning to conduct a more formal assessment/comparison to HIL D criteria and have something through to you to issue to the contractor by lunchtime at the latest.

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Tuesday, 28 April 2020 3:26 PM
To: Bill Kmon <bill.kmon@hksolutions.com.au>
Cc: Sarah Doherty <sdoherty@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sinead Redmond <sinead.redmond@hksolutions.com.au>
Subject: RE: Halikos EMP for Information

Hi Bill,

I've chased up with the lab and can advise the following –

> 50% of the site (northern half) validation results will be provided to us by COB Wednesday 29 April 2020. So following on from the discussion I have had with the auditor (and subsequent email I have just sent out), we would be able to provide reoccupation back to the contractor for this portion of the site on Thursday morning (presuming all the results meet the nominated HIL D criteria). Remaining 50% of the site (southern half) validation results will be provided to us by COB Thursday 30 April 2020. So following on from the discussion I have had with the auditor (and subsequent email I have just sent out), we would be able to provide reoccupation back to the contractor for this portion of the site on Thursday evening or Friday morning (presuming all the results meet the nominated HIL D criteria).

I have also requested that the lab provide us with the results as soon as humanly possible, and to issue us with any interim results that they have available so we can commence the data interpretation etc ASAP.

With regard to your comment/response to point 3 below, you did request this when onsite yesterday so Sarah asked me to make this happen – which I subsequently did and then discussed with you after Liam was onsite.

We will be in touch as and when we start receiving the laboratory data.

Paul Turyn
Northern Australia Operations Manager

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From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Tuesday, 28 April 2020 2:48 PM
To: Paul Turyn <pturyn@slrconsulting.com>
Cc: Sarah Doherty <sdoherty@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sinead Redmond <sinead.redmond@hksolutions.com.au>
Subject: RE: Halikos EMP for Information

Hi Paul

Yes as discussed your proposal for the Police site is approved. The remainder of the site is still in discussion but you should have an answer this week.
Comments below to your questions are in red.

Regards

Bill Kmon
MBA CPPM MAIPM
Director/Project Manager

bill.kmon@hksolutions.com.au
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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Tuesday, 28 April 2020 2:07 PM
To: Bill Kmon <bill.kmon@hksolutions.com.au>
Cc: Sarah Doherty <sdoherty@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: FW: Halikos EMP for Information

Hi Bill,

Thanks for the verbal that our contract has been approved.

Can you please send back a formal response so I can get this activated in our project management system.

A few questions that I think we need to clarify moving forward –

1. When is it likely that we can commence the DSI? Hopefully an answer in the next couple of days for the DSI testing. Noting that we now have to consider Geoff's service removal scope and there are a number of covered stockpiles sitting on the surface of the areas we need to investigate. Covered stockpiles are clean fill that imported to site with relevant certificates. No more work need to be done here as the auditor has already accepted this.
2. All samples which have been sent to the lab to date have been sent on same day TAT (which essentially turns out to be 1 02 working days for samples sent from Darwin to interstate labs), which incurs a surcharge fee of 100%. As per the attached, we only allowed for 25% of the samples to be at this rate as we were advised by the contractor that the stripping and validation process would take a week and a half. This was obviously not the case and we have been under the pump to return areas to the contractor for continuation of works. As verbally agreed, we have continued to schedule all analysis as same day turn around at 100% surcharge. I have asked Sarah to tally up the number of samples submitted to the laboratory to date under these TAT conditions and we will send through a variation to account for this. Let me know ASAP what this will be with justification eg. Reduced standown time by 5 days. I will need to apply for a variation from DIPL.
3. As per your instruction yesterday, we have mobilised a second staff member to site to assist in speeding up the validation works. I didn't instruct this but happy with the justification to reduced standown time. Cost of this additional resource for yesterday and today will be $2,750 ex GST. We may be able to cover this in the existing budget allocated, but this depends on when site works are finished and what the auditor expects us to do from a supervision perspective now that the site bulk excavation has been completed. I will discuss this with him today and confirm as soon as I am able.
4. We are currently in the process of chasing the lab to see when we will receive the results for the validation areas and we will advise once we have this timeframe. To clear up any confusion following our phone call earlier this afternoon – we will not be able to provide the site back to the contractor until we have received these results and have passed them by the auditor. **So Halikos will not get access to 70% of the site tomorrow to continue works**. If you get the results today I can warn out the Auditor so he can look at them ASAP to clear them.

I want to reiterate that we are working as har as we can to facilitate construction works onsite, but these things do take time to ensure that we have the appropriate controls and evidence in place to make sure that the auditor is happy to sign off on the site post remediation.

We cannot move any faster than what we are at the moment, so please keep that in mind when providing advice or promising things to the contractor.
Happy to do this but from our discussion results were in today so understood we could use the area tomorrow.

Happy to discuss any of the above as you feel appropriate.

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Thursday, 23 April 2020 4:39 PM
To: Bill Kmon <bill.kmon@hksolutions.com.au>
Cc: Sarah Doherty <sdoherty@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: RE: Halikos EMP for Information

Hi Bill,

Please see attached.

Paul Turyn
Northern Australia Operations Manager

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From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Thursday, 23 April 2020 4:24 PM
To: Paul Turyn <pturyn@slrconsulting.com>
Cc: Sarah Doherty <sdoherty@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: RE: Halikos EMP for Information

Hi Paul

I need the price separated for Police and the rest of the site including lab costs. Concurrently I will review you fees.
Also I noticed I sent you a consultancy agreement not sub consultancy. Attached is the correct contract (sorry).

Regards

Bill Kmon
MBA CPPM MAIPM
Director/Project Manager

bill.kmon@hksolutions.com.au
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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Thursday, 23 April 2020 4:01 PM
To: Bill Kmon <bill.kmon@hksolutions.com.au>
Cc: Sarah Doherty <sdoherty@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: RE: Halikos EMP for Information
Importance: High

Hi Bill,

Please see CA attached as requested.

Can you please prioritise approval etc so we can recover the time we have already spent on this project this week.

Please call if you have any queries.

Thanks,

Paul Turyn
Northern Australia Operations Manager

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From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Monday, 20 April 2020 1:16 PM
To: Paul Turyn <pturyn@slrconsulting.com>
Subject: RE: Halikos EMP for Information

Hi Paul

I will engage you just fill in the consultancy agreement and include the agreed scope that you work out with the Auditor.

Regards

Bill Kmon
MBA CPPM MAIPM
Director/Project Manager

bill.kmon@hksolutions.com.au
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P 0459 840 588 | **W** www.hksolutions.com.au
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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Monday, 20 April 2020 12:38 PM
To: Bill Kmon <bill.kmon@hksolutions.com.au>
Subject: RE: Halikos EMP for Information

Hey mate,

On a side note, how do I go about getting engaged by you guys?

Do I need to fill out a form or something or can you just engage us directly?

Will work out what our fees will be this afternoon once I;ve finished up with the auditor. May not get these finalised until tomorrow morning, but just want to try and get in front of the game.

Thanks,

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Monday, 20 April 2020 11:11 AM
To: Paul Turyn <pturyn@slrconsulting.com>
Cc: kristin.grumelart@nt.gov.au
Subject: Halikos EMP for Information

Hi Paul

As discussed this EMP has been approved by the auditor.
If this covers what we need we will continue excavating, separating and stockpiling on site. May only need to add the testing and removal of contaminated soil below the accepted levels for the police site.

Regards

Bill Kmon
MBA CPPM MAIPM
Director/Project Manager

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From: Paul Turyn
Sent: Thursday, 30 April 2020 8:14 PM
To: Bill Kmon (bill.kmon@hksolutions.com.au)
Cc: kristin.grumelart@nt.gov.au; Ruairi Hanly; Sarah Doherty; Gemma Sheridan; Liam Munro; Geoffrey Thomas; Jean-Paul Pearce; Shandel Coleman; Sinead Redmond; Diana Bedder; Ned Connolly
Subject: 680.10679 - Validation of Lot A work area
Attachments: 716332-S_report.pdf; 716332-AID.pdf; 716374-S_report.pdf; 716374-AID.pdf; 716332-W_report.pdf; RE: Halikos EMP for Information

Hi Bill,

As discussed via text, following review of the most recent analysis carried out on the samples collected on Lot A (up to and including the 30 April 2020), there has been no analytes detected above investigation limits for purposed site usage for Commercial / Industrial purposes.

I have attached the analytical reports from the laboratory for the latest round of testing and my email from earlier today relating to the northern area of the site. Please note that laboratory reports numbered 716332 have been issued as draft until the % clay analysis is completed and finalised. I have discussed this with the laboratory and they have confirmed that all other data presented in these reports is accurate and has had the appropriate QA/QC checks completed. We will include a copy of the final report in our formal report which will be prepared in the coming days.

SLR Consulting Australia Pty Ltd (SLR) understands that due to construction time constraints, HK solutions/DIPL require construction to continue in order to meet required timeframes.

As a result of this, it is important to note, that despite the analytical results being below the Commercial / Industrial criteria, the contaminated site auditor has not had time to review the works and data collected to date (up to and including the 30 April 2020).

Based on the validation data sampled and reviewed to date by SLR, our professional opinion is that the site is suitable for works to recommence in the footprint of Lot A – based on proposed end land use.

Please note that this is a project risk, however SLR is of the opinion that the above risk is low.

This risk is being managed as much as SLR can practically under the current construction timeframes, however SLR will not be held responsible should any construction delays occur in the future following a review of the data by the contaminated land auditor.

-
Should the auditor query any of the data and / or require additional data to be collected, and this can't be actioned due to the construction having progressed, SLR is not responsible for any rework / construction delays that may occur so as to address the auditor queries.

We also advise that the contractor take care when working in adjacent areas to the walls of the excavation to ensure that no further geotechnically unsuitable or potentially contaminated material is entrained in further works onsite.

It is important to note that the above advice is only issued in relation to the validated excavation surfaces within Lot A. SLR has not had the opportunity to appropriately review and interpret the data obtained from the stockpile characterisation sampling collected to date.

As such, our advice would be to not proceed with any further reworking of the screened, excavated material stockpiles onsite (generated from the excavation of Lot A) until the appropriate review and interpretation of the stockpile data has been conducted and discussed with the auditor (as required).

Additional to this, SLR again request that we (and the auditor) be provided with the proposed blending ratios of the crushed concrete materials currently stockpiled on Lot B1 and Lot C, the (yet to be) screened and characterised excavated material from Lot A and the current stockpiles of imported fill material located (generally) on Lots B1 and B2.

Once the stockpile characterisation data review and interpretation has been completed and the blending ratios understood (and agreed with the auditor) the reuse of the characterised stockpiles and blending of materials can be endorsed by the auditor and commence onsite.

We will prepare a more formal report in the coming days once we receive the final reports numbered 716332.

Please feel free to call me should you wish to discuss further.

Sincerely,

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn
Sent: Monday, 20 April 2020 3:14 PM
To: Shandel Coleman; Jean-Paul Pearce
Cc: Bill Kmon; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan; Ruairi Hanly; Sarah Doherty; 'Sinead Redmond'
Subject: RE: John Stokes Square - Lot A remediation discussion
Attachments: Figure 1.pdf

Hi AEA team,

Thanks for your time on the phone this afternoon to talk through the proposed remediation and further investigation strategy for the John Stokes Square redevelopment site.

This email is proposed to address the remediation strategy for the Police Station site (Lot A) in the attached map, I will provide a further email separately to address the proposed further investigation across the remainder site.

As discussed, the construction phase of Lot A has commenced and there is some concern regarding the discovery of geotechnically unsuitable and potentially contaminated material onsite.

DIPL would like to see us progress a remediation strategy to –

A. Appropriately manage any contamination onsite whilst facilitating construction as quickly as possible
B. Remove and segregate geotechnically unsuitable material/uncontrolled fill and characterise for either beneficial reuse (onsite or offsite) or disposal
C. Validate any remediated contamination and reinstate both geotechnically and environmentally suitable material to facilitate the construction works.

To address the above, SLR propose to conduct a supervised remediation strategy onsite to expediate these works as follows –

Strip back and stockpile the crushed concrete from the surface of Lot A (nominally 200 mm across site (but depth reportedly varies between 100 – 300mm) – noting that you have still not received or reviewed the latest Agon report which stipulates that the concrete has been appropriately sampled and validated to be clean of asbestos.
Strip back the top soil onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back uncontrolled fill onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back any further geotechnically unsuitable material (where is exists) onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Validate final surfaces where apparent natural material is encountered – noting that these surfaces should be investigated to reasonable depth to ensure that they are indeed natural material/s
Validate or quantify residual insitu uncontrolled fill in areas where continued excavation on is unwarranted or becomes too onerous - e.g. if a lens of uncontrolled fill or visibly contaminated material is encountered at depth (say 1.5 – 2 m) which appears to be geotechnically suitable (or can be accepted as part of the design /compaction procedures onsite) this material could be considered to remain insitu if appropriate testing, delineation, management (such as capping) and a risk assessment is undertaken.

Points to note during remediation works would be as follows –

The asbestos emergency procedure under the existing EMP does not sufficiently address the control measures required to appropriately segregate different material types and further information/detail is to be developed and provided to the onsite contractor to facilitate an appropriate segregation and stockpiling procedure. This procedure would be reviewed with the onsite contractor to ensure they are aware of the requirements.
All stripping works would be supervised by SLR to ensure that layers of materials are not blended to ensure that all materials are appropriately segregated and characterised
All stockpiled material heights and erosion control measures are to be managed appropriately in accordance with the project EMP and section 12.2.5 of the NT EPA Contaminated Land Guidelines, version 1.0 (June 2017)
Characterisation of stockpiled material will be undertaken on an ongoing basis with laboratory turn around times fast tracked to allow quick characterisation of materials generated as part of the excavation works to allow for offsite disposal or beneficial reuse (either onsite or offsite).

Can you please review the above and provide any further commentary or advice in relation to the above approach.

Once reviewed, SLR will formalise the above in a Remediation Action Plan or a technical memorandum of understanding.

Please feel free to call me to discuss if you have any queries.

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Friday, 17 April 2020 2:57 PM
To: scoleman@envaud.com.au
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Christophe Grumelart <Christophe.Grumelart@nt.gov.au>; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: John Stokes Square - Lot A remediation discussion

Hi Shandel,

SLR have been engaged by HK Solutions, to assist in the remediation and validation of Lot A of the John Stokes Square redevelopment.

I would like the opportunity to catch up with you to discuss a remediation strategy to ensure that you and JP are comfortable that it will sufficient to close out the site audit for this Lot.

Subsequent to this scope, HK solutions are also engaging SLR to undertake further detailed site investigations across the remainder site to inform future remediation requirements.

We have had some internal and team discussions as to what this would need to look like, however I would also like to discuss that with you to ensure that the final deliverables are suitable to inform a RAP and subsequent remediation works to also close out these lots –

Lot B1, Lot B2, Lot B3 and Lot B4
Lot C
Road Reserve – A (plus associated easements.

If you could please give me a call when you have the opportunity (or advise a time for me to set up a tele/video conference) that would be great.

Thanks in advance.

Sincerely,

Paul Turyn
Northern Australia Operations Manager

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pturyn@slrconsulting.com

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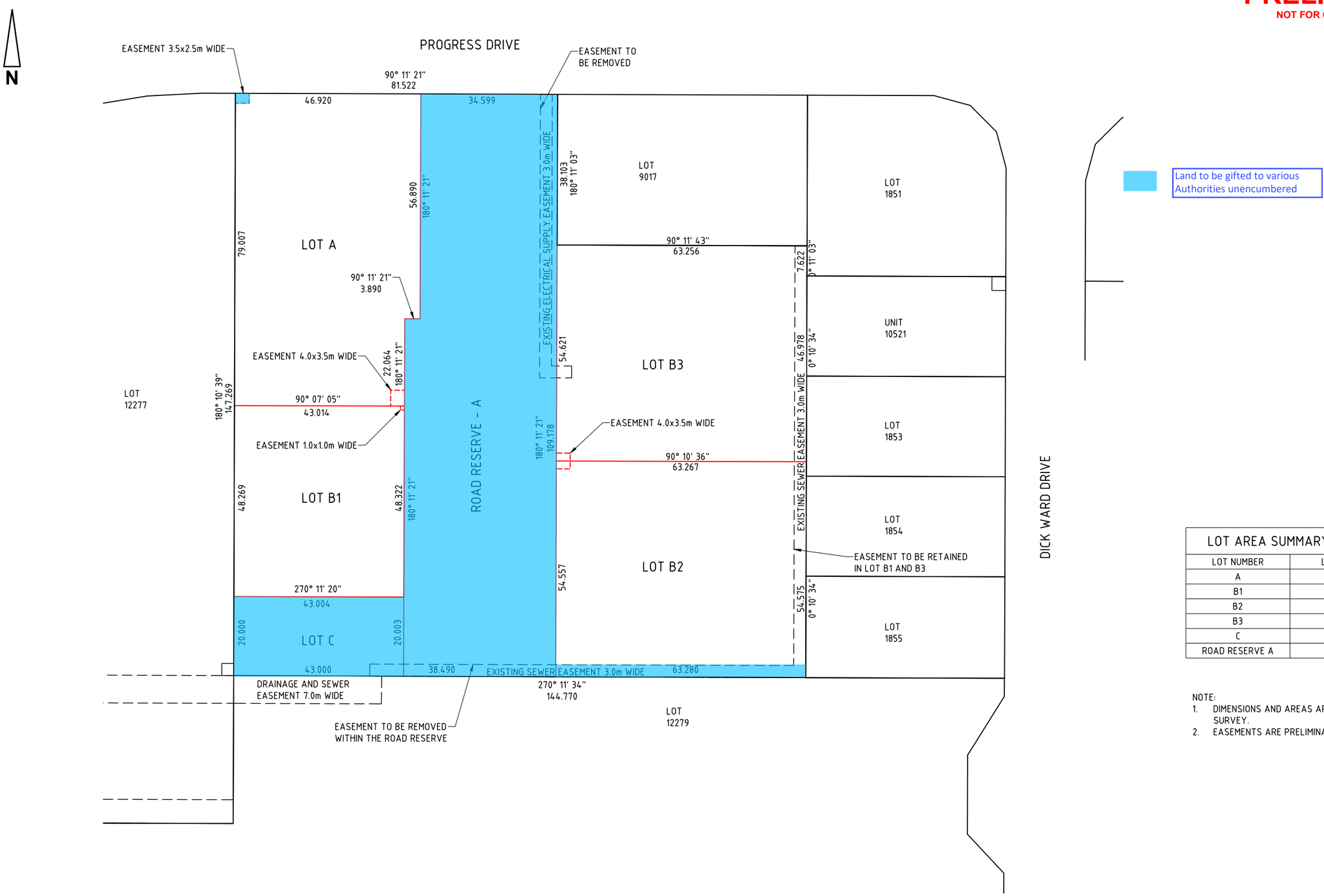


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PRELIMINARY
NOT FOR CONSTRUCTION



Land to be gifted to various Authorities unencumbered

LOT AREA SUMMARY TABLE	
LOT NUMBER	LOT AREA
A	3619m2
B1	2077m2
B2	3453m2
B3	3455m2
C	860m2
ROAD RESERVE A	5448m2

NOTE:
1. DIMENSIONS AND AREAS ARE SUBJECT TO SURVEY.
2. EASEMENTS ARE PRELIMINARY.

5 0 5 10 15 20 25m
0 1:500-A1 1:1000-A3

No.	DESCRIPTION	DATE	INIT.	DEPT/COMPANY.
E	EASEMENTS AMENDED	23/03/2020	YB	BYRNE
D	LOT NUMBERS AMENDED	21/01/2019	YB	BYRNE
C	ISSUED FOR COMMENT	28/11/2019	YB	BYRNE
B	ISSUED FOR COMMENT	16/09/2019	YB	BYRNE
A	ISSUED FOR COMMENT	09/09/2019	YB	BYRNE

AMENDMENTS

byrne CONSULTANTS
ABN 78 124 388 192
P.O.Box 43420 Casuarina NT 0811
Ph. 08 89472476 Fax: 08 89475098
Byrne Consultants Project No. NT19012

DRAWN	CHECKED
YB	AC
DATE	DATE
DESIGNED	CHECKED
-	-
DATE	DATE
DESIGN PROJECT LEADER	NTG PROJECT MANAGER
-	-
DATE	DATE

Northern Territory Government

DARWIN
NIGHTCLIFF
JOHN STOKES SQUARE

PROPOSED CADASTRAL BOUNDARIES

NTG PROJECT No.	NTG ASSET No.	SHEET No.	NTG DRAWING No. AMENDMENT	SHEET SIZE
-	-	- OF -	19012-SK105 E	A1

From: Shandel Coleman <scoleman@envaud.com.au>
Sent: Tuesday, 21 April 2020 4:51 PM
To: Paul Turyn; Jean-Paul Pearce
Cc: Bill Kmon; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan; Ruairi Hanly; Sarah Doherty; 'Sinead Redmond'
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi Paul

Thanks for your email and discussion regarding the identification of geotechnically unsuitable material in Lot A.

We note that a strategy was in place that we had accepted, but an alternative approach is being undertaken due to identified geotechnically unsuitable materials and with the aim of further reducing the level of residual contamination at the site.

We agree with the approach, with a few minor clarifications:

Objective C – We presume the reinstatement will be done in layers (i.e. 200mm lifts and compacted with level 1 geotech) which can provide an efficient opportunity for inspection of ACM, issue visual clearance certificates on each lift, etc when being reused.
Agon reporting - Recommend we are provided the report as a priority, but if residual uncertainty remains (or we don't get the report) some validation sampling may warranted.
Please provide the segregation/stockpile procedure for review
Supervision of works – please ensure the SLR personnel supervising the works have the required experience/competency for asbestos works as per WA DoH (2009) asbestos guidelines
Please provide additional information regarding the proposed analysis suite and will this differ for on site reuse/off site reuse/ waste classification
We recommend airborne asbestos fibre monitoring be conducted during the works.

Please note the auditor is also waiting to have a discussion with DIPL regarding the approach and audit outcomes, but don't see this as delaying the process.

Regards
Shandel

Shandel Coleman | Qld Contaminated Land Auditor, Principal Audit Support, WA Manager, National WHS Manager
T 08 6268 0181 M 0412 230 147
scoleman@envaud.com.au

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West Perth WA 6005
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Adelaide | Melbourne | Perth | Sydney | Brisbane

AUSTRALIAN ENVIRONMENTAL AUDITORS

From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Monday, 20 April 2020 3:44 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi AEA team,

Thanks for your time on the phone this afternoon to talk through the proposed remediation and further investigation strategy for the John Stokes Square redevelopment site.

This email is proposed to address the remediation strategy for the Police Station site (Lot A) in the attached map, I will provide a further email separately to address the proposed further investigation across the remainder site.

As discussed, the construction phase of Lot A has commenced and there is some concern regarding the discovery of geotechnically unsuitable and potentially contaminated material onsite.

DIPL would like to see us progress a remediation strategy to –

A. Appropriately manage any contamination onsite whilst facilitating construction as quickly as possible
B. Remove and segregate geotechnically unsuitable material/uncontrolled fill and characterise for either beneficial reuse (onsite or offsite) or disposal
C. Validate any remediated contamination and reinstate both geotechnically and environmentally suitable material to facilitate the construction works.

To address the above, SLR propose to conduct a supervised remediation strategy onsite to expediate these works as follows –

Strip back and stockpile the crushed concrete from the surface of Lot A (nominally 200 mm across site (but depth reportedly varies between 100 – 300mm) – noting that you have still not received or reviewed the latest Agon report which stipulates that the concrete has been appropriately sampled and validated to be clean of asbestos.
Strip back the top soil onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back uncontrolled fill onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back any further geotechnically unsuitable material (where is exists) onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Validate final surfaces where apparent natural material is encountered – noting that these surfaces should be investigated to reasonable depth to ensure that they are indeed natural material/s
Validate or quantify residual insitu uncontrolled fill in areas where continued excavation on is unwarranted or becomes too onerous - e.g. if a lens of uncontrolled fill or visibly contaminated material is encountered at depth (say 1.5 – 2 m) which appears to be geotechnically suitable (or can be accepted as part of the design /compaction procedures onsite) this material could be considered to remain insitu if appropriate testing, delineation, management (such as capping) and a risk assessment is undertaken.

Points to note during remediation works would be as follows –

The asbestos emergency procedure under the existing EMP does not sufficiently address the control measures required to appropriately segregate different material types and further information/detail is to be developed and provided to the onsite contractor to facilitate an appropriate segregation and stockpiling procedure. This procedure would be reviewed with the onsite contractor to ensure they are aware of the requirements.
All stripping works would be supervised by SLR to ensure that layers of materials are not blended to ensure that all materials are appropriately segregated and characterised
All stockpiled material heights and erosion control measures are to be managed appropriately in accordance with the project EMP and section 12.2.5 of the NT EPA Contaminated Land Guidelines, version 1.0 (June 2017)
Characterisation of stockpiled material will be undertaken on an ongoing basis with laboratory turn around times fast tracked to allow quick characterisation of materials generated as part of the excavation works to allow for offsite disposal or beneficial reuse (either onsite or offsite).

Can you please review the above and provide any further commentary or advice in relation to the above approach.

Once reviewed, SLR will formalise the above in a Remediation Action Plan or a technical memorandum of understanding.

Please feel free to call me to discuss if you have any queries.

SLR
Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Friday, 17 April 2020 2:57 PM
To: scoleman@envaud.com.au
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Christophe Grumelart <Christophe.Grumelart@nt.gov.au>; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: John Stokes Square - Lot A remediation discussion

Hi Shandel,

SLR have been engaged by HK Solutions, to assist in the remediation and validation of Lot A of the John Stokes Square redevelopment.

I would like the opportunity to catch up with you to discuss a remediation strategy to ensure that you and JP are comfortable that it will sufficient to close out the site audit for this Lot.

Subsequent to this scope, HK solutions are also engaging SLR to undertake further detailed site investigations across the remainder site to inform future remediation requirements.

We have had some internal and team discussions as to what this would need to look like, however I would also like to discuss that with you to ensure that the final deliverables are suitable to inform a RAP and subsequent remediation works to also close out these lots –

Lot B1, Lot B2, Lot B3 and Lot B4
Lot C
Road Reserve – A (plus associated easements.

If you could please give me a call when you have the opportunity (or advise a time for me to set up a tele/video conference) that would be great.

Thanks in advance.

Sincerely,

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn
Sent: Wednesday, 22 April 2020 4:37 PM
To: Shandel Coleman; Jean-Paul Pearce
Cc: Bill Kmon; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan; Ruairi Hanly; Sarah Doherty; 'Sinead Redmond'
Subject: RE: John Stokes Square - Lot A remediation discussion
Attachments: 680.30002.00000 Remediation Strategy 20200422.pdf

Hi Shandel,

Please see attached technical memorandum providing further detail with regard to the remediation strategy as requested.

Please don't hesitate in contacting either Sarah or myself if you would like to discuss further.

Sincerely,

Paul Turyn
Northern Australia Operations Manager

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From: Shandel Coleman <scoleman@envaud.com.au>
Sent: Tuesday, 21 April 2020 4:51 PM
To: Paul Turyn <pturyn@slrconsulting.com>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi Paul

Thanks for your email and discussion regarding the identification of geotechnically unsuitable material in Lot A.

We note that a strategy was in place that we had accepted, but an alternative approach is being undertaken due to identified geotechnically unsuitable materials and with the aim of further reducing the level of residual contamination at the site.

We agree with the approach, with a few minor clarifications:

Objective C – We presume the reinstatement will be done in layers (i.e. 200mm lifts and compacted with level 1 geotech) which can provide an efficient opportunity for inspection of ACM, issue visual clearance certificates on each lift, etc when being reused.
Agon reporting - Recommend we are provided the report as a priority, but if residual uncertainty remains (or we don't get the report) some validation sampling may warranted.
Please provide the segregation/stockpile procedure for review
Supervision of works – please ensure the SLR personnel supervising the works have the required experience/competency for asbestos works as per WA DoH (2009) asbestos guidelines
Please provide additional information regarding the proposed analysis suite and will this differ for on site reuse/off site reuse/ waste classification
We recommend airborne asbestos fibre monitoring be conducted during the works.

Please note the auditor is also waiting to have a discussion with DIPL regarding the approach and audit outcomes, but don't see this as delaying the process.

Regards
Shandel

Shandel Coleman | Qld Contaminated Land Auditor, Principal Audit Support, WA Manager, National WHS Manager
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scoleman@envaud.com.au

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West Perth WA 6005
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Adelaide | Melbourne | Perth | Sydney | Brisbane

AUSTRALIAN ENVIRONMENTAL AUDITORS

From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Monday, 20 April 2020 3:44 PM
To: Shandel Coleman <scoleman@envaud.com.au>; Jean-Paul Pearce <jppearce@envaud.com.au>
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>; Sarah Doherty <sdoherty@slrconsulting.com>; 'Sinead Redmond' <sinead.redmond@hksolutions.com.au>
Subject: RE: John Stokes Square - Lot A remediation discussion

Hi AEA team,

Thanks for your time on the phone this afternoon to talk through the proposed remediation and further investigation strategy for the John Stokes Square redevelopment site.

This email is proposed to address the remediation strategy for the Police Station site (Lot A) in the attached map, I will provide a further email separately to address the proposed further investigation across the remainder site.

As discussed, the construction phase of Lot A has commenced and there is some concern regarding the discovery of geotechnically unsuitable and potentially contaminated material onsite.

DIPL would like to see us progress a remediation strategy to –

A. Appropriately manage any contamination onsite whilst facilitating construction as quickly as possible
B. Remove and segregate geotechnically unsuitable material/uncontrolled fill and characterise for either beneficial reuse (onsite or offsite) or disposal
C. Validate any remediated contamination and reinstate both geotechnically and environmentally suitable material to facilitate the construction works.

To address the above, SLR propose to conduct a supervised remediation strategy onsite to expediate these works as follows –

Strip back and stockpile the crushed concrete from the surface of Lot A (nominally 200 mm across site (but depth reportedly varies between 100 – 300mm) – noting that you have still not received or reviewed the latest Agon report which stipulates that the concrete has been appropriately sampled and validated to be clean of asbestos.
Strip back the top soil onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back uncontrolled fill onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Strip back any further geotechnically unsuitable material (where is exists) onsite and stockpile for further chemical characterisation (for subsequent reuse of disposal)
Validate final surfaces where apparent natural material is encountered – noting that these surfaces should be investigated to reasonable depth to ensure that they are indeed natural material/s
Validate or quantify residual insitu uncontrolled fill in areas where continued excavation on is unwarranted or becomes too onerous - e.g. if a lens of uncontrolled fill or visibly contaminated material is encountered at depth (say 1.5 – 2 m) which appears to be geotechnically suitable (or can be accepted as part of the design /compaction procedures onsite) this material could be

considered to remain insitu if appropriate testing, delineation, management (such as capping) and a risk assessment is undertaken.

Points to note during remediation works would be as follows –

The asbestos emergency procedure under the existing EMP does not sufficiently address the control measures required to appropriately segregate different material types and further information/detail is to be developed and provided to the onsite contractor to facilitate an appropriate segregation and stockpiling procedure. This procedure would be reviewed with the onsite contractor to ensure they are aware of the requirements.
All stripping works would be supervised by SLR to ensure that layers of materials are not blended to ensure that all materials are appropriately segregated and characterised
All stockpiled material heights and erosion control measures are to be managed appropriately in accordance with the project EMP and section 12.2.5 of the NT EPA Contaminated Land Guidelines, version 1.0 (June 2017)
Characterisation of stockpiled material will be undertaken on an ongoing basis with laboratory turn around times fast tracked to allow quick characterisation of materials generated as part of the excavation works to allow for offsite disposal or beneficial reuse (either onsite or offsite).

Can you please review the above and provide any further commentary or advice in relation to the above approach.

Once reviewed, SLR will formalise the above in a Remediation Action Plan or a technical memorandum of understanding.

Please feel free to call me to discuss if you have any queries.

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Friday, 17 April 2020 2:57 PM
To: scoleman@envaud.com.au
Cc: Bill Kmon <bill.kmon@hksolutions.com.au>; geoffrey.thomas@nt.gov.au; kristin.grumelart@nt.gov.au; Christophe Grumelart <Christophe.Grumelart@nt.gov.au>; Gemma Sheridan <gsheridan@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: John Stokes Square - Lot A remediation discussion

Hi Shandel,

SLR have been engaged by HK Solutions, to assist in the remediation and validation of Lot A of the John Stokes Square redevelopment.

I would like the opportunity to catch up with you to discuss a remediation strategy to ensure that you and JP are comfortable that it will sufficient to close out the site audit for this Lot.

Subsequent to this scope, HK solutions are also engaging SLR to undertake further detailed site investigations across the remainder site to inform future remediation requirements.

We have had some internal and team discussions as to what this would need to look like, however I would also like to discuss that with you to ensure that the final deliverables are suitable to inform a RAP and subsequent remediation works to also close out these lots –

Lot B1, Lot B2, Lot B3 and Lot B4
Lot C
Road Reserve – A (plus associated easements.

If you could please give me a call when you have the opportunity (or advise a time for me to set up a tele/video conference) that would be great.

Thanks in advance.

Sincerely,

SLR

Paul Turyn
Northern Australia Operations Manager

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Memorandum

To:	Bill Kmon	**At:**	Harris Kmon Solutions Pty Ltd
From:	Sarah Doherty	**At:**	SLR Consulting Australia Pty Ltd
Date:	22 April 2020	**Ref:**	680.30002.00000 Remediation Strategy 20200422.docx
Subject:	Remediation Strategy John Stokes Square - Lot A		

CONFIDENTIALITY

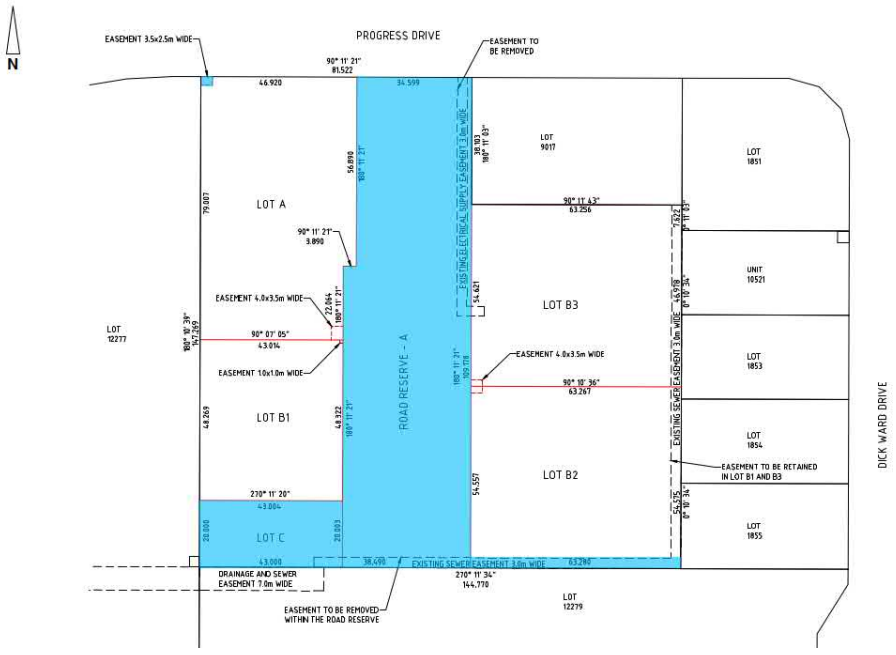
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SLR Consulting Australia Pty Ltd (SLR) have been engaged to provide environmental consulting services to support the development works at John Stokes Square in Nightcliff of the Northern Territory. This technical memorandum is intended to provide the Contaminated Lands Auditor (CLA) with a proposed strategy for review prior to commencement of works.

1 Background

John Stokes Square is a recently subdivided parcel of land in the suburb of Nightcliff. The location and subdivided land parcels are shown in **Figure 1.**

Figure 1 Layout and location of John Stokes Square (drawing provided by client)



Following subdivision, SLR understands that John Stokes Square will be subject to a multiple future land uses, as described in **Table 1**. Investigation Levels (ILs) and remediation criteria will be applied as required for each area with consideration of these varying land uses.

Table 1 Proposed future land uses of John Stokes Square

Lots or Parcels as described in Figure 1	Proposed future landuse
Lot A	Commercial Industrial (Police Station)
Lots B1, B2, B3	High Density Residential
Road Reserve A, Lot C & blue easements	Land to be gifted to various Authorities unencumbered

Several previous environmental investigations have been undertaken at John Stokes Square, which SLR have reviewed to inform the development of this strategy, including:

- Limited Soil Investigation – Greencap, July 2019
- Detailed Soil Investigation – Greencap, September 2019
- Additional Soil Investigation – Greencap, October 2019
- Detailed Site Investigation – Agon, February 2020
- Detailed Site Investigation revision – Agon, April 2020

SLR understands that Agon Environmental (Agon) carried out remediation works across John Stokes Square, details of which are included within the Detailed Site Investigation report/s. SLR also understands that these works are currently being assessed by CLA Jean-Paul Pearce and request that outcomes and recommendations be shared with SLR when available.

2 Scope

The strategy described in this technical memorandum is intended to support the development of Lot A, as shown in **Figure 1** (The Site). The remainder of John Stokes Square is intended to be managed separately to reduce the impact on construction timing.

3 Objectives

SLR understands the key objectives of this strategy are as follows:

- Ensure all remedial and development works are undertaken in a manner that does not present an unacceptable risk to human health or the environment.
- Ensure the remedial and development works adhere to all applicable legislative requirements, guidelines, and standards.
- Effectively remediate and manage all identified soil impacts within Lot A, enabling The Site to be utilised for its proposed future land use.

4 Legislative Framework

This site-specific remediation strategy was developed in general accordance with the following guidelines and standards.

- ASC NEPM 2013, "National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended in 2013". National Environment Protection Council.
- WA Department of Health 2009, "Guidelines for the assessment, Remediation and management of Asbestos-contaminated sites in Western Australia"
- AS 4482.1-2005 "Guide to the Sampling and Investigation of Potentially Contaminated Soil. Part 1: Non-volatile and semi-volatile compounds"
- VIC EPA 2009, "Industrial Waste Resource Guidelines – Soil Sampling"
- NSW EPA 2014, "Resource Recovery Order under Part 9, Clause 93 of the Protection of the Environment Operations (Waste) Regulation 2014 – The excavated natural material order 2014."

5 Remediation Strategy – Lot A

5.1 Earthworks

Based on visual assessment undertaken during a site inspection by SLR representatives on 22 April 2020 and discussions with stakeholders involved in the development, SLR has determined that there are distinct soil material types requiring management within Lot A, potentially including:

- Crushed concrete
- Geotechnically unsuitable topsoil material with organic inclusions
- Soil containing uncontrolled fill including construction/demolition waste
- ACM impacted material
- Pesticide impacted material
- Natural soil material geotechnically suitable for the proposed land use

Based on site observations on 22 April 2020, it is evident that not all of the above soil material types are in distinct layers, or in known locations, as such, SLR propose to manage to the visibly different soil layers/lenses as much as practicable to segregate the materials into the following groups –

- Crushed concrete
- Topsoil and vegetation stockpile/s
- Uncontrolled fill material
- Natural material (if required to be excavated to achieve design depth, however this is not considered necessary at this time).

The contractor has recently revised their onsite ESCP and provided an indicative site plan identifying proposed stockpile laydown areas and spoil processing/screening area (refer **Attachment A**).

The contractor intends to screen construction and demolition rubble from the uncontrolled fill material which may then be suitable for beneficial reuse onsite, pending characterisation sampling and analysis.

SLR recommend that any screened material should be further segregated into small, manageable stockpile volumes and not mixed together until laboratory results are received and the material is deemed suitable for resue onsite (or offsite). The intent of this segregation is to minimise the amount of material which is deemed unsuitable for reuse onsite (or offsite) which may need to be disposed of as waste.

Stockpiles will be segregated and sampled with information recorded within a soil tracking spreadsheet including:

- Stockpile ID label
- Stockpile location
- Estimated volume
- Material description based on visual assessment
- Number of samples collected / sampling frequency achieved

Further to this, all material excavated that is required to remain on site for either segregation processing, characterisation, or beneficial reuse must be transferred to the contractor proposed stockpile laydown areas. The location of the stockpile laydown area should reduce the need for double handling of the material and not impede upon the later construction/development works on site.

Further stockpile management requirements stipulated within the *Northern Territory Contaminated Land Guidelines* (NTEPA, 2017) includes the following.

- Maintain a log of stockpile locations, the origin of the material, locations of all characterisation and validation sample locations and corresponding sample results;
- Use of an effective liner (such as high-density polyethylene (HDPE) liner) or a sealed surface underneath each stockpile in combination with bunding to prevent run-off, soil erosion, or leaching of contaminants to the underlying strata;
- Restrict the maximum height of each stockpile to be no more than three (3) metres, or lower than boundary fence/hoarding heights when within five (5) metres of the boundary;
- Avoiding locating stockpiles:
    - adjacent to, or in close proximity to, site boundaries; and
    - in close proximity to sensitive receptors.
- Ensure stockpiles remain on site for the shortest amount of time;
- Maintain an effective dust and/or odour mitigation cover; and
- Maintain appropriate soil moisture content to reduce dust emissions (particularly during handling).

It is further recommended that if asbestos is observed during the excavation, stockpiling or the characterisation sampling process that stockpile should be securely covered using a geofabric liner. This will mitigate that potential health risk associated with the aerial dispersion of any asbestos fines/fibres.

5.2 Supervision onsite

SLR will supervise stripping, excavation and stockpiling works of Lot A, segregating material based on visual assessment in accordance with this remediation strategy.

SLR staff supervising works are deemed to be suitably experienced and competent for asbestos works as per WA DoH (2009) asbestos guidelines.

All field staff involved in this project have successfully carried out similar assessments and remediations that have been successfully completed, reviewed and signed off by previous Contaminated Land Auditors (Mark Stuckey, Anthony Lane)

5.3 Soil sampling

Samples were collected in accordance with the methodology outlined in **Table 2**.

Table 2 Soil sampling methodology

Activity	Comment / Details
Soil sampling frequencies	• Spoil characterisation samples will collected from the excavated, stockpiled material a frequency of 1 sample every 25 m^3 with a minimum of three samples should a stockpile be of less than 25m^3 in volume. • Validation samples will be collected from the walls of each excavation at a minimum rate of one per every 10 linear metres for every metre of depth, with a minimum of one sample collected from each excavation wall. • Validation samples will be collected from the base of each excavation at a minimum rate of one sample per 25 m^2 of excavation base, with a minimum of one sample collected from each excavation base. • Duplicate samples will be collected at a rate of 1:20 for soil samples. • One equipment rinsate (taken from re-useable equipment) will be collected and analysed for each day of sampling. • Where practicable, coordinates of sample locations will be recorded with a handheld GPS.
Sample collection	• Sample collection will be undertaken in general accordance with AS4482.1-2005 and SLR SOPs. Dedicated disposable nitrile gloves and laboratory supplied sample containers will be used for sample collection.
Sample preservation	• Samples will be placed in laboratory supplied jars and stored as close to 4°C as practicable, in insulated chilled containers while on site and in transit to the laboratory.
Sample submission	• Chain of custody (COC) documentation will be completed at the time of sample collection and will accompany the samples to the nominated laboratory. • All samples will be submitted to a National Association of Testing Authorities (NATA) accredited laboratory for analysis. • 50% of spoil characterisation samples will be submitted for analysis, with the rest held by the laboratory for further analysis if required should substantial variability in analytical results require further statistical assessment. • 50% of validation samples will be submitted for analysis, with the rest held by the laboratory for further analysis if required should substantial variability in analytical results require further statistical assessment.

5.4 Analytical assessment

Spoil characterisation and validation samples will be submitted to a NATA accredited laboratory for analysis.

Scheduled soil samples will be analysed for:

- Total Recoverable Hydrocarbons (TRH)
- Benzene, toluene, ethylbenzene and xylene (BTEX)
- OCP/OPP
- Asbestos (WA DoH/NEPM samples)
- 8 priority metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc)

- Representative samples will be analysed for soil characterisation as per the ASC NEPM

All non-scheduled samples will be placed on hold at the laboratory should further analysis be required as part of the characterisation and validation process.

5.5 Screening criteria

The nominated screening criteria will be selected to assess the potential risks posed to current and future users of the Site and sites at which material may be reused. The nominated screening criteria will be selected from the following:

ASC NEPM[1]:

- Health based Investigation Levels (HIL) for commercial/industrial sites
- Soil Health Screening Levels (HSL) for vapour intrusion – commercial/industrial sites
- Ecological Investigation Level (EIL) for commercial/industrial sites
- Ecological Screening Level (ESL) for commercial/industrial sites
- Management limits for Total Petroleum Hydrocarbon (TPH) fractions in soil, commercial/industrial sites
- Groundwater Investigation Levels (GIL) for Marine Waters

WA DoH[2]:

- General Contamination Criteria for protecting the public from asbestos-contaminated sites.

5.6 Air monitoring

Air monitoring will be conducted for the duration of the stripping, stockpiling and characterisation works as a precautionary measure.

Air monitoring will be undertaken SLR and the installation of air monitors in appropriate positions at the site.

Air monitoring will be conducted in accordance with the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Dust, 2nd Edition [NOHSC: 3003 (2005)].

- Where the results of the airborne asbestos monitoring show that respirable asbestos fibre levels exceed the action levels outlined in

[1] National Environment Protection Council MAY 2013, "*National Environment Protection (Assessment of Site Contamination) Measure 1999*".
[2] Western Australian Department of Health (WA DOH) MAY 2009, "*Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia*".

Table 3, action must be taken immediately.

- Refer to

Table 3 for the required controls and actions at each action level, as determined by the results of the air monitoring.

Table 3 Air monitoring action levels

Action Level	Control	Action
Less than 0.01 fibres/ml	No new control measures are necessary	• Continue with current control measures
At 0.01 fibres/ml or more than 0.01 fibres/ml but less than or equal to 0.02 fibres/ml	1. Review	• Review control measures
	2. Investigate	• Investigate the cause
	3. Implement	• Implement additional or alternative controls to eliminate or minimise exposure and prevent further release • Communicate any additional controls during daily pre-start meeting
More than 0.02 fibres/ml	4. Stop removal work	• Cease excavation / transport of material
	5. Notify Regulator	• Notify the Head Contractor, followed by the regulator (NT WorkSafe) both verbally and in written communication
	6. Investigate the cause	• Conduct a thorough assessment across the Site to determine the cause. • Consult with all personnel involved in the works • Determine ongoing mitigation measures • Continue to carry out air-monitoring to ensure further controls have mitigated the problem

Table adapted from the Code of Practice: *How to Safely Remove Asbestos*

6 Closure

We trust the above remediation strategy is adequate for the next phase of works at the John Stokes Square redevelopment project.

If you have any further queries or would like to discuss any of the above in detail, please do not hesitate in contacting either myself or Paul Turyn discuss.

Yours sincerely



SARAH DOHERTY
Environmental Project Consultant
0417 647 498

Checked/
Authorised by: PT

From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Wednesday, 22 April 2020 10:53 AM
To: Paul Turyn
Cc: Sinead Redmond; Sarah Doherty; Ruairi Hanly
Subject: RE: Final Report

Hi Paul

That is already happening.

Regards

Bill Kmon
MBA CPPM MAIPM
Director/Project Manager

bill.kmon@hksolutions.com.au
Unit 3, 29 Miles Road Berrimah NT 0828 | PO Box 213 Palmerston NT 0831
P 0459 840 588 | **W** www.hksolutions.com.au
Harris Kmon Solutions Pty Ltd.

Doing our part and working safely from home through COVID-19

From: Paul Turyn <pturyn@slrconsulting.com>
Sent: Wednesday, 22 April 2020 10:04 AM
To: Bill Kmon <bill.kmon@hksolutions.com.au>
Cc: Sinead Redmond <sinead.redmond@hksolutions.com.au>; Sarah Doherty <sdoherty@slrconsulting.com>; Ruairi Hanly <rhanly@slrconsulting.com>
Subject: RE: Final Report

Hi Bill,

This report (or two emails) really need to be sent to the auditor to close out the queries around the validation of the crushed concrete

SLR

Paul Turyn
Northern Australia Operations Manager

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From: Bill Kmon <bill.kmon@hksolutions.com.au>
Sent: Wednesday, 22 April 2020 8:27 AM
To: Paul Turyn <pturyn@slrconsulting.com>
Subject: Fwd: Final Report

As discussed enviro report

Regards

Bill Kmon
MAIPM CPPM
Director / Project Manager
Harris Kmon Solutions Pty Ltd
bill.kmon@hksolutions.com.au | 0459 840 588 | PO Box 213 PALMERSTON 0831

Begin forwarded message:

> **From:** Sinead Redmond <sinead.redmond@hksolutions.com.au>
> **Date:** 21 April 2020 at 10:29:44 pm ACST
> **To:** Bill Kmon <bill.kmon@hksolutions.com.au>
> **Subject: Fwd: Final Report**
>
> Regards
> Sinead Redmond
>
> Begin forwarded message:
>
> > **From:** John Iddles <John.Iddles@agonenviro.com.au>
> > **Date:** 21 April 2020 at 1:18:01 pm ACST
> > **To:** Sinead Redmond <sinead.redmond@hksolutions.com.au>
> > **Subject: Final Report**
> >
> > Hi Sinead
> >
> > Final report, sent in two parts due to file size, if you can accept 18MB files let me know, alternatively I can get put on a USB and sent round to you.

Cheers

John

John Iddles
Director Technical Services
Agon Environmental Pty Ltd
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M: 0414 454 578

ADELAIDE: (Head Office): 3/224 Glen Osmond Road, Fullarton SA 5063, **T: 08 8338 1009**
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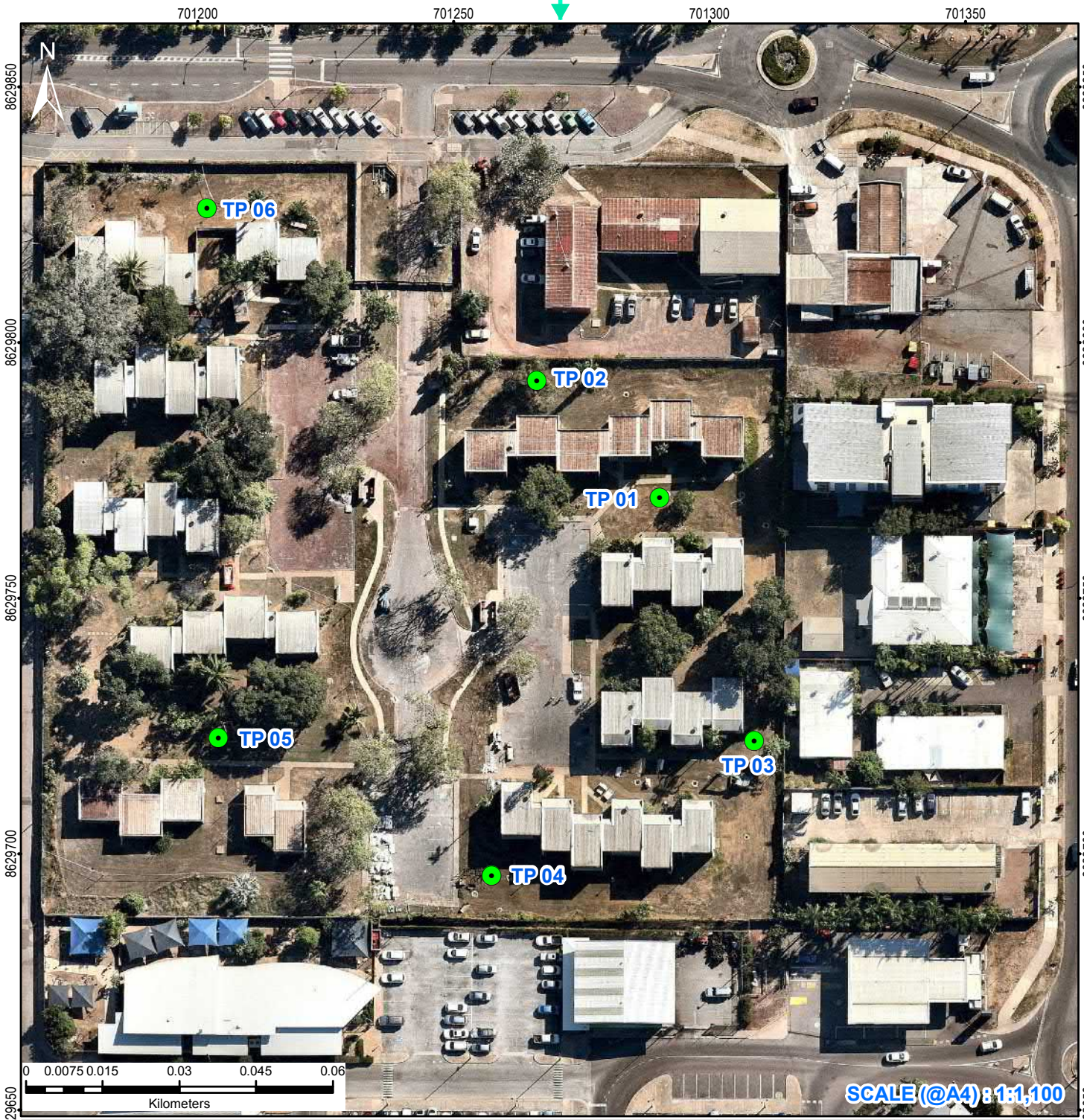
www.agonenviro.com.au

APPENDIX C

Analytical Results from Previous Environmental Investigations

Limited Soil Investigation (Greencap, July 2019)





Project: Soil Contamination Investigation – John Stokes Square, 47 Progress Drive, Nightcliff NT		Coordinate System: GDA_1994_MGA_Zone_52	GREENCAP Going Further in Managing Risk
Figure:1 Site Plan and Test Pit Locations	Job Ref: J163245	Date: July 2019 Author: Sam.K. Checked: Stuart C.	

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Project: Soil Contamination Investigation – John Stokes Square, 47 Progress Drive, Nightcliff NT		Coordinate System: GDA_1994_MGA_Zone_52	GREENCAP
Figure:2 Site and Sub-Slab Surface Soil Sample Locations	Job Ref: J163245	Date: July 2019	Author: Sam.K.	Checked: Stuart C.

No warranty is given in relation to the data (including accuracy, reliability, completeness or suitability) and accept no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of or reliance upon the data.Data must not be used for direct marketing or be used in breach of privacy laws, Nearmap imagery 13th June 2019.

3.2 Soil Sampling Methodology

A total of eight near surface soil samples were collected from the footprint of the recently demolished residential unit block. Samples were collected with the use of a clean hand trowel and placed directly into laboratory-supplied acid-rinsed and solvent-washed screw top glass jars and filled to the top to eliminate headspace. Sample jars were stored immediately in a chilled portable container and accompanied by completed Chain of Custody (CoC) forms for dispatch to National Association of Testing Authorities (NATA) accredited laboratories within acceptable holding times for the scheduled analyses.

Six test pits were excavated across the site to a maximum depth of one metre below ground level (mbgl) with the use of a mechanical excavator supplied by NTEX. 10 L bulk soil samples were collected from each layer of distinct fill material (plus one sample collected from natural or reworked natural material) and screened on site through a 7 x 7 mm sieve with any pieces of suspected ACM collected for subsequent laboratory analysis. Sub-samples (500 mL) of screened fill material were placed in plastic zip lock (double) bags for analysis of AF and/or FA.

A fresh pair of disposable nitrile gloves were worn by the sampler when collecting each individual sample and soil conditions at all locations were logged by an experienced Greencap environmental consultant.

Quality assurance and quality control (QAQC) samples including replicate samples and field, rinsate and trip blanks were also collected and analysed. A discussion of the QAQC procedures is presented in **Section 4**.

3.3 Soil Analytical Program

3.3.1 Chemical Analyses

Eight surface soil samples collected from the footprint of the residential unit block were submitted to a NATA-accredited laboratory and analysed for OCP and heavy metal concentrations.

The laboratories used for analysis of OCP and heavy metals in soil samples were Eurofins-MGT (primary laboratory) and ALS Laboratory Environmental (ALS) (secondary laboratory). Both laboratories hold NATA accreditation and the aforementioned analyses are within their NATA registration.

3.3.2 Asbestos

Potential ACM fragments were analysed for asbestos content (including total weight). Sub-samples of soil collected were analysed for AF and/or FA as per Australian Standard AS4964-2004 Method for the qualitative identification of asbestos in bulk samples (AS4964-2004).

The laboratory used for the asbestos identification was Greencap's in-house asbestos identification laboratory, approved by the NATA for asbestos identification.

3.4 Assessment Criteria / Investigation Levels

Analytical results for termiticide residues (including OCP and heavy metals) have been compared with criteria specified in the NEPM. As a large portion of the site will continue to be used for residential purposes, the relevant investigation exposure settings are considered to be:

- Table 1A(1) Health-based Investigation Levels (HILs) for soil contaminants - Residential A; and
- Generic and calculated Ecological Investigation Levels (EILs) for soil contaminants - Urban Residential/public open space. The EILs were calculated using the NEPM EIL calculation toolkit and were based on additional physico-chemical analytical data obtained from the near surface soil samples collected from the footprint of the demolished residential units.

Asbestos results have been compared with health screening levels specified in Table 7, Section 4, Schedule B1 of the NEPM, specifically that for Residential A sites; however, it should be noted that only one health screening level is appropriate for assessment of friable asbestos in soil on sites designated for all uses. Bonded ACM in soil investigation criteria was 0.01% and FA and AF investigation criteria was 0.001% by weight (w/w).

3.5 Soil Investigation Results

3.5.1 Soil Conditions

Near surface soils encountered in the residential unit footprints typically consisted of brown, soft sandy Clay and light brown, loose Sand fill materials.

Fill materials encountered during test pitting typically consisted of a surface layer of dark grey, medium density silty Sands at depths ranging from 0.0 – 0.2 mbgl and underlain by greyish brown, firm sandy Silts or stiff sandy Silts containing white, mottled yellow siltstone cobbles at depths ranging from 0.0 – 0.3 mbgl. Fill materials were encountered to a maximum depth of 0.8 mbgl at Test Pit 06 and included dark greyish brown, soft sandy Silts (from 0.0 – 0.8 mbgl). Fill materials at all locations were underlain by natural or reworked natural brownish red, soft silty Clays.

Potential ACM fragments were identified in Test Pit 02 (0.1-0.2 mbgl) and Test Pit 04 (0.2-0.3 mbgl) following on-site screening of 10 L bulk samples from each layer of fill. The fragments were collected into separate zip-lock (double) bags, examined and deemed friable and subsequently analysed in Greencap's NATA-accredited laboratory for asbestos presence/absence. No other fragments of potential ACM were detected at remaining test locations.

No staining or odours were encountered in any of the residential unit footprint or in any of the test pits. Surface soil and test pit logs are presented in **Appendix A**.

3.5.2 Analytical Results

OCP were detected in seven of the eight surface soil samples and included chlordanes, aldrin, dieldrin and heptachlor epoxide. The majority of analytical results were less than the adopted assessment criteria, as summarised below in **Table 1**, with the exception of aldrin + dieldrin in samples collected from three locations (SS01-3 (7.27 mg/kg) , SS02-3 (8.3 mg/kg) and SS02-4 (15 mg/kg)).

Heavy metals were detected in all eight surface soil samples and included arsenic, chromium, copper, lead, nickel and zinc. All heavy metal analytical results were less than the adopted assessment criteria, as summarised below in **Table 2**.

Table 1: OCPs in Surface Soil Results Summary

	OCP Concentrations (mg/kg)				
	Chlordanes - Total	Aldrin	Dieldrin	Aldrin + Dieldrin	Heptachlor epoxide
NEPM 2013 Table 1A(1) HILs for soil contaminants - Residential A	**50**	**-**	**-**	**6**	**10**
Number of Samples	8	8	8	8	8
Number of Detects	1	4	7	7	2
Minimum Concentration	<0.01	<0.05	<0.05	<0.05	<0.05
Maximum Concentration	0.3 (*SS01-1*)	3.0 (SS02-4)	12 (SS02-4)	15 (SS02-4)	1.6 (SS01-1)
Number of HIL exceedances	0	-	-	3	0

Table 2: Heavy Metals in Surface Soil Results Summary

	Heavy Metal Concentrations (mg/kg)									
	Arsenic	Cadmium	Chromium (III)	Chromium (VI)	Chromium (Tot)	Copper	Lead	Mercury	Nickel	Zinc
NEPM 2013 Table 1A(1) HILs for soil contaminants - Residential A	**100**	**20**	**-**	**100**	**-**	**6,000**	**300**	**40**	**400**	**7,400**
NEPM 2013 Calculated EIL for soil contaminants (Aged) - Urban Residential/ public open space	**100**	**-**	**420**	**-**	**-**	**220**	**1,100**	**-**	**220**	**550**
Number of Samples	8	8	2	2	8	8	8	8	8	8
Number of Detects	8	0	2	0	8	7	8	0	7	8
Minimum Concentration	5.1	<0.4	140	<1	33	<5	6	<0.1	<5	19
Maximum Concentration	31	<0.4	160	<1	250	55	29	<0.1	17	86
Number of HIL exceedances	0	0	-	0	-	0	0	0	0	0
Number of EIL exceedances	0	0	0	-	-	0	0	-	0	0

Two fragments of suspected friable ACM were collected from field screened (7 x 7 mm sieve) 10 L bulk soil samples (Test Pit 02_0.1-0.2 mbgl and Test Pit 04_0.2-0.3 mbgl) and analysed for asbestos, both of which were confirmed as ACM. The fragments of confirmed ACM were weighed and the concentration of friable asbestos material in soil calculated using the following equation as per NEPM:

%w / w asbestos in soil = (% asbestos content x ACM (kg)) / (soil volume (L) x soil density (kg/L))

The concentration of friable ACM calculated in samples of soil collected from test pits TP02 (0.1-0.2 mbgl) and TP04 (0.2-0.3 mbgl) exceeded the health-based assessment criteria.

Eleven sub-samples of soil (≥ 500 mL) were collected from the 10 L (7 x 7 mm) screened samples and analysed for AF and/or FA, none of which were detected at the limit of reporting for the method (AS4964-2004).

The results of the asbestos in soil calculations and asbestos in soil laboratory analytical results are presented below in **Table 3**.

Table 3 – Asbestos in Soil Results

		ACM fragments identified (Y/N)	Bulk weight of Sample	Weight of ACM in sample (g)	Weight of friable asbestos (g)	Friable asbestos content (w/w %)	Asbestos in Soil (w/w %) (AS4964-2004)
ASC NEPM Health Screening Level – AF & FA		**-**	**-**	**-**	**-**	**0.001**	**0.001**
Sample Location	**Depth**						
TP01	0.0-0.1	N	12.5	-	-	-	ND
TP01	0.3-0.4	N	12.5	-	-	-	ND
TP02	0.0-0.1	N	12.5	-	-	-	ND
TP02*	0.1-0.2	Y	12.5	1.39	1.39	0.0111	ND
TP03	0.0-0.1	N	12.5	-	-	-	ND
TP03	0.2-0.3	N	12.5	-	-	-	ND
TP04	0.0-0.1	N	12.5	-	-	-	ND

		ACM fragments identified (Y/N)	Bulk weight of Sample	Weight of ACM in sample (g)	Weight of friable asbestos (g)	Friable asbestos content (w/w %)	Asbestos in Soil (w/w %) (AS4964-2004)
ASC NEPM Health Screening Level – AF & FA		**-**	**-**	**-**	**-**	**0.001**	**0.001**
Sample Location	**Depth**						
TP04**	0.2-0.3	Y	12.5	6.61	5.288	0.0423	ND
TP05	0.0-0.1	N	12.5	-	-	-	ND
TP05	0.15-0.25	N	12.5	-	-	-	ND
TP06	0.0-0.1	N	12.5	-	-	-	ND

* Sample has an assumed asbestos content of 100% based on laboratory assessment

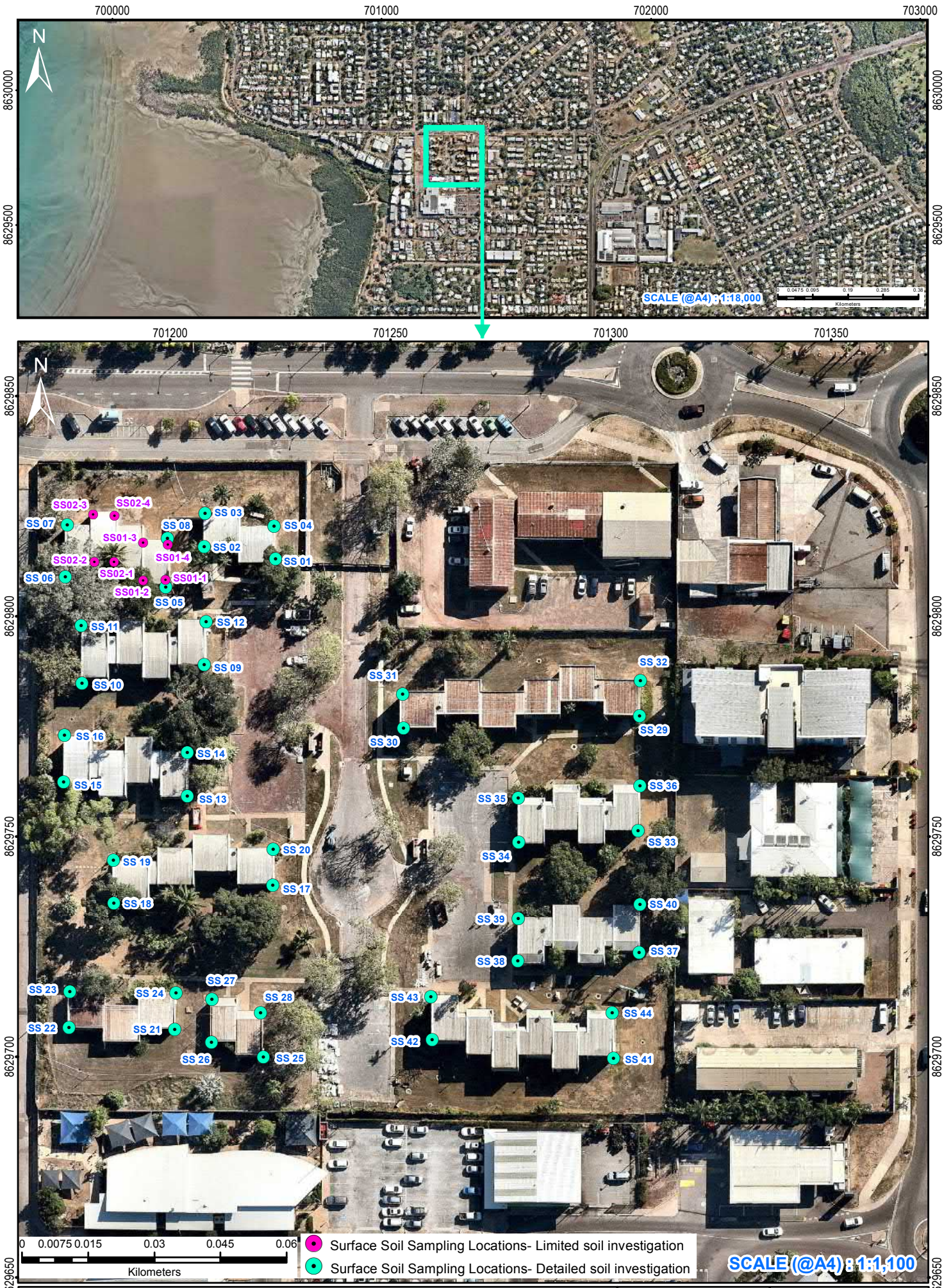
** Sample has an estimated asbestos content of 80% (based on weight of soil and organic material that may have been attached)

ND = Not detected at or above LOR (0.01 %)

A tabulated summary of the reported results is presented in **Attachment 1** at the end of this report. Details of the chemical analysis and asbestos identification test results are provided in the NATA test certificates provided in **Appendix B** and **Appendix C**, respectively.

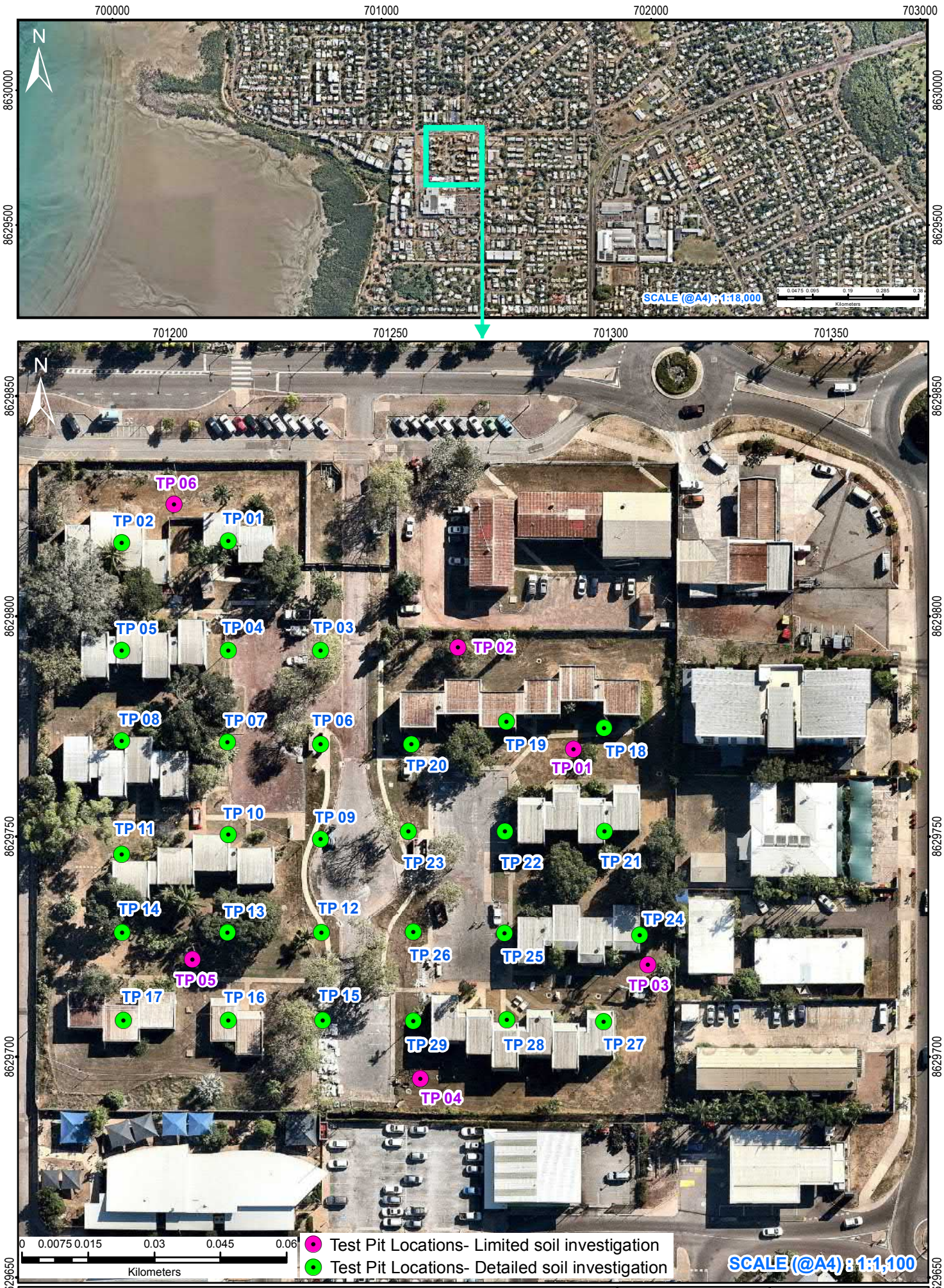
				Organochlorine Pesticides																								Heavy Metals										Physico-chemical Parameters					
				Chlordanes - Total	DDD	DDE	DDT	a-BHC	Aldrin	b-BHC	d-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Aldrin + Dieldrin	DDT+DDE+DDD	VIC EPA IWRG 621 OCP (Total)	VIC EPA IWRG 621 Other OCP (Total)	Arsenic	Cadmium	Chromium (III)	Chromium (V)	Chromium (Total)	Copper	Iron	Lead	Mercury	Nickel	Zinc	Clay	Conductivity	pH	Total Organic Carbon	Cation Exchange Capacity
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	µS/cm	pH	%	meq/100g
LOR				0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	5	0.05	0.05	0.05	0.1	2	0.4	5	1	5	5	20	5	0.1	5	5	1	10	0.1	0.1	0.05
NEPM 2013 Table 1A(1) HILs for soil contaminants - Residential A				50	-	-	-	-	-	-	-	-	270		-	10	-	-	-	6	-	10	300	20	6	240	-	-	100	20	-	100	-	6000	-	300	40	400	7400	-	-	-	-	-
NEPM 2013 Calculated EIL for soil contaminants (Aged) - Urban Residential/public open space				-	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	420	-	-	220	-	1100	-	220	550	-	-	-	-	-
Type	Sample_ID	Sampled_Date	Lab_Report_#																																								
Surface Soil	SS01-1	26/06/2019	662971-S	0.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.6	<0.05	<0.05	<1	2	<0.05	<0.05	3.9	5.1	<0.4	-	-	33	13	-	17	<0.1	6.8	61	-	-	-	-	-
Surface Soil	SS01-2	26/06/2019	662971-S	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.26	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	2.6	<0.05	<0.05	0.26	18	<0.4	-	-	180	17	-	19	<0.1	17	26	-	-	-	-	-
Surface Soil	SS01-3	26/06/2019	662971-S	<0.1	<0.05	<0.05	<0.05	<0.05	0.57	<0.05	<0.05	6.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	7.27	<0.05	<0.05	7.27	28	<0.4	-	-	200	30	-	20	<0.1	17	86	-	-	-	-	-
Surface Soil	SS01-4	26/06/2019	662971-S	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.05	<0.05	<0.05	<0.1	24	<0.4	-	-	220	14	-	25	<0.1	15	21	-	-	-	-	-
Surface Soil	SS02-1	26/06/2019	662971-S	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.61	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.25	<0.05	<0.05	<1	0.61	<0.05	0.86	0.25	11	<0.4	-	-	43	<5	-	6	<0.1	<5	31	-	-	-	-	-
Surface Soil	SS02-2	26/06/2019	662971-S	<0.1	<0.05	<0.05	<0.05	<0.05	0.24	<0.05	<0.05	2.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	2.94	<0.05	2.94	<0.1	31	<0.4	160	<1	220	55	110,000	29	<0.1	12	54	14	2300	9.2	0.4	72
Surface Soil	SS02-3	26/06/2019	662971-S	<0.1	<0.05	<0.05	<0.05	<0.05	1.2	<0.05	<0.05	7.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	8.3	<0.05	8.3	<0.1	30	<0.4	140	<1	250	11	100,000	26	<0.1	14	19	11	540	8	0.6	15
Surface Soil	SS02-4	26/06/2019	662971-S	<0.1	<0.05	<0.05	<0.05	<0.05	3.0	<0.05	<0.05	12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	15	<0.05	15.05	<0.1	21	<0.4	-	-	190	11	-	20	<0.1	10	25	-	-	-	-	-
Statistical Summary																																											
Number of Results				8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	2	2	8	8	2	8	8	8	8	8	8	8	8	8
Number of Detects				1	0	0	0	0	4	0	0	7	0	0	0	0	0	0	0	0	2	0	0	0	7	0	4	4	8	0	2	0	8	7	2	8	0	7	8	8	8	8	8	8
Minimum Concentration				<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1	<0.05	<0.05	<0.05	<0.1	5.1	<0.4	140	<1	33	<5	100000	6	<0.1	<5	19	11	540	8	0.4	15
Minimum Detect				0.3	ND	ND	ND	ND	0.24	ND	ND	0.26	ND	ND	ND	ND	ND	ND	ND	ND	0.25	ND	ND	ND	0.61	ND	0.86	0.25	5.1	ND	140	ND	33	11	100000	6	ND	6.8	19	11	540	8	0.4	15
Maximum Concentration				0.3	<0.05	<0.05	<0.05	<0.05	3	<0.05	<0.05	12	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.6	<0.05	<0.05	<1	15	<0.05	15.05	7.27	31	<0.4	160	<1	250	55	110000	29	<0.1	17	86	14	2300	9.2	0.6	72
Maximum Detect				0.3	ND	ND	ND	ND	3	ND	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	1.6	ND	ND	ND	15	ND	15.05	7.27	31	ND	160	ND	250	55	110000	29	ND	17	86	14	2300	9.2	0.6	72
Average Concentration				0.081	0.025	0.025	0.025	0.025	0.64	0.025	0.025	3.9	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.25	0.025	0.025	0.5	4.8	0.025	3.4	1.5	21	0.2	150	<1	167	19	105000	20	0.05	12	40	12.5	1420	8.6	0.5	43.5
Median Concentration				0.05	0.025	0.025	0.025	0.025	0.1325	0.025	0.025	2.35	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.5	2.77	0.025	0.4425	0.15	22.5	0.2	150	0.5	195	13.5	105000	20	0.05	13	28.5	12.5	1420	8.6	0.5	43.5
Standard Deviation				0.088	0	0	0	0	1	0	0	4.3	0	0	0	0	0	0	0	0	0.55	0	0	0	5.1	0	5.5	2.7	9.3	0	-	-	82	16	-	7	0	5.1	24	-	-	-	-	-
Number of Guideline Exceedances				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Number of Guideline Exceedances(Detects Only)				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Detailed Soil Investigation (Greencap, September 2019)



Project: Soil Contamination Investigation – John Stokes Square, 47 Progress Drive, Nightcliff NT			Coordinate System: GDA_1994_MGA_Zone_52	GREENCAP
Figure 3: Surface Soil Sample Locations	Job Ref: J163803	Date: August 2019	Author: Sam.K.	Checked: Stuart C.

No warranty is given in relation to the data (including accuracy, reliability, completeness or suitability) and accept no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of or reliance upon the data.Data must not be used for direct marketing or be used in breach of privacy laws, Nearmap imagery 13th June 2019.



Project: Soil Contamination Investigation – John Stokes Square, 47 Progress Drive, Nightcliff NT			Coordinate System: GDA_1994_MGA_Zone_52	GREENCAP
Figure4: Test Pit Locations	Job Ref: J163803	Date: August 2019	Author: Sam.K.	Checked: Stuart C.

No warranty is given in relation to the data (including accuracy, reliability, completeness or suitability) and accept no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of or reliance upon the data.Data must not be used for direct marketing or be used in breach of privacy laws, Nearmap imagery 13th June 2019.

5 SOIL INVESTIGATION RESULTS

5.1 Soil Conditions

The maximum depth of the investigation was 1.0 metre below ground level (m bgl).

Near surface soils encountered across the footprints of the residential unit block typically consisted fill material comprising light greyish brown, fine sandy silts and fine gravelly sand silts.

Underlying fill material typically consisted of yellowish brown to greyish brown, fine to coarse gravelly sandy (and sandy gravelly) silts at depths ranging from the surface to a maximum depth of 0.9 mbgl (TP09). The western portion of the site noted to have an additional layer of topsoil consisting of light greyish brown sandy silt or fine gravelly sandy silt to a maximum depth of 0.1m bgl (TP09 and TP12). Various inclusions of building rubble (concrete, PVC and plastics) were observed at several of the locations tested. In addition, various fragments of building waste suspected to contain ACM were identified at 13 of the 29 locations tested. It is noted that not all of the suspect material was confirmed to contain asbestos, as discussed further in Section 5.2.2.

All test pits extended into natural soils which comprised clayey, sandy, gravelly silts, generally coloured reddish brown to yellowish brown, observed to the maximum depth of the excavation.

No stained or odorous soils were encountered in any of the sample. Surface soil materials encountered are presented in the soil sample register along with test pit logs in Appendix B.

5.2 Analytical Results

5.2.1 Chemical Results

A tabulated summary of the reported results is presented as Attachment 1 to this report. Details of the testing results are provided in the NATA test certificates presented in Appendix A.

Elevated concentrations of OCPs above the laboratory detection limits were identified in the majority of samples collected from the perimeter of the building footprints. However, all reported results were below the adopted criteria with the exception of the following:

- Sample SS30 reported an elevated Aldrin + Dieldrin concentration of 368.8 mg/kg, exceeding the adopted HIL A of 6 mg/kg
- Sample SS18 reported an elevated heptachlor concentration of 7.8 mg/kg, exceeding the adopted HIL A of 6 mg/kg.

5.2.2 Asbestos

During the investigation, numerous fragments of suspected asbestos materials were identified during the bulk sampling and sieving. However, only fragments of suspect materials collected from the following test pits were confirmed to contain asbestos:

- TP11 (0.0-0.8 mbgl);
- TP12 (0.0-0.55 mbgl);
- TP17 (0.0-0.4 mbgl); and
- TP20 (0.0-0.5 mbgl).

The fragments confirmed as ACM were weighed and the concentration of asbestos material in soil calculated using the following equation as per NEPM:

% w/w asbestos in soil = (% asbestos content x ACM (kg)) / (soil volume (L) x soil density (kg/L))

The results of the asbestos in soil calculations are presented below in Table 3.

Table 3 Asbestos in Soil Results

						Bonded Asbestos in Soil (w/w %)	FA & AF in Soil (w/w %) (AS4964-2004)
					ASC NEPM HSL - Bonded ACM (Res. A)	0.01	-
					ASC NEPM HSL – AF & FA	-	0.001
Test Pit #	**Depth of Fill**	**ACM identified?**	**Weight of Sample (kg)**	**Weight of ACM in sample (g)**	**Weight of asbestos (g)**		
TP01	0.00-0.05	No	15.8	-	-	-	ND
	0.05-0.85	No					
TP02	0.00-0.75	No	12.8	-	-	-	ND
TP03	0.00-0.05	No	15.2	-	-	-	ND
	0.05-0.55						
TP04	0.00-0.05	No	13.3	-	-	-	ND
	0.05-0.55						
TP05	0.00-0.40	No	15.4	-	-	-	ND
TP06	0.00-0.05	No	14.7	-	-	-	ND
	0.05-0.65						
TP07	0.00-0.05	No	15.1	-	-	-	ND
	0.05-0.65						
TP08	0.00-0.05	No	12.2	-	-	-	ND
	0.05-0.40						
TP09	0.00-0.05	No	14.3	-	-	-	ND
	0.05-0.90						
TP10	0.00-0.05	No	14.9	-	-	-	ND
	0.05-0.40						
TP11	0.00-0.80	Yes	16.4	0.78	0.234*	0.0014	ND
TP12	0.00-0.10	Yes	17.1	2.33	0.699*	0.0041	ND
	0.10-0.55						
TP13	0.00-0.35	No	11.2	-	-	-	ND
TP14	0.00-0.05	No	15.3	-	-	-	ND
	0.05-0.30						
TP15	0.00-0.05	No	15.6	-	-	-	ND
	0.05-0.25						
TP16	0.00-0.65	No	16.4	-	-	-	ND
TP17	0.00-0.40	Yes	17.4	9.03	2.709*	0.0156	ND
TP18	0.00-0.25	No	14.7	-	-	-	ND
TP19	0.00-0.20	No	14.5	-	-	-	ND
TP20	0.00-0.50	Yes	10.2	0.61	0.183*	0.0018	FA = 0.0047 % w/w
TP21	0.00-0.75	No	16.6	-	-	-	ND
TP22	0.00-0.60	No	14.2	-	-	-	ND
TP23	0.00-0.45	No	13.0	-	-	-	ND
TP24	0.00-0.40	No	16.9	-	-	-	ND
TP25	0.00-0.30	No	13.6	-	-	-	ND

						Bonded Asbestos in Soil (w/w %)	FA & AF in Soil (w/w %) (AS4964-2004)
ASC NEPM HSL - Bonded ACM (Res. A)						0.01	-
ASC NEPM HSL – AF & FA						-	0.001
Test Pit #	Depth of Fill	ACM identified?	Weight of Sample (kg)	Weight of ACM in sample (g)	Weight of asbestos (g)		
TP26	0.00-0.70	No	16.4	-	-	-	ND
TP27	0.00-0.65	No	15.4	-	-	-	ND
TP28	0.00-0.80	No	16.6	-	-	-	ND
TP29	0.00-0.50	No	16.9	-	-	-	ND

* Sample has an assumed asbestos content of 30% based on laboratory assessment

ND = Not detected at or above LOR

The concentration of bonded ACM calculated in the sample collected from test pit TP17 (0.0-0.4 mbgl) was 0.016 % w/w, which exceeded the health-based assessment criteria for residential land use; however, the concentration of bonded ACM in samples of soil collected from test pits TP17 and TP20 was less than the health-based assessment criteria for residential land use.

Sub-samples of soil were collected from the 10 L (7 x 7 mm) screened samples and analysed for AF and/or FA in accordance with Australian Standard AS4964-2004: '*Method for the Qualitative Identification of Asbestos in Bulk Samples'*. One sample (TP20) reported friable asbestos at a concentration of 0.0047 % w/w, greater than the health-based assessment criteria for all land use types.

Details of the asbestos identification and asbestos in soil test results are provided in the NATA-accredited certificates of analysis provided in Appendix A.

Detailed Soil Investigation

Option Group Pty Ltd t/a NTEX

John Stokes Square, 47 Progress Drive, Nightcliff NT

Attachment 1: Soil Analytical Results Tables

					Organochlorine Pesticides																											Metals																					Physico-chem					
					Chlordanes - Total	DDD	DDE	DDT	a-BHC	Aldrin	b-BHC	d-BHC	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan Sulfate	Endrin	Endrin Aldehyde	Endrin Ketone	g-BHC (Lindane)	Heptachlor	Heptachlor Epoxide	Hexachlorobenzene	Methoxychlor	Toxaphene	Aldrin + Dieldrin	DDD+DDE+DDT	Arsenic	Cadmium	Chromium III	Chromium VI	Chromium (III+VI)	Copper	Iron	Lead	Mercury	Nickel	Zinc	Moisture (dried @ 103°C)	% Clay	Conductivity	pH	Total Organic Carbon	Cation Exchange Capacity
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	%	µS/cm	pH	%	meq/100g
LOR																											2	0.4		1	5	5		5	0.1	5	5	1	1	10	0.1	0.1	0.05
NEPM 2013 Table 1A(1) HILs for soil contaminants - Residential A					50	-	-	-	-	-	-	-	-	270		-	10	-	-	-	6	-	10	300	20	6	240	100	20		100	-	6000	-	300	40	400	7400	-	-	-	-	-	-
NEPM 2013 Calculated EILs for soil contaminants (Aged) - Urban Residential/public open space					-	-	-	180	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	440		-	220	-	1100	-	260	820	-	-	-	-	-	-
Type	Residential Block	Sample_ID	Date Sampled	Lab Report #																																																			
Surface Soil	# 1	SS01-1	26/06/2019	662971-S	0.3	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.6	< 0.05	< 0.05	< 1	2	< 0.05	5.1	< 0.4	-	-	33	13	-	17	< 0.1	6.8	61	14	-	-	-	-	-
Surface Soil	# 1	SS01-2	26/06/2019	662971-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	<0.05	< 0.05	< 0.05	0.26	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	2.6	< 0.05	18	< 0.4	-	-	180	17	-	19	< 0.1	17	26	16	-	-	-	-	-
Surface Soil	# 1	SS01-3	26/06/2019	662971-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.57	< 0.05	< 0.05	6.7	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	7.27	< 0.05	28	< 0.4	-	-	200	30	-	20	< 0.1	17	86	14	-	-	-	-	-
Surface Soil	# 1	SS01-4	26/06/2019	662971-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	<0.05	< 0.05	< 0.05	<0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	<0.05	< 0.05	24	< 0.4	-	-	220	14	-	25	< 0.1	15	21	15	-	-	-	-	-
Surface Soil	# 1	SS02-1	26/06/2019	662971-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	<0.05	< 0.05	< 0.05	0.61	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.25	< 0.05	< 0.05	< 1	0.61	< 0.05	11	< 0.4	-	-	43	< 5	-	6	< 0.1	<5	31	8.3	-	-	-	-	-
Surface Soil	# 1	SS02-2	26/06/2019	662971-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.24	< 0.05	< 0.05	2.7	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	2.94	< 0.05	31	< 0.4	160	<1	220	55	110000	29	< 0.1	12	54	14	14	2300	9.2	0.4	72
Surface Soil	# 1	SS02-3	26/06/2019	662971-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	1.2	< 0.05	< 0.05	7.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	8.3	< 0.05	30	< 0.4	140	<1	250	11	100000	26	< 0.1	14	19	12	11	540	8	0.6	15
Surface Soil	# 1	SS02-4	26/06/2019	662971-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	3.0	< 0.05	< 0.05	12	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	15	< 0.05	21	< 0.4	-	-	190	11	-	20	< 0.1	10	25	7.8	-	-	-	-	-
Surface Soil	# 2	SS01	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.09	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.09	< 0.05	10	< 0.4	-	-	94	20	74000	24	< 0.1	15	62	2.0	8	220	6.2	6.1	13
Surface Soil	# 2	SS02	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	< 0.05	< 0.05	23	< 0.4	-	<1	180	15	-	27	< 0.1	14	75	3.2	-	-	-	-	-
Surface Soil	# 2	SS03	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	< 0.05	< 0.05	4.5	0.5	-	-	29	58	-	23	< 0.1	8.7	96	3.0	-	-	-	-	-
Surface Soil	# 2	SS04	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	< 0.05	< 0.05	9.9	< 0.4	-	-	70	14	-	31	< 0.1	12	200	2.7	-	-	-	-	-
Surface Soil	# 1	SS05	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.08	< 0.05	< 0.05	0.52	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.6	< 0.05	17	< 0.4	-	<1	110	33	-	19	< 0.1	11	45	4.2	-	-	-	-	-
Surface Soil	# 1	SS06	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.1	< 0.05	< 0.05	1.3	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	1.4	< 0.05	16	< 0.4	-	-	87	18	-	15	< 0.1	15	71	14.0	-	-	-	-	-
Surface Soil	# 1	SS07	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.14	< 0.05	< 0.05	2.5	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	2.64	< 0.05	17	0.7	-	<1	130	14	-	24	< 0.1	13	130	7.0	-	-	-	-	-
Surface Soil	# 1	SS08	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.34	< 0.05	< 0.05	2.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	2.44	< 0.05	24	< 0.4	-	<1	210	17	-	28	< 0.1	16	45	10.0	-	-	-	-	-
Surface Soil	# 3	SS09	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.06	< 0.05	< 0.05	0.58	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.64	< 0.05	19	< 0.4	-	<1	150	16	-	21	< 0.1	15	48	6.8	-	-	-	-	-
Surface Soil	# 3	SS10	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.17	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.17	< 0.05	21	< 0.4	-	<1	220	15	-	23	< 0.1	20	50	9.3	-	-	-	-	-
Surface Soil	# 3	SS11	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.68	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.68	< 0.05	15	< 0.4	-	<1	190	14	99000	18	< 0.1	12	25	4.3	16	460	7.1	1.5	11
Surface Soil	# 3	SS12	7/08/2019	670777-S	0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.13	< 0.05	< 0.05	1.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	1.23	< 0.05	29	< 0.4	-	<1	210	20	-	23	< 0.1	9.4	42	3.1	-	-	-	-	-
Surface Soil	# 4	SS13	7/08/2019	670777-S	< 0.1	0.08	< 0.05	< 0.05	< 0.05	0.85	< 0.05	< 0.05	3.9	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	4.75	0.08	17	< 0.4	-	<1	210	8.9	-	17	< 0.1	11	38	4.6	-	-	-	-	-
Surface Soil	# 4	SS14	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	0.23	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.28	< 0.05	6.7	< 0.4	-	-	52	32	-	20	5.5	7.5	280	1.9	-	-	-	-	-
Surface Soil	# 4	SS15	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.39	< 0.05	< 0.05	4.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	4.59	< 0.05	14	< 0.4	-	<1	160	12	-	16	< 0.1	12	25	8.3	-	-	-	-	-
Surface Soil	# 4	SS16	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.57	< 0.05	< 0.05	1.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	1.77	< 0.05	15	< 0.4	-	<1	120	14	-	19	< 0.1	12	53	5.4	-	-	-	-	-
Surface Soil	# 5	SS17	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.06	< 0.05	< 0.05	0.4	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.46	< 0.05	9.4	< 0.4	-	-	88	21	-	21	< 0.1	10	67	9.8	-	-	-	-	-
Surface Soil	# 5	SS18	7/08/2019	670777-S	9.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.12	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	7.8	0.09	< 0.05	< 1	0.12	< 0.05	22	< 0.4	-	<1	160	18	-	22	< 0.1	15	110	14.0	-	-	-	-	-
Surface Soil	# 5	SS19	7/08/2019	670777-S	0.4	< 0.05	< 0.05	< 0.05	< 0.05	0.93	< 0.05	< 0.05	1.4	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.11	0.1	< 0.05	< 1	2.33	< 0.05	29	< 0.4	-	<1	180	13	-	25	< 0.1	13	38	10.0	-	-	-	-	-
Surface Soil	# 5	SS20	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	< 0.05	< 0.05	9.5	< 0.4	-	-	48	22	-	16	< 0.1	9.7	41	10.0	-	-	-	-	-
Surface Soil	# 6	SS21	7/08/2019	670777-S	0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.88	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.88	< 0.05	15	< 0.4	-	<1	180	11	94000	19	< 0.1	16	45	3.4	13	70	6.3	2.2	6.9
Surface Soil	# 6	SS22	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.09	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.09	< 0.05	8.8	< 0.4	-	<1	100	9.4	-	14	< 0.1	9.4	49	1.0	-	-	-	-	-
Surface Soil	# 6	SS23	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.21	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.21	< 0.05	8.2	< 0.4	-	-	55	13	-	15	< 0.1	7.6	57	1.0	-	-	-	-	-
Surface Soil	# 6	SS24	7/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	< 0.05	< 0.05	15	< 0.4	-	<1	150	21	-	24	< 0.1	12	51	5.1	-	-	-	-	-
Surface Soil	# 7	SS25	8/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.14	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.14	< 0.05	13	< 0.4	-	<1	110	16	-	16	< 0.1	17	34	4.3	-	-	-	-	-
Surface Soil	# 7	SS26	8/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	2.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	2.1	< 0.05	15	< 0.4	-	<1	180	11	-	18	< 0.1	18	25	5.7	-	-	-	-	-
Surface Soil	# 7	SS27	8/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.06	< 0.05	< 0.05	1.5	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	1.56	< 0.05	9.9	< 0.4	-	-	91	16	-	15	< 0.1	14	200	3.9	-	-	-	-	-
Surface Soil	# 7	SS28	8/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.1	< 0.05	17	< 0.4	-	<1	150	18	-	22	< 0.1	14	48	4.4	-	-	-	-	-
Surface Soil	# 8	SS29	8/08/2019	670777-S	0.5	< 0.05	< 0.05	< 0.05	< 0.05	0.1	< 0.05	< 0.05	0.22	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.32	< 0.05	23	< 0.4	-	-	73	21	-	19	< 0.1	11	97	3.9	-	-	-	-	-
Surface Soil	# 8	SS30	8/08/2019	670777-S	0.4	< 0.05	< 0.05	< 0.05	< 0.05	360	< 0.05	< 0.05	8.8	< 0.05	< 0.05	< 0.05	< 0.05	0.16	< 0.05	< 0.05	< 0.05	0.12	< 0.05	< 1	368.8	< 0.05	11	< 0.4	-	-	47	25	-	15	< 0.1	12	120	3.4	-	-	-	-	-
Surface Soil	# 8	SS31	8/08/2019	670777-S	0.4	< 0.05	< 0.05	< 0.05	< 0.05	0.2	< 0.05	< 0.05	0.12	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.32	< 0.05	15	< 0.4	-	<1	160	18	88000	22	< 0.1	18	340	3.4	11	310	6.3	1.7	5.5
Surface Soil	# 8	SS32	8/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	< 0.05	< 0.05	16	< 0.4	-	<1	110	44	-	21	< 0.1	9.4	230	3.4	-	-	-	-	-
Surface Soil	# 9	SS33	8/08/2019	670777-S	0.7	< 0.05	< 0.05	< 0.05	< 0.05	0.14	< 0.05	< 0.05	0.92	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.12	< 0.05	< 1	1.06	< 0.05	17	< 0.4	-	<1	130	16	-	19	< 0.1	10	110	6.4	-	-	-	-	-
Surface Soil	# 9	SS34	8/08/2019	670777-S	1.1	< 0.05	< 0.05	< 0.05	< 0.05	0.35	< 0.05	< 0.05	2.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.21	< 0.05	< 1	2.55	< 0.05	11	< 0.4	-	-	91	12	-	15	< 0.1	8.3	68	5.0	-	-	-	-	-
Surface Soil	# 9	SS35	8/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.28	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.28	< 0.05	21	< 0.4	-	<1	180	15	-	27	< 0.1	16	51	5.5	-	-	-	-	-
Surface Soil	# 9	SS36	8/08/2019	670777-S	0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.68	< 0.05	< 0.05	3	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	3.68	< 0.05	8.3	< 0.4	-	-	81	23	-	19	< 0.1	12	79	7.1	-	-	-	-	-
Surface Soil	# 10	SS37	8/08/2019	670777-S	0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.05	< 0.05	< 0.05	0.25	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.3	< 0.05	7.9	< 0.4	-	-	44	21	-	24	< 0.1	8.9	74	4.9	-	-	-	-	-
Surface Soil	# 10	SS38	8/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.1	< 0.05	18	< 0.4	-	<1	170	11	-	20	< 0.1	7.1	35	4.7	-	-	-	-	-
Surface Soil	# 10	SS39	8/08/2019	670777-S	0.5	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.2	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.2	< 0.05	< 1	0.2	< 0.05	15	< 0.4	-	<1	160	13	-	18	0.2	10	54	2.8	-	-	-	-	-
Surface Soil	# 10	SS40	8/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.06	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	0.06	< 0.05	6.7	< 0.4	-	-	93	15	-	13	< 0.1	< 5	44	21.0	-	-	-	-	-
Surface Soil	# 11	SS41	8/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.18	< 0.05	< 0.05	2.4	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	2.58	< 0.05	11	< 0.4	-	<1	110	12	76000	23	< 0.1	12	93	4.7	18	210	7.4	1.2	8.8
Surface Soil	# 11	SS42	8/08/2019	670777-S	0.4	< 0.05	< 0.05	< 0.05	< 0.05	0.07	< 0.05	< 0.05	0.45	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.08	< 0.05	< 1	0.52	< 0.05	13	< 0.4	-	-	97	8.9	-	13	< 0.1	9.9	48	2.7	-	-	-	-	-
Surface Soil	# 11	SS43	8/08/2019	670777-S	0.3	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.4	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	1.4	< 0.05	14	< 0.4	-	<1	130	14	-	16	< 0.1	8.9	32	4.2	-	-	-	-	-
Surface Soil	# 11	SS44	8/08/2019	670777-S	< 0.1	< 0.05	< 0.05	< 0.05	< 0.05	0.35	< 0.05	< 0.05	3.1	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 1	3.45	< 0.05	9.2	0.8	-	-	60	19	-	24	< 0.1	8.7	130	5.4	-	-	-	-	-
			Mean																													91571						13	587.1	7.2	2	18.88571

GREENCAP NT	SS08	QA01	RPD	SS25	QA03	RPD	SS37	QA05	RPD
	M19-Au15699	M19-Au15736		M19-Au15716	M19-Au15737			M19-Au15738	
% Moisture	10	9.4	6.1856	4.3	4.5	-4.5455	4.9	5.7	-15.09434
Heavy Metals									
Arsenic	24	19	23.256	13	24	-59.459	7.9	7.2	9.271523
Cadmium	< 0.4	< 0.4	0	< 0.4	< 0.4	0	< 0.4	< 0.4	0
Chromium	210	170	21.053	**110**	**220**	-66.667	44	57	-25.74257
Copper	17	19	-11.11	16	13	20.6897	21	20	4.878049
Lead	28	23	19.608	16	22	-31.579	24	23	4.255319
Mercury	< 0.1	< 0.1	0	< 0.1	< 0.1	0	< 0.1	< 0.1	0
Nickel	16	15	6.4516	17	14	19.3548	8.9	10	-11.64021
Zinc	45	58	-25.24	34	57	-50.549	74	67	9.929078
OCP									
4.4'-DDD	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
4.4'-DDE	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
4.4'-DDT	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
a-BHC	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Aldrin	0.34	0.2	51.852	< 0.05	< 0.05	0	0.05	0.06	-18.18182
b-BHC	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Chlordanes - Total	< 0.1	< 0.1	0	< 0.1	0.2	0	0.1	0.1	0
d-BHC	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Dieldrin	2.1	2	4.878	0.14	0.66	-130	0.25	0.28	-11.32075
Endosulfan I	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Endosulfan II	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Endosulfan sulphate	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Endrin	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Endrin aldehyde	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Endrin ketone	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
g-BHC (Lindane)	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Heptachlor	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Heptachlor epoxide	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Hexachlorobenzene	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Methoxychlor	< 0.05	< 0.05	0	< 0.05	< 0.05	0	< 0.05	< 0.05	0
Toxaphene	< 1	< 1	0	< 1	< 1	0	< 1	< 1	0
Aldrin + Dieldrin	2.44	2.2	10.345	0.14	0.66	-130	0.3	0.34	-12.5

GREENCAP NT	SS08	QA02	RPD	SS25	QA04	RPD	SS37	QA06	RPD
	M19-Au15699			M19-Au15716			M19-Au15728		
% Moisture	10	10.9	-8.6124402	4.3	5	-15.053763	4.9	6.3	-25
Heavy Metals									
Arsenic	24	5	131.03448	13	<5 2.5	135.48387	7.9	<5 2.5	103.8462
Cadmium	< 0.4	<1	N/A	< 0.4	<1	N/A	< 0.4	<1	N/A
Chromium	**210**	**102**	69.230769	**110**	**44**	85.714286	44	36	20
Copper	17	11	42.857143	16	12	28.571429	21	15	33.33333
Lead	28	14	66.666667	16	11	37.037037	24	15	46.15385
Mercury	< 0.1	<0.1	N/A	< 0.1	<0.1	0	< 0.1	<0.1	0
Nickel	16	6	90.909091	17	7	83.333333	8.9	5	56.11511
Zinc	45	40	11.764706	34	40	-16.216216	74	102	-31.8182
OCP									
4.4'-DDD	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
4.4'-DDE	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
4.4'-DDT	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
a-BHC	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Aldrin	0.34	0.12	95.652174	< 0.05	<0.05	0	0.05	0.1	-66.6667
b-BHC	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Chlordanes - Total	< 0.1	<0.05	N/A	< 0.1	<0.05	N/A	0.1	0.16	-46.1538
d-BHC	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Dieldrin	2.1	1.2	54.545455	0.14	0.23	-48.648649	0.25	0.49	-64.8649
Endosulfan I	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Endosulfan II	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Endosulfan sulphate	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Endrin	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Endrin aldehyde	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Endrin ketone	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
g-BHC (Lindane)	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Heptachlor	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Heptachlor epoxide	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Hexachlorobenzene	< 0.05	<0.05	0	< 0.05	<0.05	0	< 0.05	<0.05	0
Methoxychlor	< 0.05	<0.2	N/A	< 0.05	<0.2	N/A	< 0.05	<0.2	N/A
Toxaphene	< 1	-	-	< 1	-		< 1	-	
Aldrin + Dieldrin	2.44	1.32		0.14	0.23	-48.648649	0.3	0.59	-65.1685

Additional Soil Investigation (Greencap, October 2019)

4 FIELD INVESTIGATIONS

4.1 Sampling Rationale

The additional soil investigation comprised the collection of soil samples and materials for analysis of COPC (OCP and ACM) based on the following rationale.

Delineation and additional testing for OCP, as presented on Figure 2 below:

- 11 additional surface samples (SS53 to SS63 inclusive) were collected from the footprints of the previously demolished residential unit blocks.
- One surface sample (SS64) was collected from the footprint of the former northern unit block adjacent to the driveway entrance, which had not been demolished prior to previous investigations. This building was demolished shortly before sampling was carried out.
- Several locations were sampled around each location from which elevated results were reported previously:
    - Previous location SS01-03 – SS65 at the approximate location of SS01-03, SS65_N(5) approximately five metres to the north, SS65_E(5) approximately five metres to the east, SS65_S(5) approximately five metres to the south and SS65_W(5) approximately five metres to the west.
    - Previous location SS02-03 – SS66 at the approximate location of SS02-03, SS66_N(5) approximately five metres to the north, SS66_E(5) approximately five metres to the east and SS66_S(5) approximately five metres to the south. No sample was collected to the west of this location because a stockpile of demolition waste restricted access.
    - Previous location SS02-04 – SS67 at the approximate location of SS02-04, SS67_N(5) approximately five metres to the north, SS67_E(5) approximately five metres to the east and SS67_S(5) approximately five metres to the south. No sample was collected to the west of this location because this was covered by sample SS66_E(5).
    - Previous location SS18 – SS68 at the approximate location of SS18, SS68_N(5) approximately five metres to the north, SS68_E(5) approximately five metres to the east, SS68_S(5) approximately five metres to the south and SS68_W(5) approximately five metres to the west.
    - Previous location SS30 – SS69 at the approximate location of SS30, SS69_N(5) approximately five metres to the north, SS69_E(5) approximately five metres to the east, SS69_S(5) approximately five metres to the south and SS69_W(5) approximately five metres to the west.

It is noted that Figure 2 shows only the central location for each of the abovementioned ‘clusters’.

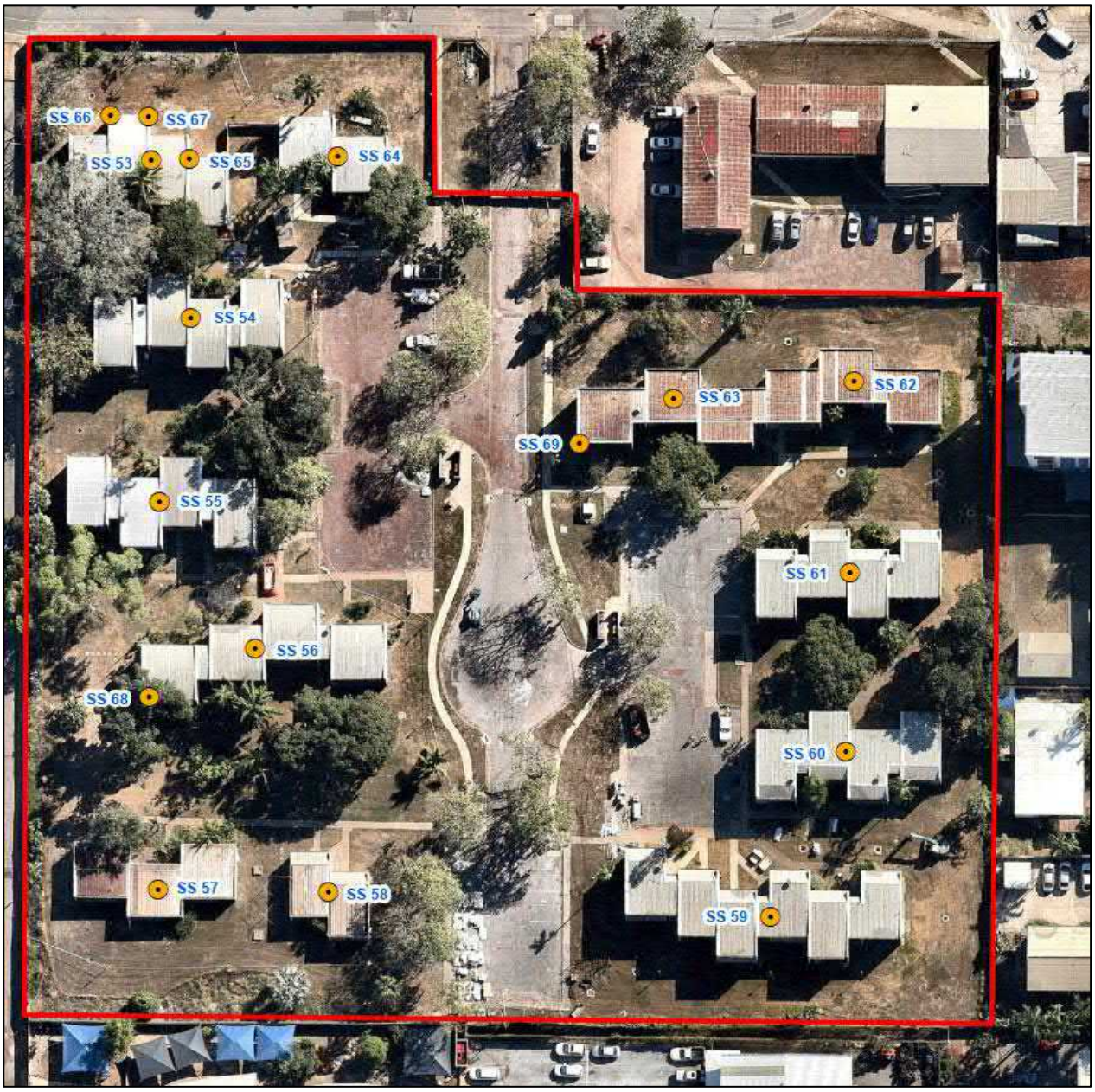


Figure 2: Sample Locations (OCP)

Delineation and additional testing for ACM, as presented on Figure 3 below:

- Additional test pitting at 21 locations (TP36 to TP56 inclusive) across the site to further assess the potential for ACM around locations where ACM was identified during previous investigations:
    - Previous location TP02 (June 2019) – TP36, TP37, TP38 and TP39.
    - Previous location TP20 (August 2019) – TP40, TP41 and TP42.
    - Previous location TP04 (June 2019) – TP43, TP44, TP45 and TP46.
    - Previous location TP17 (August 2019) – TP47, TP48, TP49, TP50 and TP51.
    - Previous location TP12 (August 2019) – TP52, TP53, TP54 and TP55.
    - Previous location TP11 (August 2019) – TP56.

Several of the test locations were not able to be excavated where originally proposed due to the presence of site infrastructure remaining (i.e. roads, etc) or the presence of the demolition waste stockpiles.

- An additional test location (TP57 in the eastern portion of the site for additional site coverage.
- Visual identification and soil screening of fill material for potential ACM (in bonded or friable form) and the collection and laboratory identification of ACM encountered.
- For the collection of screened soil samples for laboratory analysis of AF and FA.
- The collection and analysis for two samples of fibre cement sheet (FSC 01 and FSC 02) identified on the ground surface during the investigation.

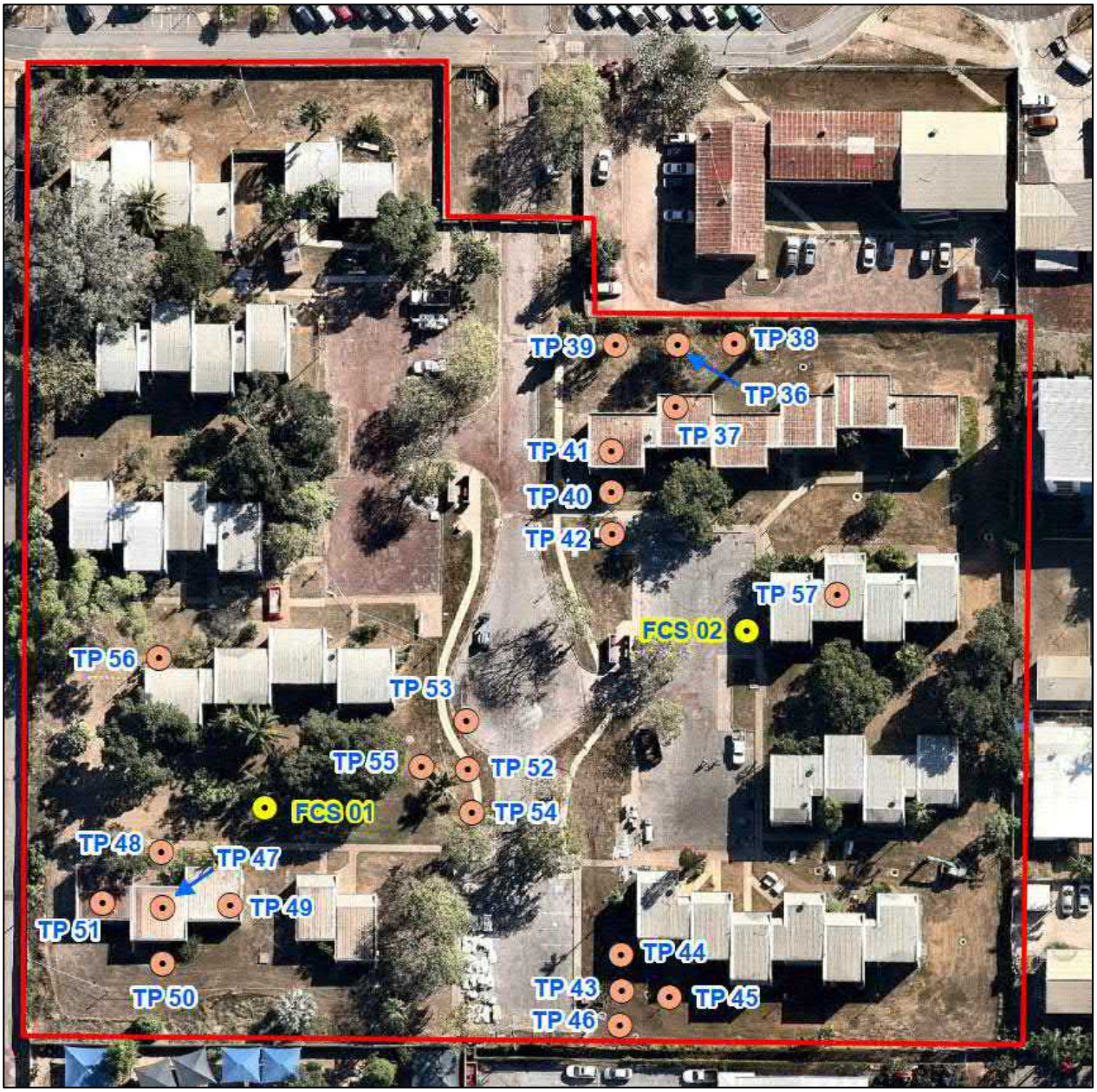
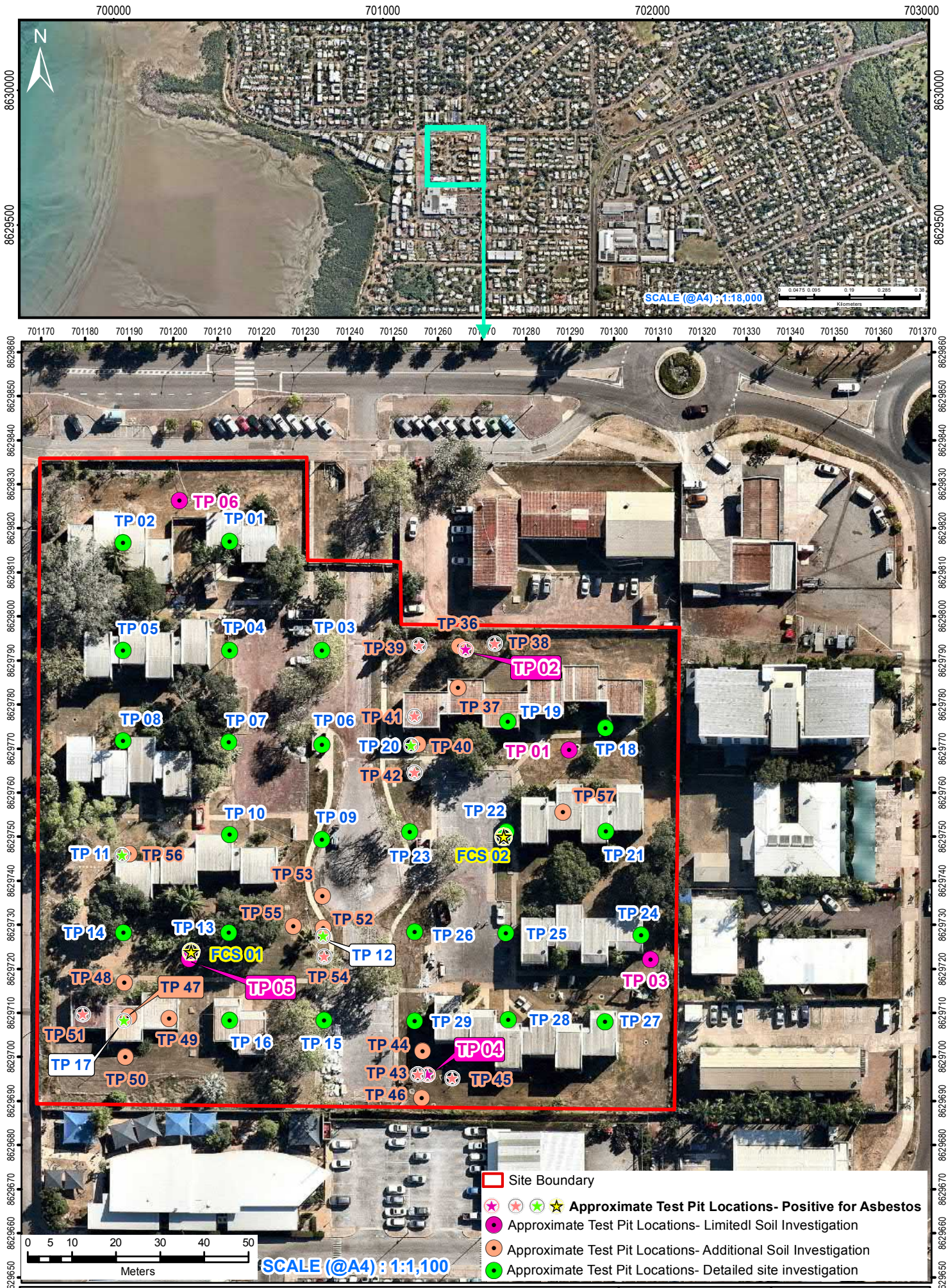


Figure 3: Test Pit Locations



Project: Soil Contamination Investigation – John Stokes Square, 47 Progress Drive, Nightcliff NT			Coordinate System: GDA_1994_MGA_Zone_52	GREENCAP
Figure4: Test Pit Locations	Job Ref: J163803	Date: October 2019	Author: Sam.K.	Checked: Stuart C.

No warranty is given in relation to the data (including accuracy, reliability, completeness or suitability) and accept no liability (including without limitation, liability in negligence) for any loss, damage or costs (including consequential damage) relating to any use of or reliance upon the data.Data must not be used for direct marketing or be used in breach of privacy laws, Nearmap imagery 13th June 2019.

5 SOIL INVESTIGATION RESULTS

5.1 Soil Conditions

The maximum depth of the investigation was 0.9 metres below ground level (m bgl). Soil conditions encountered were similar to those described in Greencap's September 2019 report (refer Section 3.2), with various inclusions of building rubble (concrete, PVC and plastics) were observed at several of the locations tested. In addition, various fragments of cement sheet were identified many of the locations tested. It is noted that not all the suspect material was confirmed to contain asbestos, as discussed further in Section 5.2.2. No stained or odorous soils were encountered in any of the sample. Test pit logs are presented in Appendix A.

5.2 Analytical Results

Chemical Results

A tabulated summary of the reported results is presented as Attachment 1 to this report. Details of the testing results are provided in the NATA test certificates presented in Appendix B.

Elevated concentrations of OCPs above the laboratory detection limits were identified in the majority of samples collected. Most of the reported results were below the adopted criteria with the exception of the following:

- Sample SS64 reported an elevated aldrin + dieldrin concentration of 8.61mg/kg, exceeding the adopted health criteria for standard residential land use of 6mg/kg. The reported result is below the adopted health criteria for high density residential, open space and commercial/industrial land use.
- Sample SS65_W(5), at a depth of 0.25m, reported an elevated aldrin + dieldrin concentration of 39.7mg/kg, exceeding the adopted health criteria for standard residential (6mg/kg), high density and open space land uses (both 10mg/kg). The reported result is below the adopted health criteria for commercial/industrial land use.
- Sample SS69_S(5), from the ground surface, reported an elevated aldrin + dieldrin concentration of 23.4mg/kg, exceeding the adopted health criteria for standard residential (6mg/kg), high density and open space land uses (both 10mg/kg). The reported result is below the adopted health criteria for commercial/industrial land use.

Asbestos

During the investigation, numerous fragments of suspected asbestos materials were identified during the bulk sampling and sieving. However, only fragments of suspect materials collected from the following test pits were confirmed to contain asbestos:

- TP38 (0.0-0.1m bgl) – fragments of asbestos fines identified during laboratory analysis of sub-sample.
- TP39 (0.0-0.1m bgl) – fragments of asbestos fines identified during laboratory analysis of sub-sample.
- TP40 (0.0-0.1m bgl) – fragments of cement sheet containing asbestos identified in bulk sample.
- TP42 (0.3-0.4m bgl) – fragments of cement sheet containing asbestos identified in bulk sample.
- TP42 (0.6-0.7m bgl) – fragments of cement sheet containing asbestos identified in bulk sample and fragments of asbestos fines identified during laboratory analysis of sub-sample.
- TP43 (0.0-0.1m bgl) – fragments of cement sheet containing asbestos identified in bulk sample.
- TP45 (0.1-0.2m bgl) – fragments of cement sheet containing asbestos identified in bulk sample.
- TP51 (0.0-0.05m bgl) – fragments of asbestos fines identified during laboratory analysis of sub-sample.
- TP54 (0.0-0.1m bgl) – fragments of cement sheet containing asbestos identified in bulk sample and fragments of asbestos fines identified during laboratory analysis of sub-sample.

The fragments confirmed as ACM were weighed and the concentration of asbestos material in soil calculated. The results of the asbestos in soil calculations are presented below in Table 2.

Table 2: Asbestos in Soil Results

Test Pit #	Sample Depth (m)	ACM identified?	Weight of bonded ACM in sample (g)	Weight of asbestos (g)*	Weight of FA and AF (g)	Bonded Asbestos in Soil (w/w %)**	FA & AF in Soil (w/w %)***
TP36	0.0-0.1	No	-	-	-	-	ND
TP37	0.0-0.1	No	-	-	-	-	ND
TP38	0.0-0.1	Yes	-	-	0.011	-	0.0012
TP39	0.0-0.1	Yes	-	-	0.094	-	0.01
TP40	0.0-0.1	Yes	8.6	2.58	-	0.017	ND
TP41	0.0-0.1	No	-	-	-	-	ND
TP42	0.3-0.4	Yes	117.5	35.25	-	0.235	ND
	0.6-0.7	Yes	5.7	1.71	0.049	0.011	0.0064
TP43	0.0-01	Yes	1.7	0.51	-	0.003	ND
TP44	0.0-0.1	No	-	-	-	-	ND
TP45	0.1-0.2	Yes	5.9	1.77	-	0.012	ND
	0.2-0.3	No	-	-	-	-	ND
	0.4-0.5	No	-	-	-	-	ND
TP46	0.0-0.1	No	-	-	-	-	ND
	0.1-0.2	No	-	-	-	-	ND
TP47	0.0-0.1	No	-	-	-	-	ND
	0.5-0.6	No	-	-	-	-	ND
TP48	0.0-0.1	No	-	-	-	-	ND
TP49	0.1-0.2	No	-	-	-	-	ND
	0.4-0.5	No	-	-	-	-	ND
TP50	0.0-0.1	No	-	-	-	-	ND
	0.2-0.3	No	-	-	-	-	ND
TP51	0.0-0.05	Yes	-	-	0.0017		0.00002
	0.1-0.2	No	-	-	-	-	ND
TP52	0.0-0.05	No	-	-	-	-	ND
	0.1-0.2	No	-	-	-	-	ND
TP53	0.0-0.05	No	-	-	-	-	ND
	0.1-0.2	No	-	-	-	-	ND
TP54	0.0-0.1	Yes	7.1	2.13	0.177	0.014	0.021
TP55	0.05-0.1	No	-	-	-	-	ND
	0.15-0.25	No	-	-	-	-	ND
TP56	0.0-0.05	No	-	-	-	-	ND
	0.1-0.2	No	-	-	-	-	ND
TP57	0.0-0.1	No	-	-	-	-	ND

* Sample has an assumed asbestos content of 30% based on laboratory assessment.

** Weight of all samples is based on a volume of 10L per sample, and an average bulk density based on the results of previous investigations of 1.5g/cm3

*** Based on weight of fines compared to weight of sub-sample (generally just under 1kg, refer attached laboratory certificates).

ND = Not detected.

Shaded cell indicates result exceeds one or more of the adopted criteria.

The concentrations of bonded ACM calculated in the samples collected from TP40 (0.0-0.1m bgl), TP42 (0.3-0.4m bgl), TP42 (0.6-0.7m bgl), TP45 (0.1-0.2m bgl) and TP54 (0.0-0.1m bgl) exceeded the health based assessment criteria for residential land use. Most of the reported results did not exceed the health criteria for other land uses considered, with the exception of the concentration from TP42 (0.3-0.4m bgl) which exceeded all relevant health based criteria.

Sub-samples of soil were collected from the 10 L (7 x 7 mm) screened samples and analysed for AF and/or FA in accordance with Australian Standard AS4964-2004: '*Method for the Qualitative Identification of Asbestos in Bulk Samples*'. Samples collected from TP38 (0.0-0.1m bgl), TP39 (0.0-0.1m bgl), TP42 (0.6-0.7m bgl) and TP54 (0.0-0.1m bgl) reported friable asbestos at estimated concentrations greater than the health-based assessment criteria for all land use types. The limitations of the analytical techniques should be considered with respect to these concentrations.

In addition, two samples of suspect material were collected during the field investigations from the ground surface (approximately 15m east of TP48 and approximately 10m west of TP57). Both samples were analysed and confirmed to contain asbestos.

Details of the asbestos identification and asbestos in soil test results are provided in the NATA-accredited certificates of analysis provided in Appendix A.

Additional Soil Investigation

Option Group Pty Ltd t/a NTEX

John Stokes Square, 47 Progress Drive, Nightcliff NT

Attachment 1: Soil Analytical Results Tables

				OCP		Halogenated Benzenes	Organochlorine Pesticides																						
				Vic EPA IWRG 621 OCP (Total)*	Vic EPA IWRG 621 Other OCP (Total	Hexachlorobenzene	4,4-DDE	a-BHC	Aldrin	Aldrin + Dieldrin	b-BHC	chlordane	d-BHC	DDD	DDT	DDT+DDE+DDD	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulphate	Endrin	Endrin aldehyde	Endrin ketone	g-BHC (Lindane)	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
				MG/KG	MG/KG	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.1	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	1
NEPM 2013 Table 1A(1) HILs Res A Soil						10				6		50				240		270			10				6		300		20
NEPM 2013 Table 1A(1) HILs Res B Soil						15				10		90				600		400			20				10		500		30
NEPM 2013 Table 1A(1) HILs Rec C Soil						10				10		70				400		340			20				10		400		30
NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil						80				45		530				3600		2000			100				50		2500		160
LocCode	Field_ID	Sampled_Date-Time	Lab_Report_Number																										
SS53	SS53	25/09/2019	680009	0.21	<0.1	<0.05	<0.05	<0.05	<0.05	0.21	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS54	SS54	25/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS55	SS55	25/09/2019	680009	2.23	<0.1	<0.05	<0.05	<0.05	0.93	2.23	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	1.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS56	SS56	25/09/2019	680009	0.44	<0.1	<0.05	<0.05	<0.05	0.05	0.44	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.39	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS57	SS57	25/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS58	SS58	25/09/2019	680009	2.56	0.2	<0.05	<0.05	<0.05	0.06	2.36	<0.05	0.2	<0.05	<0.05	<0.05	<0.05	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS59	SS59	25/09/2019	680009	2.18	2.1	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	1.9	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.2	<0.05	<0.05	<1
SS60	SS60	25/09/2019	680009	4.07	1.93	<0.05	<0.05	<0.05	0.24	2.14	<0.05	1.7	<0.05	<0.05	<0.05	<0.05	1.9	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.23	<0.05	<0.05	<1
SS61	SS61	25/09/2019	680009	0.24	<0.1	<0.05	<0.05	<0.05	<0.05	0.24	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.24	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS62	SS62	25/09/2019	680009	0.67	0.67	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<1
SS63	SS63	25/09/2019	680009	0.87	0.87	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<1
SS64	SS64	27/09/2019	680009	8.87	0.26	<0.05	<0.05	<0.05	0.81	8.61	<0.05	0.1	<0.05	<0.05	<0.05	<0.05	7.8	<0.05	<0.05	<0.05	<0.05	<0.05	0.12	<0.05	<0.05	0.16	<0.05	<0.05	<1
SS65	SS65_0.0	26/09/2019	680009	4.45	<0.1	<0.05	<0.05	<0.05	0.25	4.45	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	4.2	<0.05	<0.05	<0.05	<0.05	<0.05	0.07	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS65	SS65_0.25	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS65	SS65_E(5)_0.0	26/09/2019	680009	1.5	<0.1	<0.05	<0.05	<0.05	0.1	1.5	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	1.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS65	SS65_E(5)_0.25	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS65	SS65_N(5)_0.0	26/09/2019	680009	1.6	<0.1	<0.05	<0.05	<0.05	0.1	1.6	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	1.5	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS65	SS65_N(5)_0.5	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS65	SS65_S(5)_0.0	26/09/2019	680009	2.4	0.1	<0.05	<0.05	<0.05	0.2	2.3	<0.05	0.1	<0.05	<0.05	<0.05	<0.05	2.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS65	SS65_S(5)_0.5	26/09/2019	680009	1.2	0.1	<0.05	<0.05	<0.05	<0.05	1.1	<0.05	0.1	<0.05	<0.05	<0.05	<0.05	1.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS65	SS65_W(5)_0.0	26/09/2019	680009	3.83	0.53	<0.05	<0.05	<0.05	0.1	3.3	<0.05	0.4	<0.05	<0.05	<0.05	<0.05	3.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.13	<0.05	<0.05	<1
SS65	SS65_W(5)_0.25	26/09/2019	680009	42.35	2.57	<0.05	0.08	<0.05	3.7	39.7	<0.05	2	<0.05	<0.05	<0.05	0.08	36	<0.05	<0.05	<0.05	0.27	<0.05	0.54	<0.05	<0.05	0.3	<0.05	<0.05	<1
SS66	SS66_0.0	26/09/2019	680009	2.72	0.1	<0.05	<0.05	<0.05	0.32	2.62	<0.05	0.1	<0.05	<0.05	<0.05	<0.05	2.3	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS66	SS66_0.50	26/09/2019	680009	0.85	0.7	<0.05	<0.05	<0.05	<0.05	0.15	<0.05	0.7	<0.05	<0.05	<0.05	<0.05	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS66	SS66_E(5)_0.0	26/09/2019	680009	1.81	0.1	<0.05	<0.05	<0.05	0.11	1.71	<0.05	0.1	<0.05	<0.05	<0.05	<0.05	1.6	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS66	SS66_E(5)_0.5	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS66	SS66_N(5)_0.0	26/09/2019	680009	0.66	0.2	<0.05	<0.05	<0.05	0.05	0.46	<0.05	0.2	<0.05	<0.05	<0.05	<0.05	0.41	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS66	SS66_N(5)_0.25	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS66	SS66_S(5)_0.0	26/09/2019	680009	2.4	<0.1	<0.05	<0.05	<0.05	0.4	2.4	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS66	SS66_S(5)_0.25	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS67	SS67_0.0	26/09/2019	680009	0.45	<0.1	<0.05	<0.05	<0.05	<0.05	0.45	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.45	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS67	SS67_0.25	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS67	SS67_E(5)_0.0	26/09/2019	680009	1.48	<0.1	<0.05	<0.05	<0.05	0.08	1.48	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	1.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS67	SS67_E(5)_0.25	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS67	SS67_N(5)_0.0	26/09/2019	680009	1.67	0.63	<0.05	<0.05	<0.05	0.24	1.04	<0.05	0.5	<0.05	<0.05	<0.05	<0.05	0.8	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.05	0.08	<0.05	<0.05	<1
SS67	SS67_N(5)_0.5	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS67	SS67_S(5)_0.0	26/09/2019	680009	1.7	<0.1	<0.05	<0.05	<0.05	0.5	1.7	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	1.2	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS67	SS67_S(5)_0.5	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS68	SS68_0.0	27/09/2019	680009	4.58	4.33	<0.05	<0.05	<0.05	<0.05	0.25	<0.05	3.1	<0.05	<0.05	<0.05	<0.05	0.25	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	1.1	0.13	<0.05	<0.05	<1
SS68	SS68_0.5	27/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS68	SS68_E(5)_0.0	27/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS68	SS68_E(5)_0.25	27/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS68	SS68_N(5)_0.0	27/09/2019	680009	2.07	1	<0.05	<0.05	<0.05	0.07	1.07	<0.05	0.6	<0.05	<0.05	<0.05	<0.05	1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.4	<0.05	<0.05	<1
SS68	SS68_N(5)_0.5	27/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS68	SS68_S(5)_0.0	27/09/2019	680009	0.14	<0.1	<0.05	<0.05	<0.05	<0.05	0.14	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS68	SS68_S(5)_0.5	27/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS68	SS68_W(5)_0.0	27/09/2019	680009	0.72	0.48	<0.05	<0.05	<0.05	<0.05	0.24	<0.05	0.4	<0.05	<0.05	<0.05	<0.05	0.24	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.08	<0.05	<0.05	<1
SS68	SS68_W(5)_0.25	27/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS69	SS69_0.0	26/09/2019	680009	1.89	1.51	<0.05	<0.05	<0.05	0.06	0.38	<0.05	1.2	<0.05	<0.05	<0.05	<0.05	0.32	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.31	<0.05	<0.05	<1
SS69	SS69_0.5	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS69	SS69_E(5)_0.0	27/09/2019	680009	3.6	0.1	<0.05	<0.05	<0.05	2.1	3.5	<0.05	0.1	<0.05	<0.05	<0.05	<0.05	1.4	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS69	SS69_E(5)_0.25	28/09/2019	680009	4	0.2	<0.05	<0.05	<0.05	1.1	3.8	<0.05	0.2	<0.05	<0.05	<0.05	<0.05	2.7	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS69	SS69_N(5)_0.0	26/09/2019	680009	9.64	9.16	<0.05	<0.05	<0.05	0.21	0.48	<0.05	7.9	<0.05	<0.05	<0.05	<0.05	0.27	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	1.2	<0.05	<1
SS69	SS69_N(5)_0.5	26/09/2019	680009	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS69	SS69_S(5)_0.0	26/09/2019	680009	25.46	2.06	<0.05	<0.05	<0.05	16	23.4	<0.05	1.7	<0.05	<0.05	<0.05	<0.05	7.4	<0.05	<0.05	<0.05	0.14	<0.05	<0.05	0.36	<0.05	<1			
SS69	SS69_S(5)_0.5	26/09/2019	680009	0.4	0.2	<0.05	<0.05	<0.05	0.06	0.2	<0.05	0.2	<0.05	<0.05	<0.05	<0.05	0.14	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<1
SS69	SS69_W(5)_0.0	26/09/2019	680009	5.79	2.59	<0.05	<0.05	<0.05	2.1	3.2	<0.05	2.2	<0.05	<0.05	<0.05	<0.05	1.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.39	<0.05	<0.05	<1
SS69	SS69_W(5)_0.25	26/09/2019	680009	12.1	11.58	<0.05	<0.05	<0.05	0.37	0.52	<0.05	11	<0.05	<0.05	<0.05	<0.05	0.15	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.14	0.44	<0.05	<0.05	<1

Soil Duplicate Summary
John Stokes Square

Greencap Ref: J163803

Field Duplicates (SOIL)	Lab Report Number	680009	680009		680009	680009		680009	680009		680009	680009		680009	ES1931738		680009	ES1931738		680009	ES1931738		680009	ES1931738	
Filter: Lab_Report_Nu	Field ID	SS65_0.0	QA01	RPD	SS66_0.0	QA03	RPD	SS67_0.0	QA05	RPD	SS68_0.0	QA07	RPD	SS65_0.0	QA02	RPD	SS66_0.0	QA04	RPD	SS67_0.0	QA06	RPD	SS68_0.0	QA08	RPD
	Sampled Date/Time	26/09/2019	26/09/2019		26/09/2019	26/09/2019		26/09/2019	26/09/2019		27/09/2019	27/09/2019		26/09/2019	26/09/2019		26/09/2019	26/09/2019		26/09/2019	26/09/2019		27/09/2019	27/09/2019	
Chem_Gr	ChemNam	Units	EQL																						
OCP	Vic EPA IW	mg/kg	0.1	**4.45**	**3.21**	**32**	2.72	3.3	19	0.45	0.38	17	**4.58**	**<0.1**	**191**	4.45			2.72			0.45			4.58		
	Vic EPA IW	mg/kg	0.1	<0.1	0.1	0	**0.1**	**0.3**	**100**	<0.1	<0.1	0	**4.33**	**<0.1**	**191**	<0.1			0.1			<0.1			4.33		
Inorganics	Moisture C	%	1	4.6	5.1	10	1.3	2.2	51	4.4	5.1	15	**3.1**	**7.5**	**83**	4.6			1.3			4.4			3.1		
Halogenat	Hexachlor	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
ed Benzenes																											
Organochl	4,4-DDE	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	a-BHC	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	Aldrin	mg/kg	0.05	0.25	0.21	17	0.32	0.3	6	<0.05	<0.05	0	<0.05	<0.05	0	0.25	0.13	63	0.32	0.16	67	<0.05	<0.05	0	<0.05	<0.05	0
	Aldrin + Di	mg/kg	0.05	**4.45**	**3.11**	**35**	2.62	3.0	14	0.45	0.38	17	**0.25**	**<0.05**	**133**	**4.45**	**1.81**	**84**	**2.62**	**1.59**	**49**	0.45	0.27	50	**0.25**	**<0.05**	**133**
	b-BHC	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	chlordane	mg/kg	0.1 (Primary): 0.05 (Inter	<0.1	0.1	0	**0.1**	**0.3**	**100**	<0.1	<0.1	0	**3.1**	**<0.1**	**188**	<0.1	0.07	0	0.1	0.08	22	<0.1	<0.05	0	**3.1**	**<0.05**	**194**
	d-BHC	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	DDD	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	DDT	mg/kg	0.05 (Primary): 0.2 (Inter	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.2	0	<0.05	<0.2	0	<0.05	<0.2	0
	DDT+DDE	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	Dieldrin	mg/kg	0.05	**4.2**	**2.9**	**37**	2.3	2.7	16	0.45	0.38	17	**0.25**	**<0.05**	**133**	**4.2**	**1.68**	**86**	**2.3**	**1.43**	**47**	0.45	0.27	50	**0.25**	**<0.05**	**133**
	Endosulfar	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	Endosulfar	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	Endosulfar	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	Endrin	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	Endrin alde	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	Endrin ket	mg/kg	0.05	0.07	<0.05	33	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	0.07	<0.05	33	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	g-BHC (Lin	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0
	Heptachlor	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	**1.1**	**<0.05**	**183**	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	**1.1**	**<0.05**	**183**
	Heptachlor	mg/kg	0.05	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	**0.13**	**<0.05**	**89**	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	**0.13**	**<0.05**	**89**
	Methoxych	mg/kg	0.05 (Primary): 0.2 (Inter	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.05	0	<0.05	<0.2	0	<0.05	<0.2	0	<0.05	<0.2	0	<0.05	<0.2	0
	Toxaphene	mg/kg	1	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0	<1.0	0	<1.0			<1.0			<1.0			<1.0		

*RPDs have only been considered where a concentration is greater than 1 times the EQL.

**High RPDs are in bold (Acceptable RPDs for each EQL multiplier range are: 80 (1-10 x EQL); 50 (10-30 x EQL); 30 (> 30 x EQL))

***Interlab Duplicates are matched on a per compound basis as methods vary between laboratories. Any methods in the row header relate to those used in the primary laboratory

Blanks Results Summary
John Stokes Square

Greencap Ref: J163803

Field Blanks (WATER)
Filter: Lab_Report_Number in('680009')

Lab Report Number	680009	680009	680009
Field ID	FB01	RB01	TB01
Sampled_Date/Time	26/09/2019	26/09/2019	26/09/2019
Sample Type	Field_B	Rinsate	Trip_B

Chem_Group	**ChemName**	**Units**	**EQL**			
Halogenated Benzenes	Hexachlorobenzene	µg/l	0.1	<0.1	<0.1	<0.1
Organochlorine Pesticides	4,4-DDE	µg/l	0.1	<0.1	<0.1	<0.1
	a-BHC	µg/l	0.1	<0.1	<0.1	<0.1
	Aldrin	µg/l	0.1	<0.1	<0.1	<0.1
	Aldrin + Dieldrin	µg/l	0.1	<0.1	<0.1	<0.1
	b-BHC	µg/l	0.1	<0.1	<0.1	<0.1
	chlordane	µg/l	1	<1	<1	<1
	d-BHC	µg/l	0.1	<0.1	<0.1	<0.1
	DDD	µg/l	0.1	<0.1	<0.1	<0.1
	DDT	µg/l	0.1	<0.1	<0.1	<0.1
	DDT+DDE+DDD	µg/l	0.1	<0.1	<0.1	<0.1
	Dieldrin	µg/l	0.1	<0.1	<0.1	<0.1
	Endosulfan I	µg/l	0.1	<0.1	<0.1	<0.1
	Endosulfan II	µg/l	0.1	<0.1	<0.1	<0.1
	Endosulfan sulphate	µg/l	0.1	<0.1	<0.1	<0.1
	Endrin	µg/l	0.1	<0.1	<0.1	<0.1
	Endrin aldehyde	µg/l	0.1	<0.1	<0.1	<0.1
	Endrin ketone	µg/l	0.1	<0.1	<0.1	<0.1
	g-BHC (Lindane)	µg/l	0.1	<0.1	<0.1	<0.1
	Heptachlor	µg/l	0.1	<0.1	<0.1	<0.1
	Heptachlor epoxide	µg/l	0.1	<0.1	<0.1	<0.1
	Methoxychlor	µg/l	0.1	<0.1	<0.1	<0.1
	Toxaphene	mg/l	0.01	<0.01	<0.01	<0.01

Detailed Site Investigation (February 2020; Agon)

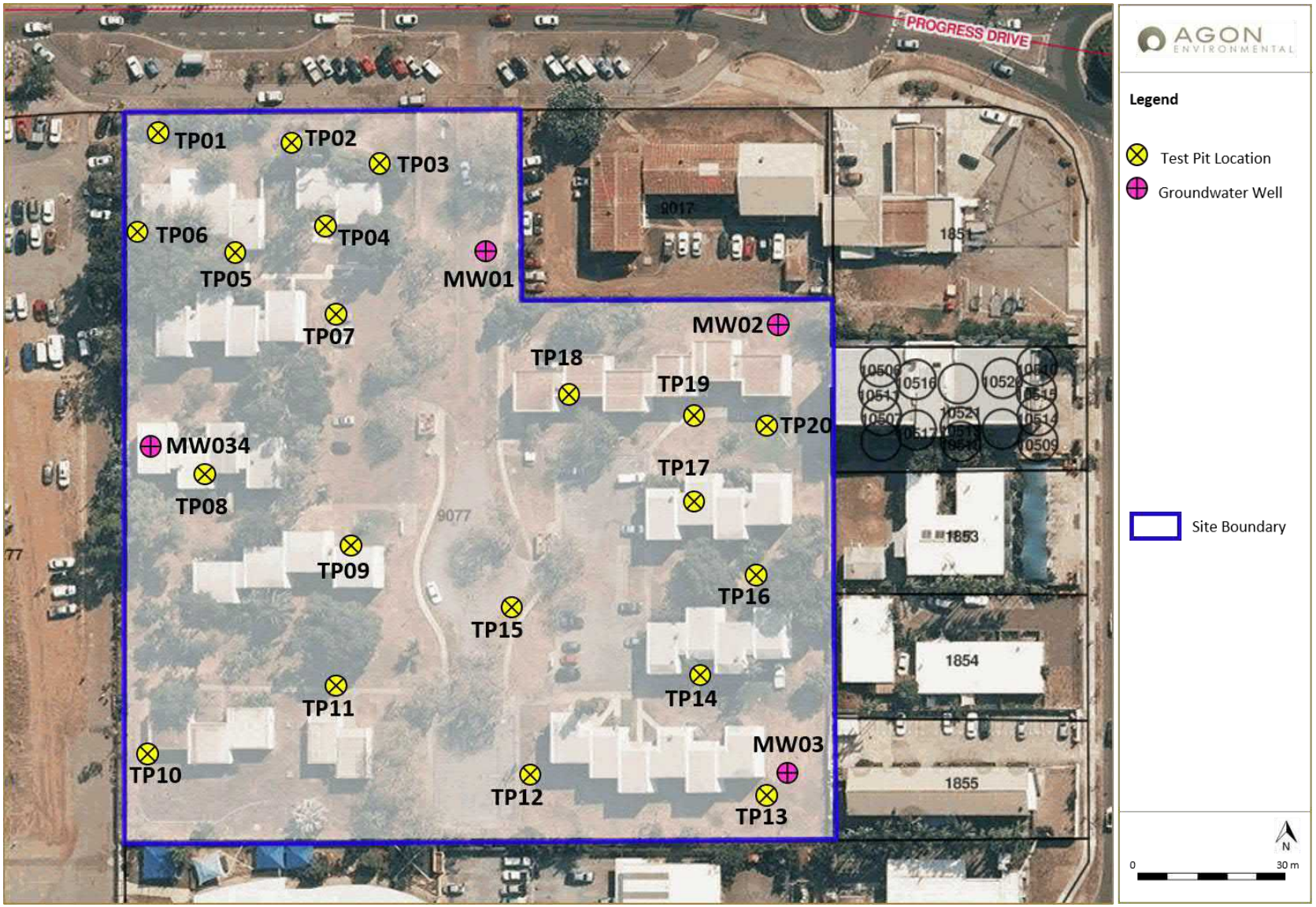


Figure 9: Agon Sample Locations
Source: NR Maps

10.0 SOIL INVESTIGATION RESULTS

10.1 Soil Conditions

Subsurface soil conditions consist of fill materials typically comprising brown sandy clay and clayey silty sand with minor gravel extending to a maximum depth of 800 mm. Inclusions of building rubble (concrete fragments, bitumen fragments, and PVC) were encountered across the surface of the site and within the shallow fill material.

Surface fill materials were overlying natural material consisting of brown and red brown clayey sandy gravel and stiff to very stiff red brown sandy clay with trace gravels. Areas of surface fill were also observed to be reworked natural soils disturbed during the demolition of the former site buildings.

No potential asbestos containing materials were observed during the intrusive investigations.

10.2 Soil Analytical Results

A tabulated summary of reported results (and adopted assessment criteria) is presented in Table 1G, Appendix G. Laboratory certificate and chain of custody documentation is provided in Appendix H.

All concentrations of analytes in the natural soils were below the adopted assessment criteria.

All analytes from soil analysis of fill material were below the NEPM Commercial and Industrial HILs, HSLs, EILs and ESLs assessment criteria.

The following analytes exceeded the Residential NEPM HIL and EIL criteria:

- OCPs Aldrin + Dieldrin, in sample 09_0_0.1 (TP09) reported a concentration of 7.5 mg/kg exceeding HIL A criterion of 6 mg/kg. The sample immediately below this (09_1_0.7) recorded a concentration of Aldrin + Dieldrin below the HIL criterion. The soil has subsequently been place in the commercial area; and
- Nickel was detected in excess of the NEPM EIL criterion (15 mg/kg) in 3 of the 34 samples analysed, reporting a maximum concentration of 19 mg/kg in sample 04_0_0.1 (TP04). The sample below this (04_1_0.6) recorded a concentration of nickel below the EIL criterion.

11.0 GROUNDWATER INVESTIGATION RESULTS

11.1 Groundwater Conditions

The Standing Water Levels (SWLs), Total Depth and observations were recorded during the groundwater investigation and are summarised below in

Table 9: Groundwater Conditions

Well ID	Date	SWL (m TOC)	Total Depth (m TOC)	Observations
MW01	21-01-2020	3.72	9.56	Light brown turbid becoming slightly turbid. No odour. No sheen.
MW02	21-01-2020	3.79	9.55	
MW03	22-01-2020	2.69	9.55	
MW04	22-01-2020	3.51	9.57	

11.2 Groundwater Parameters

Groundwater purge details are presented in Appendix F. Final groundwater parameters measured during purging the wells just prior to sampling are summarised in Table 10.

Table 10: Groundwater Parameters

Well ID	Date	Volume (L)	DO (ppm)	EC (µS/cm)	pH	Redox (mV)	Temperature (°C)
MW01	21-01-2020	6	2.96	880	5.34	126.8	30.6
MW02	21-01-2020	8.0	2.68	203.1	5.66	123.4	30.1
MW03	22-01-2020	7.8	5.77	166.1	4.69	215.0	30.1
MW04	22-01-2020	8.5	3.03	191.8	4.42	318.0	30.2

Notes: DO = Dissolved Oxygen, EC = Electrical Conductivity, Redox = Reduction / Oxidisation Potential

11.3 Groundwater Analytical Results

Reported concentrations of TRH, Ether Oxygenates, BTEX and Halogenated Volatile Organics were below the adopted assessment criteria.

Minor concentrations of chloroform and TRH fractions were detected in groundwater. It is noted that silica gel clean-up was conducted on the highest results in MW01. The silica gel clean-up process removes naturally occurring hydrocarbons which can be present from vegetable matter, bacterial activity or from mangrove environs. The results from MW01 following the clean up were all below the limit of laboratory reporting.

Concentrations of some heavy metals exceeded the respective ADWG 2018 Health and Aesthetic, ANZECC 2000 Marine, Freshwater, Recreational and Irrigation and the WHO DQQG criteria.

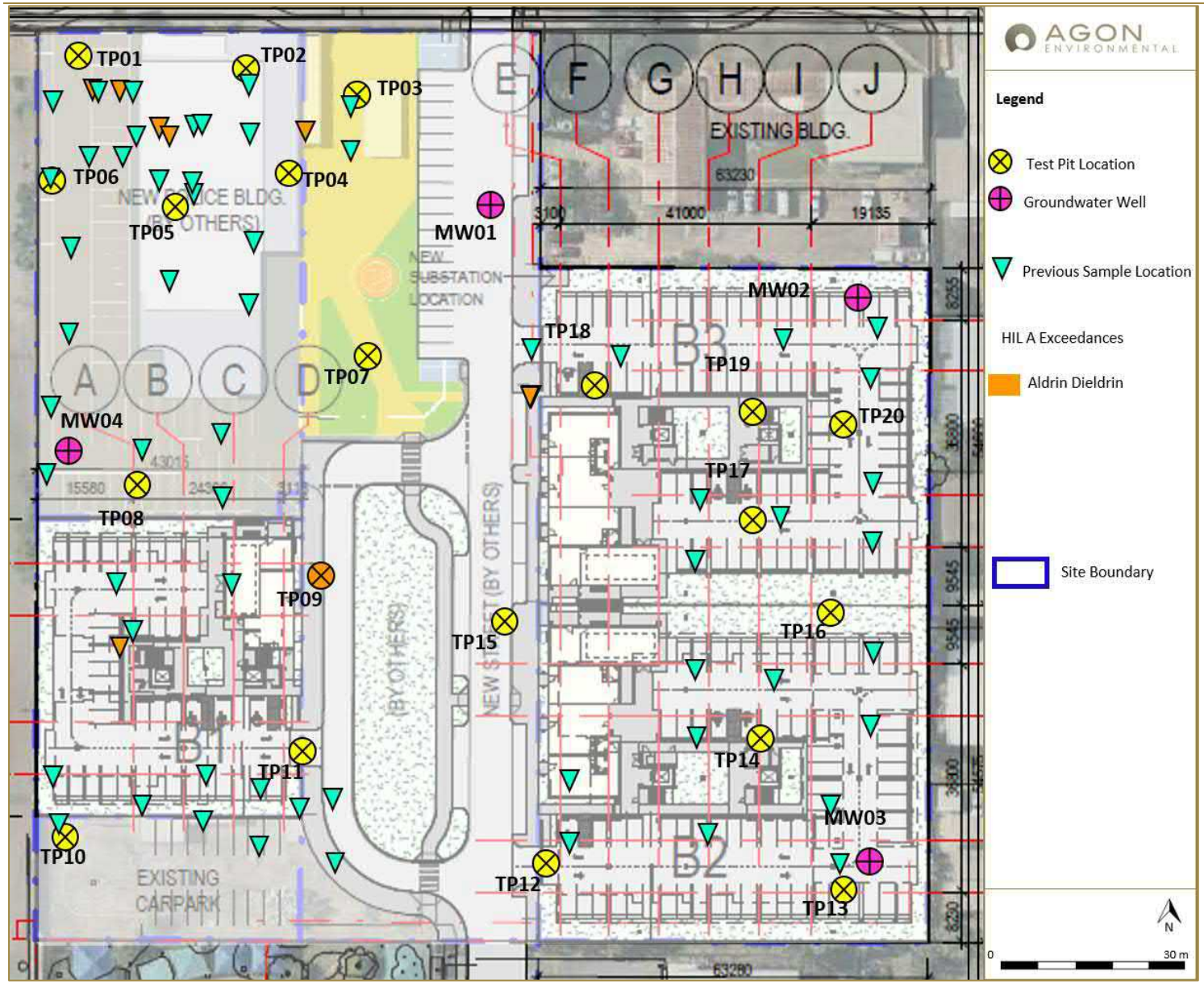


Figure 10: Soil OCP Exceedances

Source: NR Maps; Extracts Buildings Plans

APPENDIX G: TABULATED ANALYTICAL DATA

AGON ENVIRONMENTAL

APPENDIX G
Laboratory Analysis Results

JF1006 John Stokes Square DSI					Metals													
					Cobalt	Arsenic	Cadmium	Beryllium	Boron	Chromium (III+VI)	Chromium (hexavalent)	Copper	Lead	Molybdenum	Manganese	Mercury	Nickel	Selenium	Silver	Iron	Zinc
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					5	2	0.4	2	10	5	1	5	5	5	5	0.1	5	2	0.2	20	5
NEPM 2013 HILs Res A Soil					100	100	20	60	4,500		100	6,000	300		3,800	40	400	200			7,400
NEPM 2013 HILs Res B Soil					600	500	150	90	40,000		500	30,000	1,200		14,000	120	1,200	1,400			60,000
NEPM 2013 HILs Commercial/Industrial D Soil					4000	3000	900	500	300000		3600	240000	1500		60000	730	6000	10000			400000
NEPM 2013 Res A/B Soil HSL for Vapour Intrusion																					
Sand 0-1m																					
Sand 1-2m																					
Sand 2-4m																					
NEPM 2013 ESLs for Urban Res, Coarse Soil																					
0-2m																					
Prelim EILs Urban Res/ Open Public Spaces						100				570		45	1100				15				220
Prelim EILs Commercial/ Industrial						160				940		55	1800				20				300
Field ID	**Location**	**Lab Report**	**Date**																		
01_0_0.15	**TP01**	688422	12/11/2019			12	<0.4	<2			<1		31	<5		<0.1	15	<2	<0.2		
02_0_0.1	**TP02**	688422	12/11/2019			11	<0.4			120		13	17			<0.1	10				20
02_1_0.8	**TP02**	688422	12/11/2019		<5	15	<0.4	<2	<10	300	<1	7.2	17		44	<0.1	8.9	<2			<5
03_0_0.1	**TP03**	688422	12/11/2019			12	<0.4			180		9.2	15			<0.1	11				22
03_1_0.8	**TP03**	688422	12/11/2019																	100,000	
04_0_0.1	**TP04**	688422	12/11/2019		5.2	12	<0.4	<2	<10	160	<1	13	17		270	<0.1	19	<2			20
04_1_0.6	**TP04**	692905	12/11/2019														13				
05_0_0.1	**TP05**	688422	12/11/2019			12	<0.4			110		9.5	14			<0.1	8.2				29
05_1_0.72	**TP05**	688422	12/11/2019		<5	17	<0.4	<2	<10	180	<1	7.4	11		40	<0.1	<5	<2			<5
06_0_0.1	**TP06**	688422	12/11/2019		<5	19	<0.4	<2	<10	230	<1	12	25		150	<0.1	11	<2			40
06_1_1.2	**TP06**	688422	12/11/2019			20	<0.4			290		10	14			<0.1	12				5.4
07_0_0.1	**TP07**	688422	12/11/2019			24	<0.4			160		<5	17			<0.1	7.0				5.6
08_0_0.1	**TP08**	688422	12/11/2019			15	<0.4	<2			<1		20	<5		<0.1	8.2	<2	<0.2		
09_0_0.1	**TP09**	688422	12/11/2019		<5	12	<0.4	<2	<10	160	<1	10	13		92	<0.1	7.7	<2			21
09_1_07	**TP09**	692905	12/11/2019																		
10_0_0.1	**TP10**	688422	12/11/2019			12	<0.4			200		7.6	14			<0.1	8.9				68
10_1_0.7	**TP10**	688422	12/11/2019			21	<0.4	<2			<1		19	7.0		<0.1	10	<2	<0.2		
11_0_0.2	**TP11**	688422	12/11/2019			14	<0.4			140		15	19			<0.1	7.8				86
11_1_0.8	**TP11**	688422	12/11/2019																	170,000	
12_0_0.1	**TP12**	688422	12/11/2019		<5	14	<0.4	<2	<10	200	<1	8.8	16		110	<0.1	9.7	<2			17
13_0_0.1	**TP13**	688422	12/11/2019			7.5	<0.4	<2			<1		15	<5		<0.1	5.2	<2	<0.2		
13_1_0.6	**TP13**	688422	12/11/2019			24	<0.4			250		9.3	20			<0.1	13				5.3
14_0_0.1	**TP14**	688422	12/11/2019		<5	14	<0.4	<2	<10	140	<1	8.3	15		61	<0.1	6.6	<2			16
14_1_0.6	**TP14**	688422	12/11/2019			24	<0.4			270		7.2	19			<0.1	11				<5
15_0_0.1	**TP15**	688422	12/11/2019			18	<0.4			180		5.8	16			<0.1	6.9				11
15_1_1.0	**TP15**	688422	12/11/2019			18	<0.4			260		7.5	19			<0.1	11				5.9
16_0_0.1	**TP16**	688422	12/11/2019		<5	13	<0.4	<2	<10	180	<1	7.9	19		76	<0.1	7.3	<2			70
16_1_1.0	**TP16**	688422	12/11/2019																	170,000	
17_0_0.2	**TP17**	688422	12/11/2019			18	<0.4	<2			<1		16	<5		<0.1	11	<2	<0.2		
18_0_0.1	**TP18**	688422	12/11/2019			11	<0.4			100		20	16			<0.1	11				54
18_1_1.0	**TP18**	688422	12/11/2019																	180,000	
19_0_0.1	**TP19**	688422	12/11/2019			9.9	<0.4			130		12	14			<0.1	16				9.9
19_1_0.7	**TP19**	688422	12/11/2019		<5	17	<0.4	<2	<10	220	<1	10	16		46	<0.1	13	<2			8.8
20_0_0.1	**TP20**	688422	12/11/2019		<5	6.5	<0.4	<2	<10	67	<1	10	10		56	<0.1	9.0	<2			24
20_1_0.8	**TP20**	688422	12/11/2019			18	<0.4			240		10	17			<0.1	13				8.6
MW01_4M	**MW01**	694532	18/12/2019										6.6								
MW01_5M	**MW01**	694532	18/12/2019										<5								
MW01_6M	**MW01**	694532	18/12/2019										6.2								
MW02_4M	**MW02**	694532	18/12/2019										<5								
MW02_5M	**MW02**	694532	18/12/2019										<5								
MW03_4M	**MW03**	694532	18/12/2019										6.4								
MW03_5M	**MW03**	694532	18/12/2019										7.4								
MW04_4M	**MW04**	694532	18/12/2019										8.1								
MW04_5M	**MW04**	694532	18/12/2019										8.9								
MW04_6M	**MW04**	694532	18/12/2019										<5								

AGON ENVIRONMENTAL

APPENDIX G
Laboratory Analysis Results

JF1006 John Stokes Square DSI	PAH																								
	Benzo(a)pyrene TEQ calc (Zero)	Benzo(b+j)fluoranthene	1-Chloronaphthalene	2-chloronaphthalene	2-methylnaphthalene	3-methylcholanthrene	7,12-dimethylbenz(a)anthracene	Benzo(k)fluoranthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Acenaphthene	Naphthalene	Benzo(a)pyrene TEQ (LOR)	Benzo(a)pyrene TEQ calc (Half)	Benzo(a) pyrene	Benzo(g,h,i)perylene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-c,d)pyrene	Phenanthrene	PAHs (Sum of total)	Pyrene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 HILs Res A Soil	3													3	3									300	
NEPM 2013 HILs Res B Soil	4													4	4									400	
NEPM 2013 HILs Commercial/Industrial D Soil	40													40	40									4000	
NEPM 2013 Res A/B Soil HSL for Vapour Intrusion																									
Sand 0-1m													3												
Sand 1-2m																									
Sand 2-4m																									
NEPM 2013 ESLs for Urban Res, Coarse Soil																									
0-2m																0.7									
Prelim EILs Urban Res/ Open Public Spaces													170												
Prelim EILs Commercial/ Industrial													370												
Field ID	**Location**	**Lab Report**	**Date**																								
01_0_0.15	**TP01**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
02_0_0.1	**TP02**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
02_1_0.8	**TP02**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
03_0_0.1	**TP03**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
03_1_0.8	**TP03**	688422	12/11/2019																									
04_0_0.1	**TP04**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
04_1_0.6	**TP04**	692905	12/11/2019																									
05_0_0.1	**TP05**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
05_1_0.72	**TP05**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
06_0_0.1	**TP06**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
06_1_1.2	**TP06**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
07_0_0.1	**TP07**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
08_0_0.1	**TP08**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
09_0_0.1	**TP09**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
09_1_07	**TP09**	692905	12/11/2019																									
10_0_0.1	**TP10**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10_1_0.7	**TP10**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
11_0_0.2	**TP11**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
11_1_0.8	**TP11**	688422	12/11/2019																									
12_0_0.1	**TP12**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
13_0_0.1	**TP13**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
13_1_0.6	**TP13**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
14_0_0.1	**TP14**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
14_1_0.6	**TP14**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
15_0_0.1	**TP15**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
15_1_1.0	**TP15**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
16_0_0.1	**TP16**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
16_1_1.0	**TP16**	688422	12/11/2019																									
17_0_0.2	**TP17**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
18_0_0.1	**TP18**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
18_1_1.0	**TP18**	688422	12/11/2019																									
19_0_0.1	**TP19**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
19_1_0.7	**TP19**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
20_0_0.1	**TP20**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
20_1_0.8	**TP20**	688422	12/11/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW01_4M	**MW01**	694532	18/12/2019												<0.5													
MW01_5M	**MW01**	694532	18/12/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW01_6M	**MW01**	694532	18/12/2019												<0.5													
MW02_4M	**MW02**	694532	18/12/2019												<0.5													
MW02_5M	**MW02**	694532	18/12/2019												<0.5													
MW03_4M	**MW03**	694532	18/12/2019												<0.5													
MW03_5M	**MW03**	694532	18/12/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW04_4M	**MW04**	694532	18/12/2019	<0.5	<0.5						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.2	0.6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW04_5M	**MW04**	694532	18/12/2019												<0.5													
MW04_6M	**MW04**	694532	18/12/2019												<0.5													

AGON ENVIRONMENTAL

APPENDIX G
Laboratory Analysis Results

				BTEX						TRH							TPH				
JF1006 John Stokes Square DSI				Toluene	Xylene Total	Benzene	Ethylbenzene	Xylene (m & p)	Xylene (o)	C6-C10	C6-C10 (F1 minus BTEX)	C10-C16	C16-C34	C34-C40	C10-C40 (Sum of total)	C10-C16 (F2 minus Naphthalene)	C6-C9	C10-C14	C15-C28	C29-C36	+C10-C36 (Sum of total)
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.1	0.3	0.1	0.1	0.2	0.1	20	20	50	100	100	100	50	20	20	50	50	50
NEPM 2013 HILs Res A Soil																					
NEPM 2013 HILs Res B Soil																					
NEPM 2013 HILs Commercial/Industrial D Soil																					
NEPM 2013 Res A/B Soil HSL for Vapour Intrusion																					
Sand 0-1m				160	40	0.5	55				45					110					
Sand 1-2m				220	60	0.5					70					240					
Sand 2-4m				310	95	0.5					110					440					
NEPM 2013 ESLs for Urban Res, Coarse Soil																					
0-2m				85	105	50	70				180		300	2,800		120					
Prelim EILs Urban Res/ Open Public Spaces																					
Prelim EILs Commercial/ Industrial																					
Field ID	**Location**	**Lab Report**	**Date**																		
01_0_0.15	**TP01**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
02_0_0.1	**TP02**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
02_1_0.8	**TP02**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
03_0_0.1	**TP03**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
03_1_0.8	**TP03**	688422	12/11/2019																		
04_0_0.1	**TP04**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
04_1_0.6	**TP04**	692905	12/11/2019																		
05_0_0.1	**TP05**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
05_1_0.72	**TP05**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
06_0_0.1	**TP06**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
06_1_1.2	**TP06**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
07_0_0.1	**TP07**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
08_0_0.1	**TP08**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
09_0_0.1	**TP09**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
09_1_07	**TP09**	692905	12/11/2019																		
10_0_0.1	**TP10**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
10_1_0.7	**TP10**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
11_0_0.2	**TP11**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
11_1_0.8	**TP11**	688422	12/11/2019																		
12_0_0.1	**TP12**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
13_0_0.1	**TP13**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
13_1_0.6	**TP13**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
14_0_0.1	**TP14**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
14_1_0.6	**TP14**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
15_0_0.1	**TP15**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
15_1_1.0	**TP15**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
16_0_0.1	**TP16**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
16_1_1.0	**TP16**	688422	12/11/2019																		
17_0_0.2	**TP17**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
18_0_0.1	**TP18**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
18_1_1.0	**TP18**	688422	12/11/2019																		
19_0_0.1	**TP19**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
19_1_0.7	**TP19**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
20_0_0.1	**TP20**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
20_1_0.8	**TP20**	688422	12/11/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
MW01_4M	**MW01**	694532	18/12/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
MW01_5M	**MW01**	694532	18/12/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
MW01_6M	**MW01**	694532	18/12/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
MW02_4M	**MW02**	694532	18/12/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
MW02_5M	**MW02**	694532	18/12/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
MW03_4M	**MW03**	694532	18/12/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
MW03_5M	**MW03**	694532	18/12/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
MW04_4M	**MW04**	694532	18/12/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
MW04_5M	**MW04**	694532	18/12/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50
MW04_6M	**MW04**	694532	18/12/2019	<0.1	<0.3	<0.1	<0.1	<0.2	<0.1	<20	<20	<50	<100	<100	<100	<50	<20	<20	<50	<50	<50

AGON ENVIRONMENTAL

APPENDIX G
Laboratory Analysis Results

JF1006 John Stokes Square DSI

	Organochlorine Pesticides																								
	Aldrin + Dieldrin	chlordane	Endrin ketone	Organochlorine pesticides EPAVic	Toxaphene	Hexachlorobenzene	Other organochlorine pesticides EPAVic	4,4-DDE	Endosulfan sulphate	Endrin	Endrin aldehyde	Aldrin	g-BHC (Lindane)	DDT+DDE+DDD	Heptachlor	Heptachlor epoxide	a-BHC	b-BHC	d-BHC	DDD	DDT	Dieldrin	Endosulfan I	Endosulfan II	Methoxychlor
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.05	0.1	0.05	0.1	1	0.05	0.1	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
NEPM 2013 HILs Res A Soil	6	50			20	10				10				240	6										300
NEPM 2013 HILs Res B Soil	10	90			30	15				20				600	10										500
NEPM 2013 HILs Commercial/Industrial D Soil	45	530			160	80				100				3600	50										2500
NEPM 2013 Res A/B Soil HSL for Vapour Intrusion																									
Sand 0-1m																									
Sand 1-2m																									
Sand 2-4m																									
NEPM 2013 ESLs for Urban Res, Coarse Soil																									
0-2m																									
Prelim EILs Urban Res/ Open Public Spaces																					180				
Prelim EILs Commercial/ Industrial																					640				

Field ID	Location	Lab Report	Date																							
01_0_0.15	TP01	688422	12/11/2019	0.09	<0.1	<0.05	<0.1	<1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09	<0.05	<0.05	<0.05	<0.05
02_0_0.1	TP02	688422	12/11/2019	<0.5		<0.5			<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
02_1_0.8	TP02	688422	12/11/2019	<0.05	<0.1			<1	<0.05		<0.05	<0.05	<0.05		<0.05			<0.05					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
03_0_0.1	TP03	688422	12/11/2019																									
03_1_0.8	TP03	688422	12/11/2019																									
04_0_0.1	TP04	688422	12/11/2019	0.08	<0.1			<1	<0.05		<0.05	<0.05	<0.05		<0.05			<0.05					<0.05	<0.05	0.08	<0.05	<0.05	<0.05	<0.05
04_1_0.6	TP04	692905	12/11/2019																									
05_0_0.1	TP05	688422	12/11/2019																									
05_1_0.72	TP05	688422	12/11/2019	<0.05	<0.1			<1	<0.05		<0.05	<0.05	<0.05		<0.05			<0.05					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
06_0_0.1	TP06	688422	12/11/2019	<0.05	<0.1			<1	<0.05		<0.05	<0.05	<0.05		<0.05			<0.05					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
06_1_1.2	TP06	688422	12/11/2019																									
07_0_0.1	TP07	688422	12/11/2019																									
08_0_0.1	TP08	688422	12/11/2019	<0.05	<0.1	<0.05	<0.1	<1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
09_0_0.1	TP09	688422	12/11/2019	7.5	0.2			<1	<0.05		<0.05	<0.05	<0.05		1.8			<0.05					<0.05	<0.05	5.7	<0.05	<0.05	<0.05
09_1_07	TP09	692905	12/11/2019	0.21											0.06									0.15				
10_0_0.1	TP10	688422	12/11/2019	<0.5		<0.5			<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10_1_0.7	TP10	688422	12/11/2019	<0.05	<0.1	<0.05	<0.1	<1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
11_0_0.2	TP11	688422	12/11/2019	0.83											0.83									<0.05				
11_1_0.8	TP11	688422	12/11/2019																									
12_0_0.1	TP12	688422	12/11/2019	<0.05	<0.1			<1	<0.05		<0.05	<0.05	<0.05		<0.05			<0.05					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
13_0_0.1	TP13	688422	12/11/2019	<0.05	<0.1	<0.05	<0.1	<1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
13_1_0.6	TP13	688422	12/11/2019																									
14_0_0.1	TP14	688422	12/11/2019	<0.05	<0.1			<1	<0.05		<0.05	<0.05	<0.05		<0.05			<0.05					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
14_1_0.6	TP14	688422	12/11/2019	<0.5		<0.5			<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
15_0_0.1	TP15	688422	12/11/2019	<0.5		<0.5			<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
15_1_1.0	TP15	688422	12/11/2019																									
16_0_0.1	TP16	688422	12/11/2019	<0.05	<0.1			<1	<0.05		<0.05	<0.05	<0.05		<0.05			<0.05					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
16_1_1.0	TP16	688422	12/11/2019																									
17_0_0.2	TP17	688422	12/11/2019	<0.05	<0.1	<0.05	<0.1	<1	<0.05	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
18_0_0.1	TP18	688422	12/11/2019																									
18_1_1.0	TP18	688422	12/11/2019																									
19_0_0.1	TP19	688422	12/11/2019	<0.5		<0.5			<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
19_1_0.7	TP19	688422	12/11/2019	<0.05	<0.1			<1	<0.05		<0.05	<0.05	<0.05		<0.05			<0.05					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
20_0_0.1	TP20	688422	12/11/2019	<0.05	<0.1			<1	<0.05		<0.05	<0.05	<0.05		<0.05			<0.05					<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
20_1_0.8	TP20	688422	12/11/2019																									
MW01_4M	MW01	694532	18/12/2019																									
MW01_5M	MW01	694532	18/12/2019																									
MW01_6M	MW01	694532	18/12/2019																									
MW02_4M	MW02	694532	18/12/2019																									
MW02_5M	MW02	694532	18/12/2019																									
MW03_4M	MW03	694532	18/12/2019																									
MW03_5M	MW03	694532	18/12/2019																									
MW04_4M	MW04	694532	18/12/2019																									
MW04_5M	MW04	694532	18/12/2019																									
MW04_6M	MW04	694532	18/12/2019																									

AGON ENVIRONMENTAL

APPENDIX G
Laboratory Analysis Results

	Organophosphorous Pesticides																														
JF1006 John Stokes Square DSI	Azinophos methyl	Bolstar (Sulprofos)	Chlorfenvinphos	Chlorpyrifos-methyl	Coumaphos	Demeton-O	Demeton-S	Diazinon	Dichlorvos	Dimethoate	Disulfoton	Merphos	EPN	Methyl parathion	Ethion	Ethoprop	Mevinphos (Phosdrin)	Fenitrothion	Fensulfothion	Monocrotophos	Fenthion	Malathion	Naled (Dibrom)	Omethoate	Phorate	Pyrazophos	Ronnel	Terbufos	Tetrachlorvinphos	Tokuthion	Trichloronate	Chlorpyrifos
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	2	0.2	0.2	0.2	2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
NEPM 2013 HILs Res A Soil																																160
NEPM 2013 HILs Res B Soil																																340
NEPM 2013 HILs Commercial/Industrial D Soil																																2000
NEPM 2013 Res A/B Soil HSL for Vapour Intrusion																																
Sand 0-1m																																
Sand 1-2m																																
Sand 2-4m																																
NEPM 2013 ESLs for Urban Res, Coarse Soil																																
0-2m																																
Prelim EILs Urban Res/ Open Public Spaces																																
Prelim EILs Commercial/ Industrial																																

Field ID	Location	Lab Report	Date																													
01_0_0.15	**TP01**	688422	12/11/2019	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
02_0_0.1	**TP02**	688422	12/11/2019																													
02_1_0.8	**TP02**	688422	12/11/2019																													<0.2
03_0_0.1	**TP03**	688422	12/11/2019																													
03_1_0.8	**TP03**	688422	12/11/2019																													
04_0_0.1	**TP04**	688422	12/11/2019																													<0.2
04_1_0.6	**TP04**	692905	12/11/2019																													
05_0_0.1	**TP05**	688422	12/11/2019																													
05_1_0.72	**TP05**	688422	12/11/2019																													<0.2
06_0_0.1	**TP06**	688422	12/11/2019																													<0.2
06_1_1.2	**TP06**	688422	12/11/2019																													
07_0_0.1	**TP07**	688422	12/11/2019																													
08_0_0.1	**TP08**	688422	12/11/2019	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
09_0_0.1	**TP09**	688422	12/11/2019																													<0.2
09_1_07	**TP09**	692905	12/11/2019																													
10_0_0.1	**TP10**	688422	12/11/2019																													
10_1_0.7	**TP10**	688422	12/11/2019	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
11_0_0.2	**TP11**	688422	12/11/2019																													
11_1_0.8	**TP11**	688422	12/11/2019																													
12_0_0.1	**TP12**	688422	12/11/2019																													<0.2
13_0_0.1	**TP13**	688422	12/11/2019	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
13_1_0.6	**TP13**	688422	12/11/2019																													
14_0_0.1	**TP14**	688422	12/11/2019																													<0.2
14_1_0.6	**TP14**	688422	12/11/2019																													
15_0_0.1	**TP15**	688422	12/11/2019																													
15_1_1.0	**TP15**	688422	12/11/2019																													
16_0_0.1	**TP16**	688422	12/11/2019																													<0.2
16_1_1.0	**TP16**	688422	12/11/2019																													
17_0_0.2	**TP17**	688422	12/11/2019	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
18_0_0.1	**TP18**	688422	12/11/2019																													
18_1_1.0	**TP18**	688422	12/11/2019																													
19_0_0.1	**TP19**	688422	12/11/2019																													
19_1_0.7	**TP19**	688422	12/11/2019																													<0.2
20_0_0.1	**TP20**	688422	12/11/2019																													<0.2
20_1_0.8	**TP20**	688422	12/11/2019																													
MW01_4M	**MW01**	694532	18/12/2019																													
MW01_5M	**MW01**	694532	18/12/2019																													
MW01_6M	**MW01**	694532	18/12/2019																													
MW02_4M	**MW02**	694532	18/12/2019																													
MW02_5M	**MW02**	694532	18/12/2019																													
MW03_4M	**MW03**	694532	18/12/2019																													
MW03_5M	**MW03**	694532	18/12/2019																													
MW04_4M	**MW04**	694532	18/12/2019																													
MW04_5M	**MW04**	694532	18/12/2019																													
MW04_6M	**MW04**	694532	18/12/2019																													

AGON ENVIRONMENTAL

APPENDIX G
Laboratory Analysis Results

					Phenols																	Amino		Amino Aromatics			Anilines	
JF1006 John Stokes Square DSI					2,4,5-Trichlorophenol	3&4-Methylphenol (m&p-cresol)	2,4-Dinitrophenol	2,3,4,6-Tetrachlorophenol	Picloram	2,4-Dichlorophenol	2,4-Dimethylphenol	2,6-Dichlorophenol	2-Chlorophenol	2,4,6-Trichlorophenol	Phenols (Total Halogenated)	2-Methylphenol	Tetrachlorophenols	2-Nitrophenol	4,6-Dinitro-2-methylphenol	4,6-Dinitro-o-cyclohexyl phenol	4-chloro-3-methylphenol	Phenol	4-Nitrophenol	Pentachlorophenol	Phenols (Total Non Halogenated)	N-nitrosodi-n-butylamine	N-nitrosodi-n-propylamine	1-naphthylamine	2-naphthylamine	Diphenylamine	2-nitroaniline	Aniline
					mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL					1	0.4	5	5	0.5	0.5	0.5	0.5	0.5	1	1	0.2	10	1	0.5	20	1	0.5	5	1	20	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 HILs Res A Soil									4,500													3,000		100								
NEPM 2013 HILs Res B Soil									6,600													45,000		130								
NEPM 2013 HILs Commercial/Industrial D Soil									35000													240000		660								
NEPM 2013 Res A/B Soil HSL for Vapour Intrusion																																
Sand 0-1m																																
Sand 1-2m																																
Sand 2-4m																																
NEPM 2013 ESLs for Urban Res, Coarse Soil																																
0-2m																																
Prelim EILs Urban Res/ Open Public Spaces																																
Prelim EILs Commercial/ Industrial																																
Field ID	**Location**	**Lab Report**	**Date**																													
01_0_0.15	**TP01**	688422	12/11/2019		<1	<0.4	<5			<0.5	<0.5	<0.5	<0.5	<1	<1	<0.2	<10	<1	<0.5	<20	<1	<0.5	<5	<1	<20							
02_0_0.1	**TP02**	688422	12/11/2019		<1	<0.4	<5	<5		<0.5	<0.5	<0.5	<0.5	<1		<0.2		<1	<5		<1	<0.5	<5	<1		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
02_1_0.8	**TP02**	688422	12/11/2019			<0.4			<0.5							<0.2						<0.5		<1								
03_0_0.1	**TP03**	688422	12/11/2019																													
03_1_0.8	**TP03**	688422	12/11/2019																													
04_0_0.1	**TP04**	688422	12/11/2019			<0.4			<0.5							<0.2						<0.5		<1								
04_1_0.6	**TP04**	692905	12/11/2019																													
05_0_0.1	**TP05**	688422	12/11/2019																													
05_1_0.72	**TP05**	688422	12/11/2019			<0.4			<0.5							<0.2						<0.5		<1								
06_0_0.1	**TP06**	688422	12/11/2019			<0.4			<0.5							<0.2						<0.5		<1								
06_1_1.2	**TP06**	688422	12/11/2019																													
07_0_0.1	**TP07**	688422	12/11/2019																													
08_0_0.1	**TP08**	688422	12/11/2019		<1	<0.4	<5			<0.5	<0.5	<0.5	<0.5	<1	<1	<0.2	<10	<1	<0.5	<20	<1	<0.5	<5	<1	<20							
09_0_0.1	**TP09**	688422	12/11/2019			<0.4			<0.5							<0.2						<0.5		<1								
09_1_07	**TP09**	692905	12/11/2019																													
10_0_0.1	**TP10**	688422	12/11/2019		<1	<0.4	<5	<5		<0.5	<0.5	<0.5	<0.5	<1		<0.2		<1	<5		<1	<0.5	<5	<1		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10_1_0.7	**TP10**	688422	12/11/2019		<1	<0.4	<5			<0.5	<0.5	<0.5	<0.5	<1	<1	<0.2	<10	<1	<0.5	<20	<1	<0.5	<5	<1	<20							
11_0_0.2	**TP11**	688422	12/11/2019																													
11_1_0.8	**TP11**	688422	12/11/2019																													
12_0_0.1	**TP12**	688422	12/11/2019			<0.4			<0.5							<0.2						<0.5		<1								
13_0_0.1	**TP13**	688422	12/11/2019		<1	<0.4	<5			<0.5	<0.5	<0.5	<0.5	<1	<1	<0.2	<10	<1	<0.5	<20	<1	<0.5	<5	<1	<20							
13_1_0.6	**TP13**	688422	12/11/2019																													
14_0_0.1	**TP14**	688422	12/11/2019			<0.4			<0.5							<0.2						<0.5		<1								
14_1_0.6	**TP14**	688422	12/11/2019		<1	<0.4	<5	<5		<0.5	<0.5	<0.5	<0.5	<1		<0.2		<1	<5		<1	<0.5	<5	<1		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
15_0_0.1	**TP15**	688422	12/11/2019		<1	<0.4	<5	<5		<0.5	<0.5	<0.5	<0.5	<1		<0.2		<1	<5		<1	<0.5	<5	<1		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
15_1_1.0	**TP15**	688422	12/11/2019																													
16_0_0.1	**TP16**	688422	12/11/2019			<0.4			<0.5							<0.2						<0.5		<1								
16_1_1.0	**TP16**	688422	12/11/2019																													
17_0_0.2	**TP17**	688422	12/11/2019		<1	<0.4	<5			<0.5	<0.5	<0.5	<0.5	<1	<1	<0.2	<10	<1	<0.5	<20	<1	<0.5	<5	<1	<20							
18_0_0.1	**TP18**	688422	12/11/2019																													
18_1_1.0	**TP18**	688422	12/11/2019																													
19_0_0.1	**TP19**	688422	12/11/2019		<1	<0.4	<5	<5		<0.5	<0.5	<0.5	<0.5	<1		<0.2		<1	<5		<1	<0.5	<5	<1		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
19_1_0.7	**TP19**	688422	12/11/2019			<0.4			<0.5							<0.2						<0.5		<1								
20_0_0.1	**TP20**	688422	12/11/2019			<0.4			<0.5							<0.2						<0.5		<1								
20_1_0.8	**TP20**	688422	12/11/2019																													
MW01_4M	**MW01**	694532	18/12/2019																													
MW01_5M	**MW01**	694532	18/12/2019																													
MW01_6M	**MW01**	694532	18/12/2019																													
MW02_4M	**MW02**	694532	18/12/2019																													
MW02_5M	**MW02**	694532	18/12/2019																													
MW03_4M	**MW03**	694532	18/12/2019																													
MW03_5M	**MW03**	694532	18/12/2019																													
MW04_4M	**MW04**	694532	18/12/2019																													
MW04_5M	**MW04**	694532	18/12/2019																													
MW04_6M	**MW04**	694532	18/12/2019																													

AGON ENVIRONMENTAL

APPENDIX G
Laboratory Analysis Results

																Chlorinated Hydrocarbons																				
JF1006 John Stokes Square DSI	Benzyl chloride	Hexachlorocyclopentadiene	Hexachloroethane	1,1-dichloroethane	1,1-dichloroethene	1,2,3-trichloropropane	1,2-dichloroethane	1,2-dichloropropane	1,3-dichloropropane	Bromochloromethane	Chloroform	Bromodichloromethane	Chloromethane	1,1,1,2-tetrachloroethane	Tetrachloroethene	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	cis-1,3-dichloropropene	Hexachlorobutadiene	Dibromomethane	Dichloromethane	Other chlorinated hydrocarbons EPAVic	Trichloroethene	Chlorinated hydrocarbons EPAVic	cis-1,2-dichloroethene	1,1,2-trichloroethane	trans-1,3-dichloropropene	Vinyl chloride	Bromoform	Carbon tetrachloride	Chlorodibromomethane	Chloroethane	trans-1,2-dichloroethene
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
NEPM 2013 HILs Res A Soil																																		
NEPM 2013 HILs Res B Soil																																		
NEPM 2013 HILs Commercial/Industrial D Soil																																		
NEPM 2013 Res A/B Soil HSL for Vapour Intrusion																																		
Sand 0-1m																																		
Sand 1-2m																																		
Sand 2-4m																																		
NEPM 2013 ESLs for Urban Res, Coarse Soil																																		
0-2m																																		
Prelim EILs Urban Res/ Open Public Spaces																																		
Prelim EILs Commercial/ Industrial																																		
Field ID	**Location**	**Lab Report**	**Date**																																
01_0_0.15	**TP01**	688422	12/11/2019				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
02_0_0.1	**TP02**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
02_1_0.8	**TP02**	688422	12/11/2019																																
03_0_0.1	**TP03**	688422	12/11/2019																																
03_1_0.8	**TP03**	688422	12/11/2019																																
04_0_0.1	**TP04**	688422	12/11/2019																																
04_1_0.6	**TP04**	692905	12/11/2019																																
05_0_0.1	**TP05**	688422	12/11/2019																																
05_1_0.72	**TP05**	688422	12/11/2019																																
06_0_0.1	**TP06**	688422	12/11/2019																																
06_1_1.2	**TP06**	688422	12/11/2019																																
07_0_0.1	**TP07**	688422	12/11/2019																																
08_0_0.1	**TP08**	688422	12/11/2019				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
09_0_0.1	**TP09**	688422	12/11/2019																																
09_1_07	**TP09**	692905	12/11/2019																																
10_0_0.1	**TP10**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10_1_0.7	**TP10**	688422	12/11/2019				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
11_0_0.2	**TP11**	688422	12/11/2019																																
11_1_0.8	**TP11**	688422	12/11/2019																																
12_0_0.1	**TP12**	688422	12/11/2019																																
13_0_0.1	**TP13**	688422	12/11/2019				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
13_1_0.6	**TP13**	688422	12/11/2019																																
14_0_0.1	**TP14**	688422	12/11/2019																																
14_1_0.6	**TP14**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
15_0_0.1	**TP15**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
15_1_1.0	**TP15**	688422	12/11/2019																																
16_0_0.1	**TP16**	688422	12/11/2019																																
16_1_1.0	**TP16**	688422	12/11/2019																																
17_0_0.2	**TP17**	688422	12/11/2019				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
18_0_0.1	**TP18**	688422	12/11/2019																																
18_1_1.0	**TP18**	688422	12/11/2019																																
19_0_0.1	**TP19**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
19_1_0.7	**TP19**	688422	12/11/2019																																
20_0_0.1	**TP20**	688422	12/11/2019																																
20_1_0.8	**TP20**	688422	12/11/2019																																
MW01_4M	**MW01**	694532	18/12/2019																																
MW01_5M	**MW01**	694532	18/12/2019																																
MW01_6M	**MW01**	694532	18/12/2019																																
MW02_4M	**MW02**	694532	18/12/2019																																
MW02_5M	**MW02**	694532	18/12/2019																																
MW03_4M	**MW03**	694532	18/12/2019																																
MW03_5M	**MW03**	694532	18/12/2019																																
MW04_4M	**MW04**	694532	18/12/2019																																
MW04_5M	**MW04**	694532	18/12/2019																																
MW04_6M	**MW04**	694532	18/12/2019																																

AGON ENVIRONMENTAL

APPENDIX G
Laboratory Analysis Results

				Explosives			Halogenated Benzenes												Halogenated Hydrocarbons					Herbicides														
				2,6-dinitrotoluene	Nitrobenzene	2,4-Dinitrotoluene	1,2,3,5-Tetrachlorobenzene	1,2,3,4-tetrachlorobenzene	1,2,3-trichlorobenzene	1,2,4,5-tetrachlorobenzene	1,3,5-Trichlorobenzene	Pentachlorobenzene	1,2,4-trichlorobenzene	1,2-dichlorobenzene	1,3-dichlorobenzene	1,4-dichlorobenzene	Bromobenzene	4-chlorotoluene	Chlorobenzene	Iodomethane	Bromomethane	1,2-dibromoethane	Dichlorodifluoromethane	Trichlorofluoromethane	Pronamide	Trifluralin	2,4,5-TP (Silvex)	2,4-Dichlorprop	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	Dicamba	2,4,5-Trichlorophenoxy Acetic Acid	2-Methyl-4-Chlorophenoxy Butanoic Acid	2-Methyl-4-chlorophenoxyacetic acid	Atrazine	Dinoseb	Hedonal	Mecoprop
JF1006 John Stokes Square DSI				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
EQL				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.2	0.5	0.5	0.5	0.5	0.5
NEPM 2013 HILs Res A Soil																															600	600	600	320		900	600
NEPM 2013 HILs Res B Soil																															900	900	900	470		1,600	900
NEPM 2013 HILs Commercial/Industrial D Soil																															5000	5000	5000	2500		9000	5000
NEPM 2013 Res A/B Soil HSL for Vapour Intrusion																																					
Sand 0-1m																																					
Sand 1-2m																																					
Sand 2-4m																																					
NEPM 2013 ESLs for Urban Res, Coarse Soil																																					
0-2m																																					
Prelim EILs Urban Res/ Open Public Spaces																																					
Prelim EILs Commercial/ Industrial																																					
Field ID	**Location**	**Lab Report**	**Date**																																			
01_0_0.15	**TP01**	688422	12/11/2019		<0.5	<0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5
02_0_0.1	**TP02**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5													
02_1_0.8	**TP02**	688422	12/11/2019																												<0.5	<0.5	<0.5	<0.2		<0.5	<0.5
03_0_0.1	**TP03**	688422	12/11/2019																																			
03_1_0.8	**TP03**	688422	12/11/2019																																			
04_0_0.1	**TP04**	688422	12/11/2019																												<0.5	<0.5	<0.5	<0.2		<0.5	<0.5
04_1_0.6	**TP04**	692905	12/11/2019																																			
05_0_0.1	**TP05**	688422	12/11/2019																																			
05_1_0.72	**TP05**	688422	12/11/2019																												<0.5	<0.5	<0.5	<0.2		<0.5	<0.5
06_0_0.1	**TP06**	688422	12/11/2019																												<0.5	<0.5	<0.5	<0.2		<0.5	<0.5
06_1_1.2	**TP06**	688422	12/11/2019																																			
07_0_0.1	**TP07**	688422	12/11/2019																																			
08_0_0.1	**TP08**	688422	12/11/2019		<0.5	<0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5
09_0_0.1	**TP09**	688422	12/11/2019																												<0.5	<0.5	<0.5	<0.2		<0.5	<0.5
09_1_07	**TP09**	692905	12/11/2019																																			
10_0_0.1	**TP10**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5													
10_1_0.7	**TP10**	688422	12/11/2019		<0.5	<0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5
11_0_0.2	**TP11**	688422	12/11/2019																																			
11_1_0.8	**TP11**	688422	12/11/2019																																			
12_0_0.1	**TP12**	688422	12/11/2019																												<0.5	<0.5	<0.5	<0.2		<0.5	<0.5
13_0_0.1	**TP13**	688422	12/11/2019		<0.5	<0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5
13_1_0.6	**TP13**	688422	12/11/2019																																			
14_0_0.1	**TP14**	688422	12/11/2019																												<0.5	<0.5	<0.5	<0.2		<0.5	<0.5
14_1_0.6	**TP14**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5													
15_0_0.1	**TP15**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5													
15_1_1.0	**TP15**	688422	12/11/2019																																			
16_0_0.1	**TP16**	688422	12/11/2019																												<0.5	<0.5	<0.5	<0.2		<0.5	<0.5
16_1_1.0	**TP16**	688422	12/11/2019																																			
17_0_0.2	**TP17**	688422	12/11/2019		<0.5	<0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5
18_0_0.1	**TP18**	688422	12/11/2019																																			
18_1_1.0	**TP18**	688422	12/11/2019																																			
19_0_0.1	**TP19**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5													
19_1_0.7	**TP19**	688422	12/11/2019																												<0.5	<0.5	<0.5	<0.2		<0.5	<0.5
20_0_0.1	**TP20**	688422	12/11/2019																												<0.5	<0.5	<0.5	<0.2		<0.5	<0.5
20_1_0.8	**TP20**	688422	12/11/2019																																			
MW01_4M	**MW01**	694532	18/12/2019																																			
MW01_5M	**MW01**	694532	18/12/2019																																			
MW01_6M	**MW01**	694532	18/12/2019																																			
MW02_4M	**MW02**	694532	18/12/2019																																			
MW02_5M	**MW02**	694532	18/12/2019																																			
MW03_4M	**MW03**	694532	18/12/2019																																			
MW03_5M	**MW03**	694532	18/12/2019																																			
MW04_4M	**MW04**	694532	18/12/2019																																			
MW04_5M	**MW04**	694532	18/12/2019																																			
MW04_6M	**MW04**	694532	18/12/2019																																			

AGON ENVIRONMENTAL

APPENDIX G
Laboratory Analysis Results

JF1006 John Stokes Square DSI																																	
	MAH					Nitroaromatics			Other		PCBs								Pesticides			Phthalates						Solvents					
	Total MAH	1,3,5-trimethylbenzene	Styrene	Isopropylbenzene	1,2,4-trimethylbenzene	2-Picoline	4-aminobiphenyl	Pentachloronitrobenzene	Acetophenone	Actril (loxynil)	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1221	Arochlor 1260	Arochlor 1016	PCBs (Sum of total)	Parathion	Pirimiphos-methyl	Mirex	Bis(2-ethylhexyl) phthalate	Diethylphthalate	Butyl benzyl phthalate	Dimethyl phthalate	Di-n-butyl phthalate	Di-n-octyl phthalate	4-Methyl-2-pentanone	Acetone	Allyl chloride	Carbon disulfide	Methyl Ethyl Ketone	
	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	
EQL	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.01	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
NEPM 2013 HILs Res A Soil																		1			10												
NEPM 2013 HILs Res B Soil																		1			20												
NEPM 2013 HILs Commercial/Industrial D Soil																		7			100												
NEPM 2013 Res A/B Soil HSL for Vapour Intrusion																																	
Sand 0-1m																																	
Sand 1-2m																																	
Sand 2-4m																																	
NEPM 2013 ESLs for Urban Res, Coarse Soil																																	
0-2m																																	
Prelim EILs Urban Res/ Open Public Spaces																																	
Prelim EILs Commercial/ Industrial																																	
Field ID	**Location**	**Lab Report**	**Date**																														
01_0_0.15	**TP01**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5									<0.2	<0.2		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
02_0_0.1	**TP02**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5													<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
02_1_0.8	**TP02**	688422	12/11/2019										<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.01												
03_0_0.1	**TP03**	688422	12/11/2019																																
03_1_0.8	**TP03**	688422	12/11/2019																																
04_0_0.1	**TP04**	688422	12/11/2019										<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.01												
04_1_0.6	**TP04**	692905	12/11/2019																																
05_0_0.1	**TP05**	688422	12/11/2019																																
05_1_0.72	**TP05**	688422	12/11/2019										<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.01												
06_0_0.1	**TP06**	688422	12/11/2019										<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.01												
06_1_1.2	**TP06**	688422	12/11/2019																																
07_0_0.1	**TP07**	688422	12/11/2019																																
08_0_0.1	**TP08**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5									<0.2	<0.2		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
09_0_0.1	**TP09**	688422	12/11/2019										<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.01												
09_1_07	**TP09**	692905	12/11/2019																																
10_0_0.1	**TP10**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5													<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10_1_0.7	**TP10**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5									<0.2	<0.2		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
11_0_0.2	**TP11**	688422	12/11/2019																																
11_1_0.8	**TP11**	688422	12/11/2019																																
12_0_0.1	**TP12**	688422	12/11/2019										<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.01												
13_0_0.1	**TP13**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5									<0.2	<0.2		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
13_1_0.6	**TP13**	688422	12/11/2019																																
14_0_0.1	**TP14**	688422	12/11/2019										<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.01												
14_1_0.6	**TP14**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5													<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
15_0_0.1	**TP15**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5													<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
15_1_1.0	**TP15**	688422	12/11/2019																																
16_0_0.1	**TP16**	688422	12/11/2019										<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.01												
16_1_1.0	**TP16**	688422	12/11/2019																																
17_0_0.2	**TP17**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5					<0.5									<0.2	<0.2		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
18_0_0.1	**TP18**	688422	12/11/2019																																
18_1_1.0	**TP18**	688422	12/11/2019																																
19_0_0.1	**TP19**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5													<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
19_1_0.7	**TP19**	688422	12/11/2019										<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.01												
20_0_0.1	**TP20**	688422	12/11/2019										<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1			<0.01												
20_1_0.8	**TP20**	688422	12/11/2019																																
MW01_4M	**MW01**	694532	18/12/2019																																
MW01_5M	**MW01**	694532	18/12/2019																																
MW01_6M	**MW01**	694532	18/12/2019																																
MW02_4M	**MW02**	694532	18/12/2019																																
MW02_5M	**MW02**	694532	18/12/2019																																
MW03_4M	**MW03**	694532	18/12/2019																																
MW03_5M	**MW03**	694532	18/12/2019																																
MW04_4M	**MW04**	694532	18/12/2019																																
MW04_5M	**MW04**	694532	18/12/2019																																
MW04_6M	**MW04**	694532	18/12/2019																																

AGON ENVIRONMENTAL

APPENDIX G
Laboratory Analysis Results

				SVOCs								VOCs	Inorganics									
JF1006 John Stokes Square DSI				3,3-Dichlorobenzidine	4-(dimethylamino) azobenzene	4-bromophenyl phenyl ether	4-chlorophenyl phenyl ether	Bis(2-chloroethoxy) methane	Bis(2-chloroisopropyl) ether	Dibenzofuran	N-nitrosopiperidine	Dibenz(a,j)acridine	Iron (%)	% Clay*	Conductivity (1:5 aqueous extract)	Fluoride	Moisture Content (dried @ 103°C)	Cyanide (Free)	Cyanide Total	pH (Lab)	TOC	CEC
				mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	%	%	uS/cm	mg/kg	%	mg/kg	mg/kg	-	%	meq/100g
EQL				0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.01	1	10	100	1	5	5	0.1	0.1	0.05
NEPM 2013 HILs Res A Soil																		250				
NEPM 2013 HILs Res B Soil																		300				
NEPM 2013 HILs Commercial/Industrial D Soil																		1500				
NEPM 2013 Res A/B Soil HSL for Vapour Intrusion																						
Sand 0-1m																						
Sand 1-2m																						
Sand 2-4m																						
NEPM 2013 ESLs for Urban Res, Coarse Soil																						
0-2m																						
Prelim EILs Urban Res/ Open Public Spaces																						
Prelim EILs Commercial/ Industrial																						
Field ID	**Location**	**Lab Report**	**Date**																			
01_0_0.15	**TP01**	688422	12/11/2019													<100	15	<5	<5			
02_0_0.1	**TP02**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					11					
02_1_0.8	**TP02**	688422	12/11/2019														14	<5				
03_0_0.1	**TP03**	688422	12/11/2019														9.3					
03_1_0.8	**TP03**	688422	12/11/2019										10	21	25		12			5.8	0.1	2.6
04_0_0.1	**TP04**	688422	12/11/2019														13	<5				
04_1_0.6	**TP04**	692905	12/11/2019														13					
05_0_0.1	**TP05**	688422	12/11/2019														11					
05_1_0.72	**TP05**	688422	12/11/2019														14	<5				
06_0_0.1	**TP06**	688422	12/11/2019														11	<5				
06_1_1.2	**TP06**	688422	12/11/2019														12					
07_0_0.1	**TP07**	688422	12/11/2019														5.7					
08_0_0.1	**TP08**	688422	12/11/2019													<100	11	<5	<5			
09_0_0.1	**TP09**	688422	12/11/2019														7.1	<5				
09_1_07	**TP09**	692905	12/11/2019														13					
10_0_0.1	**TP10**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					8.6					
10_1_0.7	**TP10**	688422	12/11/2019													<100	11	<5	<5			
11_0_0.2	**TP11**	688422	12/11/2019														9.3					
11_1_0.8	**TP11**	688422	12/11/2019										17	32	240		15			6.5	0.1	3.6
12_0_0.1	**TP12**	688422	12/11/2019														6.0	<5				
13_0_0.1	**TP13**	688422	12/11/2019													<100	8.1	<5	<5			
13_1_0.6	**TP13**	688422	12/11/2019														11					
14_0_0.1	**TP14**	688422	12/11/2019														9.5	<5				
14_1_0.6	**TP14**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					14					
15_0_0.1	**TP15**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					7.5					
15_1_1.0	**TP15**	688422	12/11/2019														12					
16_0_0.1	**TP16**	688422	12/11/2019														11	<5				
16_1_1.0	**TP16**	688422	12/11/2019										17	30	15		15			5.9	0.3	2.3
17_0_0.2	**TP17**	688422	12/11/2019													<100	9.5	<5	<5			
18_0_0.1	**TP18**	688422	12/11/2019														11					
18_1_1.0	**TP18**	688422	12/11/2019										18	28	<10		13			5.0	0.2	1.6
19_0_0.1	**TP19**	688422	12/11/2019	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5					13					
19_1_0.7	**TP19**	688422	12/11/2019														15	<5				
20_0_0.1	**TP20**	688422	12/11/2019														10	<5				
20_1_0.8	**TP20**	688422	12/11/2019														14					
MW01_4M	**MW01**	694532	18/12/2019														21					
MW01_5M	**MW01**	694532	18/12/2019														24					
MW01_6M	**MW01**	694532	18/12/2019														26					
MW02_4M	**MW02**	694532	18/12/2019														20					
MW02_5M	**MW02**	694532	18/12/2019														23					
MW03_4M	**MW03**	694532	18/12/2019														24					
MW03_5M	**MW03**	694532	18/12/2019														25					
MW04_4M	**MW04**	694532	18/12/2019														25					
MW04_5M	**MW04**	694532	18/12/2019														23					
MW04_6M	**MW04**	694532	18/12/2019														23					

CHAIN OF CUSTODY RECORD

ABN 50 005 085 521

Eurofins | mgt Sydney Lab Unit F3 Building F, 16 Mars Road, Lane Cove West, NSW 2066 P : +61 2 9900 8400 E : EnviroSampleNSW@eurofins.com.au

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Company	AGON ENVIRONMENTAL	Purchase Order		Project Manager	JOHN IDDLES
Address	1/41 Jessop Crescent Berrimah 0828	Eurofins | mgt Quote №		Project №	JF1006
Contact Name	Robyn Maurer				
Contact Phone №	0428 547 849				
Special Direction	ANALYSIS: B12A and Semi Vol CHC 3 DAY TAT remaining analysis STD TAT				
Relinquished by (Signature)					
(Time / Date)	___:___				

Project Name	JOHN STOKES SQUARE
Electronic Results Format	ESDAT
Email for Results	robyn.maurer@agonenviro.com.au; sophie.hambour@agonenviro.com.au; INVOICE: Finance@agonenviro.com.au
Turn Around Requirements	1 DAY* 2 DAY* 3 DAY* * Surcharges apply; 5 DAY (Std.) Other ( )

Analysis (Note Where metals are requested, please specify "Total" or "Filtered")

№	Client Sample ID	Date	Matrix	M13A: METALS	SEMI VOL CHC	B3: PAH, PHENOLS	B12A: TRH, BTEXN, Oxygenates	B14: OCP OPP	pH	TDS	B11C: Cation	B11 E: Anion	B1: TRH BTEXN	HOLD	Containers: 1L Plastic	250mL Plastic	125mL Plastic	200mL Amber Glass	40mL vial	125mL Amber Glass	Sample Comments / DG Hazard Warning
1	JF1066_MW01_201021	21.01.2020	W	X	X	X	X	X	X	X	X	X									1 x 500ml plastic,
2	JF1066_MW01_201022	22.01.2020		X	X	X		X	X	X	X	X	X								PLEASE FORWARD 2 x VOC and Metal vials to ALS. Hold remaining VOC's 3 x 60ml plastic
3	JF1066_MW02_201022	22.01.2020	W	X	X	X	X	X	X	X	X	X									
4	JF1066_MW03_201022	22.01.2020	W	X	X	X	X	X	X	X	X	X									
5	JF1066_MW04_201022	22.01.2020	W	X	X	X	X	X	X	X	X	X									
6	JF1066_MW04B_201022	22.01.2020	W	X									X								Hold all others unless advised
7	JF1066_T1_201022	22.01.2020	W	X																	Hold all others unless advised
8	JF1066_Trip_201022	22.01.2020	W										X								
9	JF1066_R1_201022	22.01.2020	W	X									X								
10																					
11																					
12																					

Method of Shipment: Courier (#) Hand Delivered Postal

Laboratory Use Only								
Received By		SYD | BNE | MEL | PER | ADL | NEW | DAR	Date	___/___/___	Time	___:___	Signature	Temperature
Received By	Mollie Reeve	SYD | BNE (MEL) | PER | ADL | NEW | DAR	Date	22/1/20	Time	9:00	Signature	Report № 69819

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

Agon Environmental Pty Ltd
3/224 Glen Osmond Road
Fullarton
SA 5063

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Robyn Maurer**

Report **698191-W**
Project name JOHN STOKES SQUARE
Project ID JF1006
Received Date Jan 22, 2020

Client Sample ID			**JF1066_WAT01_201021**	**JF1066_WAT01_201022**	**JF1066_WAT02_201022**	**JF1066_WAT03_201022**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M20-Ja21725**	**M20-Ja21726**	**M20-Ja21727**	**M20-Ja21728**
Date Sampled			**Jan 21, 2020**	**Jan 22, 2020**	**Jan 22, 2020**	**Jan 22, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	0.08	-	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	0.3	-	0.2	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	0.38	-	0.2	< 0.1
Ether Oxygenates						
Methyl-tert-Butyl Ether	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Di-isopropyl Ether*	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Ethyl-tert Butyl Ether*	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Tertiary Amyl Methyl Ether*	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Tertiary Butyl Alcohol*	0.025	mg/L	< 0.025	-	< 0.025	< 0.025
BTEX						
Benzene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	-	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	125	-	128	85
Halogenated Volatile Organics						
1.1-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001

Client Sample ID			JF1066_WAT01_201021	JF1066_WAT01_201022	JF1066_WAT02_201022	JF1066_WAT03_201022
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M20-Ja21725	M20-Ja21726	M20-Ja21727	M20-Ja21728
Date Sampled			Jan 21, 2020	Jan 22, 2020	Jan 22, 2020	Jan 22, 2020
Test/Reference	LOR	Unit				
Halogenated Volatile Organics						
Bromoform	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Bromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chloroform	0.005	mg/L	0.006	0.006	0.010	< 0.005
Chloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibromomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Iodomethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Methylene Chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichloroethene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	0.006	0.006	0.01	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	0.006	0.006	0.01	< 0.005
4-Bromofluorobenzene (surr.)	1	%	125	125	128	85
Toluene-d8 (surr.)	1	%	111	94	108	97
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	0.08	-	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	0.08	-	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	0.2	-	0.2	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	-	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	0.28	-	0.2	< 0.1

Client Sample ID			JF1066_WAT06_201022
Sample Matrix			Water
Eurofins Sample No.			M20-Ja21729
Date Sampled			Jan 22, 2020
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1

Client Sample ID			JF1066_WAT06_201022
Sample Matrix			**Water**
Eurofins Sample No.			**M20-Ja21729**
Date Sampled			**Jan 22, 2020**
Test/Reference	LOR	Unit	
Ether Oxygenates			
Methyl-tert-Butyl Ether	0.001	mg/L	< 0.001
Di-isopropyl Ether*	0.001	mg/L	< 0.001
Ethyl-tert Butyl Ether*	0.001	mg/L	< 0.001
Tertiary Amyl Methyl Ether*	0.001	mg/L	< 0.001
Tertiary Butyl Alcohol*	0.025	mg/L	< 0.025
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	126
Halogenated Volatile Organics			
1.1-Dichloroethane	0.001	mg/L	< 0.001
1.1-Dichloroethene	0.001	mg/L	< 0.001
1.1.1-Trichloroethane	0.001	mg/L	< 0.001
1.1.1.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.1.2-Trichloroethane	0.001	mg/L	< 0.001
1.1.2.2-Tetrachloroethane	0.001	mg/L	< 0.001
1.2-Dibromoethane	0.001	mg/L	< 0.001
1.2-Dichlorobenzene	0.001	mg/L	< 0.001
1.2-Dichloroethane	0.001	mg/L	< 0.001
1.2-Dichloropropane	0.001	mg/L	< 0.001
1.2.3-Trichloropropane	0.001	mg/L	< 0.001
1.3-Dichlorobenzene	0.001	mg/L	< 0.001
1.3-Dichloropropane	0.001	mg/L	< 0.001
1.4-Dichlorobenzene	0.001	mg/L	< 0.001
Bromodichloromethane	0.001	mg/L	< 0.001
Bromoform	0.001	mg/L	< 0.001
Bromomethane	0.001	mg/L	< 0.001
Carbon Tetrachloride	0.001	mg/L	< 0.001
Chlorobenzene	0.001	mg/L	< 0.001
Chloroform	0.005	mg/L	< 0.005
Chloromethane	0.001	mg/L	< 0.001
cis-1.2-Dichloroethene	0.001	mg/L	< 0.001
cis-1.3-Dichloropropene	0.001	mg/L	< 0.001
Dibromochloromethane	0.001	mg/L	< 0.001
Dibromomethane	0.001	mg/L	< 0.001
Iodomethane	0.001	mg/L	< 0.001
Methylene Chloride	0.001	mg/L	< 0.001
Tetrachloroethene	0.001	mg/L	< 0.001
trans-1.2-Dichloroethene	0.001	mg/L	< 0.001
trans-1.3-Dichloropropene	0.001	mg/L	< 0.001
Trichloroethene	0.001	mg/L	< 0.001
Trichlorofluoromethane	0.001	mg/L	< 0.001
Vinyl chloride	0.001	mg/L	< 0.001
Vic EPA IWRG 621 CHC (Total)*	0.005	mg/L	< 0.005
Vic EPA IWRG 621 Other CHC (Total)*	0.005	mg/L	< 0.005

Client Sample ID			JF1066_WAT06_201022
Sample Matrix			**Water**
Eurofins Sample No.			**M20-Ja21729**
Date Sampled			**Jan 22, 2020**
Test/Reference	LOR	Unit	
Halogenated Volatile Organics			
4-Bromofluorobenzene (surr.)	1	%	126
Toluene-d8 (surr.)	1	%	92
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B12A			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jan 23, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Ether Oxygenates	Melbourne	Jan 23, 2020	7 Days
- Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices			
BTEX	Melbourne	Jan 23, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jan 23, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jan 23, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Halogenated Volatile Organics	Melbourne	Jan 23, 2020	7 Days
- Method: USEPA 8260 MGT 350A Halogenated Volatile Organics			

eurofins | Environment Testing

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Phone : 0800 856 450
IANZ # 1290

Company Name: Agon Environmental Pty Ltd
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: JOHN STOKES SQUARE
Project ID: JF1006

Order No.:
Report #: 698191
Phone: 08 8338 1009
Fax:

Received: Jan 22, 2020 9:00 AM
Due: Jan 28, 2020
Priority: 3 Day
Contact Name: John Iddles

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						Halogenated Volatile Organics	Eurofins | mgt Suite B12A
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X
Sydney Laboratory - NATA Site # 18217							
Brisbane Laboratory - NATA Site # 20794							
Perth Laboratory - NATA Site # 23736							
External Laboratory							
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**		
1	JF1066_WAT01_201021	Jan 21, 2020		Water	M20-Ja21725	X	X
2	JF1066_WAT01_201022	Jan 22, 2020		Water	M20-Ja21726	X	X
3	JF1066_WAT02_201022	Jan 22, 2020		Water	M20-Ja21727	X	X
4	JF1066_WAT03_201022	Jan 22, 2020		Water	M20-Ja21728	X	X
5	JF1066_WAT06_201022	Jan 22, 2020		Water	M20-Ja21729	X	X
Test Counts						5	5

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
Ether Oxygenates							
Methyl-tert-Butyl Ether	mg/L	< 0.001			0.001	Pass	
Di-isopropyl Ether*	mg/L	< 0.001			0.001	Pass	
Ethyl-tert Butyl Ether*	mg/L	< 0.001			0.001	Pass	
Tertiary Amyl Methyl Ether*	mg/L	< 0.001			0.001	Pass	
Tertiary Butyl Alcohol*	mg/L	< 0.025			0.025	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Halogenated Volatile Organics							
1.1-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.1-Dichloroethene	mg/L	< 0.001			0.001	Pass	
1.1.1-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.1.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2-Trichloroethane	mg/L	< 0.001			0.001	Pass	
1.1.2.2-Tetrachloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dibromoethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.2-Dichloroethane	mg/L	< 0.001			0.001	Pass	
1.2-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.2.3-Trichloropropane	mg/L	< 0.001			0.001	Pass	
1.3-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
1.3-Dichloropropane	mg/L	< 0.001			0.001	Pass	
1.4-Dichlorobenzene	mg/L	< 0.001			0.001	Pass	
Bromodichloromethane	mg/L	< 0.001			0.001	Pass	
Bromoform	mg/L	< 0.001			0.001	Pass	
Bromomethane	mg/L	< 0.001			0.001	Pass	
Carbon Tetrachloride	mg/L	< 0.001			0.001	Pass	
Chlorobenzene	mg/L	< 0.001			0.001	Pass	
Chloroform	mg/L	< 0.005			0.005	Pass	
Chloromethane	mg/L	< 0.001			0.001	Pass	
cis-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	
cis-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Dibromochloromethane	mg/L	< 0.001			0.001	Pass	
Dibromomethane	mg/L	< 0.001			0.001	Pass	
Iodomethane	mg/L	< 0.001			0.001	Pass	
Methylene Chloride	mg/L	< 0.001			0.001	Pass	
Tetrachloroethene	mg/L	< 0.001			0.001	Pass	
trans-1.2-Dichloroethene	mg/L	< 0.001			0.001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
trans-1.3-Dichloropropene	mg/L	< 0.001			0.001	Pass	
Trichloroethene	mg/L	< 0.001			0.001	Pass	
Trichlorofluoromethane	mg/L	< 0.001			0.001	Pass	
Vinyl chloride	mg/L	< 0.001			0.001	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	105			70-130	Pass	
TRH C10-C14	%	126			70-130	Pass	
LCS - % Recovery							
Ether Oxygenates							
Methyl-tert-Butyl Ether	%	83			70-130	Pass	
Di-isopropyl Ether*	%	104			75-125	Pass	
Ethyl-tert Butyl Ether*	%	106			75-125	Pass	
Tertiary Amyl Methyl Ether*	%	103			75-125	Pass	
Tertiary Butyl Alcohol*	%	104			75-125	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	90			70-130	Pass	
Toluene	%	94			70-130	Pass	
Ethylbenzene	%	98			70-130	Pass	
m&p-Xylenes	%	98			70-130	Pass	
Xylenes - Total	%	97			70-130	Pass	
LCS - % Recovery							
Halogenated Volatile Organics							
1.1-Dichloroethene	%	80			70-130	Pass	
1.1.1-Trichloroethane	%	86			70-130	Pass	
1.2-Dichlorobenzene	%	99			70-130	Pass	
1.2-Dichloroethane	%	100			70-130	Pass	
Trichloroethene	%	90			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	87			70-130	Pass	
TRH C6-C10	%	101			70-130	Pass	
TRH >C10-C16	%	120			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ja19177	NCP	%	125			70-130	Pass	
Spike - % Recovery									
Ether Oxygenates				Result 1					
Methyl-tert-Butyl Ether	M20-Ja19177	NCP	%	79			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ja19177	NCP	%	101			70-130	Pass	
Toluene	M20-Ja19177	NCP	%	109			70-130	Pass	
Ethylbenzene	M20-Ja19177	NCP	%	105			70-130	Pass	
m&p-Xylenes	M20-Ja19177	NCP	%	109			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
o-Xylene	M20-Ja19177	NCP	%	109			70-130	Pass	
Xylenes - Total	M20-Ja19177	NCP	%	109			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ja19177	NCP	%	93			70-130	Pass	
TRH C6-C10	M20-Ja19177	NCP	%	122			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ja21728	CP	%	77			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ja21728	CP	%	73			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ja19063	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Ether Oxygenates				Result 1	Result 2	RPD			
Methyl-tert-Butyl Ether	M20-Ja19063	NCP	mg/L	0.002	0.002	4.0	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ja19063	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M20-Ja19063	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M20-Ja19063	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M20-Ja19063	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M20-Ja19063	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	M20-Ja19063	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ja19063	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M20-Ja19063	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Duplicate									
Halogenated Volatile Organics				Result 1	Result 2	RPD			
1.1-Dichloroethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1-Dichloroethene	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1-Trichloroethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.1.2-Tetrachloroethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2-Trichloroethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.1.2.2-Tetrachloroethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dibromoethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichlorobenzene	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloroethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2-Dichloropropane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.2.3-Trichloropropane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichlorobenzene	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.3-Dichloropropane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
1.4-Dichlorobenzene	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromodichloromethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromoform	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Bromomethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Carbon Tetrachloride	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chlorobenzene	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Chloroform	S20-Ja16497	NCP	mg/L	< 0.005	< 0.005	<1	30%	Pass	
Chloromethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	

Duplicate									
Halogenated Volatile Organics				Result 1	Result 2	RPD			
cis-1.2-Dichloroethene	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
cis-1.3-Dichloropropene	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromochloromethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Dibromomethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Iodomethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Methylene Chloride	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Tetrachloroethene	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.2-Dichloroethene	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
trans-1.3-Dichloropropene	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichloroethene	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Trichlorofluoromethane	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Vinyl chloride	S20-Ja16497	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ja21727	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M20-Ja21727	CP	mg/L	0.2	0.2	9.0	30%	Pass	
TRH C29-C36	M20-Ja21727	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ja21727	CP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M20-Ja21727	CP	mg/L	0.2	0.2	10	30%	Pass	
TRH >C34-C40	M20-Ja21727	CP	mg/L	< 0.1	< 0.1	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	No
Appropriate sample containers have been used	No
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

Authorised By

Michael Cassidy	Analytical Services Manager
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Robyn Maurer**

Report **698341-W**
Project name JOHN STOKES SQUARE
Project ID JF1006
Received Date Jan 22, 2020

Client Sample ID			**JF1066_MW01_201021**	**JF1066_MW02_201022**	**JF1066_MW03_201022**	**JF1066_MW04_201022**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M20-Ja23007**	**M20-Ja23008**	**M20-Ja23009**	**M20-Ja23010**
Date Sampled			**Jan 21, 2020**	**Jan 22, 2020**	**Jan 22, 2020**	**Jan 22, 2020**
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Acenaphthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Acenaphthylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benz(a)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(a)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(b&j)fluoranthene[N07]	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(g.h.i)perylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Benzo(k)fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Chrysene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibenz(a.h)anthracene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluoranthene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Fluorene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Indeno(1.2.3-cd)pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Naphthalene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Phenanthrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Pyrene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Total PAH*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
2-Fluorobiphenyl (surr.)	1	%	64	55	111	57
p-Terphenyl-d14 (surr.)	1	%	77	65	113	80
Organochlorine Pesticides						
Chlordanes - Total	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4.4'-DDD	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDE	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDT	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
a-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Aldrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
b-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
d-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dieldrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan I	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan II	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan sulphate	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin aldehyde	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin ketone	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Client Sample ID			JF1066_MW01_201021	JF1066_MW02_201022	JF1066_MW03_201022	JF1066_MW04_201022
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M20-Ja23007**	**M20-Ja23008**	**M20-Ja23009**	**M20-Ja23010**
Date Sampled			**Jan 21, 2020**	**Jan 22, 2020**	**Jan 22, 2020**	**Jan 22, 2020**
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor epoxide	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Methoxychlor	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Toxaphene	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibutylchlorendate (surr.)	1	%	84	75	112	83
Tetrachloro-m-xylene (surr.)	1	%	65	60	127	57
Organophosphorus Pesticides						
Azinphos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Bolstar	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorfenvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorpyrifos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Coumaphos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-S	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-O	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Diazinon	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dichlorvos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dimethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Disulfoton	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
EPN	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethoprop	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenitrothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fensulfothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Malathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Merphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Mevinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Monocrotophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Naled	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Omethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Phorate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Pyrazophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ronnel	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Terbufos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tokuthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Trichloronate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Triphenylphosphate (surr.)	1	%	76	62	137	64

Client Sample ID			JF1066_MW01_201021	JF1066_MW02_201022	JF1066_MW03_201022	JF1066_MW04_201022
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M20-Ja23007**	**M20-Ja23008**	**M20-Ja23009**	**M20-Ja23010**
Date Sampled			**Jan 21, 2020**	**Jan 22, 2020**	**Jan 22, 2020**	**Jan 22, 2020**
Test/Reference	LOR	Unit				
Phenols (Halogenated)						
2-Chlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4.5-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4.6-Trichlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.6-Dichlorophenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Chloro-3-methylphenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Pentachlorophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Tetrachlorophenols - Total	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Total Halogenated Phenol*	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Phenols (non-Halogenated)						
2-Cyclohexyl-4.6-dinitrophenol	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
2-Methyl-4.6-dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
2-Methylphenol (o-Cresol)	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2-Nitrophenol	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
2.4-Dimethylphenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
2.4-Dinitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
3&4-Methylphenol (m&p-Cresol)	0.006	mg/L	< 0.006	< 0.006	< 0.006	< 0.006
4-Nitrophenol	0.03	mg/L	< 0.03	< 0.03	< 0.03	< 0.03
Dinoseb	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
Total Non-Halogenated Phenol*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Phenol-d6 (surr.)	1	%	44	35	69	40
Chloride	1	mg/L	190	38	17	16
pH (at 25°C)	0.1	pH Units	6.1	6.2	4.5	4.9
Sulphate (as SO4)	5	mg/L	56	17	26	32
Total Dissolved Solids Dried at 180°C ± 2°C	10	mg/L	430	120	120	150
Alkalinity (speciated)						
Bicarbonate Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Carbonate Alkalinity (as CaCO3)	10	mg/L	< 10	< 10	< 10	< 10
Hydroxide Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Total Alkalinity (as CaCO3)	20	mg/L	< 20	< 20	< 20	< 20
Heavy Metals						
Arsenic	0.001	mg/L	0.002	< 0.001	-	-
Arsenic (filtered)	0.001	mg/L	-	-	< 0.001	< 0.001
Beryllium	0.001	mg/L	< 0.001	< 0.001	-	-
Beryllium (filtered)	0.001	mg/L	-	-	< 0.001	< 0.001
Boron	0.05	mg/L	< 0.05	< 0.05	-	-
Boron (filtered)	0.05	mg/L	-	-	< 0.05	< 0.05
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	-	-
Cadmium (filtered)	0.0002	mg/L	-	-	< 0.0002	< 0.0002
Chromium	0.001	mg/L	0.014	< 0.001	-	-
Chromium (filtered)	0.001	mg/L	-	-	< 0.001	< 0.001
Cobalt	0.001	mg/L	0.006	0.002	-	-
Cobalt (filtered)	0.001	mg/L	-	-	0.005	0.002
Copper	0.001	mg/L	0.017	0.001	-	-
Copper (filtered)	0.001	mg/L	-	-	0.006	0.004
Lead	0.001	mg/L	0.035	0.009	-	-

Client Sample ID			JF1066_MW01_201021	JF1066_MW02_201022	JF1066_MW03_201022	JF1066_MW04_201022
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M20-Ja23007**	**M20-Ja23008**	**M20-Ja23009**	**M20-Ja23010**
Date Sampled			**Jan 21, 2020**	**Jan 22, 2020**	**Jan 22, 2020**	**Jan 22, 2020**
Test/Reference	LOR	Unit				
Heavy Metals						
Lead (filtered)	0.001	mg/L	-	-	0.005	0.002
Manganese	0.005	mg/L	0.21	0.19	-	-
Manganese (filtered)	0.005	mg/L	-	-	0.14	0.032
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	-	-
Mercury (filtered)	0.0001	mg/L	-	-	< 0.0001	< 0.0001
Nickel	0.001	mg/L	0.12	0.009	-	-
Nickel (filtered)	0.001	mg/L	-	-	0.025	0.016
Selenium	0.001	mg/L	< 0.001	< 0.001	-	-
Selenium (filtered)	0.001	mg/L	-	-	< 0.001	< 0.001
Zinc	0.005	mg/L	0.26	0.044	-	-
Zinc (filtered)	0.005	mg/L	-	-	0.093	0.034
Alkali Metals						
Calcium	0.5	mg/L	11	7.7	5.3	5.7
Magnesium	0.5	mg/L	10	3.5	2.7	4.6
Potassium	0.5	mg/L	1.9	1.0	0.6	< 0.5
Sodium	0.5	mg/L	100	17	15	16

Client Sample ID			JF1066_WAT4B_201022	JF1066_TRIPLICATE_201022	JF1066_T1_201022	JF1066_R1_201022
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M20-Ja23011**	**M20-Ja23012**	**M20-Ja23013**	**M20-Ja23014**
Date Sampled			**Jan 22, 2020**	**Jan 22, 2020**	**Jan 22, 2020**	**Jan 22, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	-	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	-	-	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	-	-	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	-	-	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	-	-	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	-	-	< 0.1
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	< 0.02	-	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	-	-	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	-	-	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	-	-	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	-	-	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	-	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	-	< 0.001	< 0.001
Xylenes - Total	0.003	mg/L	< 0.003	-	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	93	-	99	100

Client Sample ID			JF1066_WAT4B_201022	JF1066_TRIPLICATE_201022	JF1066_T1_201022	JF1066_R1_201022
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M20-Ja23011**	**M20-Ja23012**	**M20-Ja23013**	**M20-Ja23014**
Date Sampled			**Jan 22, 2020**	**Jan 22, 2020**	**Jan 22, 2020**	**Jan 22, 2020**
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic (filtered)	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Beryllium (filtered)	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Boron (filtered)	0.05	mg/L	< 0.05	< 0.05	-	< 0.05
Cadmium (filtered)	0.0002	mg/L	< 0.0002	< 0.0002	-	< 0.0002
Chromium (filtered)	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Cobalt (filtered)	0.001	mg/L	0.001	< 0.001	-	< 0.001
Copper (filtered)	0.001	mg/L	0.004	0.003	-	< 0.001
Lead (filtered)	0.001	mg/L	0.002	0.003	-	< 0.001
Manganese (filtered)	0.005	mg/L	0.030	0.044	-	< 0.005
Mercury (filtered)	0.0001	mg/L	< 0.0001	< 0.0001	-	< 0.0001
Nickel (filtered)	0.001	mg/L	0.017	< 0.001	-	< 0.001
Selenium (filtered)	0.001	mg/L	< 0.001	< 0.001	-	< 0.001
Zinc (filtered)	0.005	mg/L	0.032	0.025	-	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jan 24, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons	Melbourne	Jan 24, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Jan 24, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Jan 24, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins | mgt Suite B1			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Jan 24, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Eurofins | mgt Suite B3			
Polycyclic Aromatic Hydrocarbons	Melbourne	Jan 24, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (Halogenated)	Melbourne	Jan 24, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Phenols (non-Halogenated)	Melbourne	Jan 24, 2020	7 Days
- Method: LTM-ORG-2130 PAH and Phenols in Soil and Water			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Jan 24, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Jan 24, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
Eurofins | mgt Suite B11E: Cl/SO4/Alkalinity			
Chloride	Melbourne	Jan 24, 2020	28 Days
- Method: LTM-INO-4090 Chloride by Discrete Analyser			
Sulphate (as SO4)	Melbourne	Jan 24, 2020	28 Days
- Method: LTM-INO-4110 Sulfate by Discrete Analyser			
Alkalinity (speciated)	Melbourne	Jan 24, 2020	14 Days
- Method: LTM-INO-4250 Alkalinity by Electrometric Titration			
pH (at 25°C)	Melbourne	Jan 24, 2020	0 Hours
- Method: LTM-GEN-7090 pH in water by ISE			
Total Dissolved Solids Dried at 180°C ± 2°C	Melbourne	Jan 24, 2020	7 Days
- Method: LTM-INO-4170 Total Dissolved Solids in Water			
NEPM 2013 Metals without Cr6+ (As, Be, B, Cd, Co, Cr, Cu, Hg, Pb, Ni, Mn, Se, Zn)	Melbourne	Jan 28, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
NEPM 2013 Filtered Metals without Cr6+ (As, Be, B, Cd, Co, Cr, Cu, Hg, Pb, Ni, Mn, Se, Zn)	Melbourne	Jan 28, 2020	28 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B11C: Na/K/Ca/Mg	Melbourne	Jan 24, 2020	180 Days
- Method: LTM-MET-3010 Alkali Metals by ICP-AES			

eurofins | Environment Testing

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Project Name: JOHN STOKES SQUARE
Project ID: JF1006

Order No.:
Report #: 698341
Phone: 08 8338 1009
Fax:

Received: Jan 22, 2020 11:00 AM
Due: Jan 30, 2020
Priority: 5 Day
Contact Name: Robyn Maurer

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						pH (at 25°C)	Total Dissolved Solids Dried at 180°C ± 2°C	Eurofins | mgt Suite B3	Eurofins | mgt Suite B14	Eurofins | mgt Suite B1	BTEXN and Volatile TRH	NEPM 2013 Metals without Cr6+ (As, Be, B, Cd, Co, Cr, Cu, Hg, Pb, Ni, Mn, Se, Zn)	Eurofins | mgt Suite B11E: Cl/SO4/Alkalinity	Eurofins | mgt Suite B11C: Na/K/Ca/Mg
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
External Laboratory														
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**									
1	JF1066_MW01_201021	Jan 21, 2020		Water	M20-Ja23007	X	X	X	X			X	X	X
2	JF1066_MW02_201022	Jan 22, 2020		Water	M20-Ja23008	X	X	X	X			X	X	X
3	JF1066_MW03_201022	Jan 22, 2020		Water	M20-Ja23009	X	X	X	X			X	X	X
4	JF1066_MW04_201022	Jan 22, 2020		Water	M20-Ja23010	X	X	X	X			X	X	X
5	JF1066_WAT4B_201022	Jan 22, 2020		Water	M20-Ja23011					X		X		
6	JF1066_TRIPLICATE_20102	Jan 22, 2020		Water	M20-Ja23012					X		X		

eurofins | Environment Testing

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Company Name: Agon Environmental Pty Ltd
Address: 3/224 Glen Osmond Road
Fullarton
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Project Name: JOHN STOKES SQUARE
Project ID: JF1006

Order No.:
Report #: 698341
Phone: 08 8338 1009
Fax:

Received: Jan 22, 2020 11:00 AM
Due: Jan 30, 2020
Priority: 5 Day
Contact Name: Robyn Maurer

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						pH (at 25°C)	Total Dissolved Solids Dried at 180°C ± 2°C	Eurofins | mgt Suite B3	Eurofins | mgt Suite B14	Eurofins | mgt Suite B1	BTEXN and Volatile TRH	NEPM 2013 Metals without Cr6+ (As, Be, B, Cd, Co, Cr, Cu, Hg, Pb, Ni, Mn, Se, Zn)	Eurofins | mgt Suite B11E: Cl/SO4/Alkalinity	Eurofins | mgt Suite B11C: Na/K/Ca/Mg
Melbourne Laboratory - NATA Site # 1254 & 14271						X	X	X	X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217														
Brisbane Laboratory - NATA Site # 20794														
Perth Laboratory - NATA Site # 23736														
	2													
7	JF1066_T1_201022	Jan 22, 2020		Water	M20-Ja23013						X			
8	JF1066_R1_201022	Jan 22, 2020		Water	M20-Ja23014					X		X		
Test Counts						4	4	4	4	3	1	7	4	4

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total	mg/L	< 0.003			0.003	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/L	< 0.001			0.001	Pass	
Acenaphthylene	mg/L	< 0.001			0.001	Pass	
Anthracene	mg/L	< 0.001			0.001	Pass	
Benz(a)anthracene	mg/L	< 0.001			0.001	Pass	
Benzo(a)pyrene	mg/L	< 0.001			0.001	Pass	
Benzo(b&j)fluoranthene	mg/L	< 0.001			0.001	Pass	
Benzo(g.h.i)perylene	mg/L	< 0.001			0.001	Pass	
Benzo(k)fluoranthene	mg/L	< 0.001			0.001	Pass	
Chrysene	mg/L	< 0.001			0.001	Pass	
Dibenz(a.h)anthracene	mg/L	< 0.001			0.001	Pass	
Fluoranthene	mg/L	< 0.001			0.001	Pass	
Fluorene	mg/L	< 0.001			0.001	Pass	
Indeno(1.2.3-cd)pyrene	mg/L	< 0.001			0.001	Pass	
Naphthalene	mg/L	< 0.001			0.001	Pass	
Phenanthrene	mg/L	< 0.001			0.001	Pass	
Pyrene	mg/L	< 0.001			0.001	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	
Demeton-S	mg/L	< 0.02			0.02	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Phenols (Halogenated)							
2-Chlorophenol	mg/L	< 0.003			0.003	Pass	
2.4-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
2.4.5-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.4.6-Trichlorophenol	mg/L	< 0.01			0.01	Pass	
2.6-Dichlorophenol	mg/L	< 0.003			0.003	Pass	
4-Chloro-3-methylphenol	mg/L	< 0.01			0.01	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorophenol	mg/L	< 0.01			0.01	Pass	
Tetrachlorophenols - Total	mg/L	< 0.03			0.03	Pass	
Method Blank							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	mg/L	< 0.1			0.1	Pass	
2-Methyl-4.6-dinitrophenol	mg/L	< 0.03			0.03	Pass	
2-Methylphenol (o-Cresol)	mg/L	< 0.003			0.003	Pass	
2-Nitrophenol	mg/L	< 0.01			0.01	Pass	
2.4-Dimethylphenol	mg/L	< 0.003			0.003	Pass	
2.4-Dinitrophenol	mg/L	< 0.03			0.03	Pass	
3&4-Methylphenol (m&p-Cresol)	mg/L	< 0.006			0.006	Pass	
4-Nitrophenol	mg/L	< 0.03			0.03	Pass	
Dinoseb	mg/L	< 0.1			0.1	Pass	
Phenol	mg/L	< 0.003			0.003	Pass	
Method Blank							
Chloride	mg/L	< 1			1	Pass	
Sulphate (as SO4)	mg/L	< 5			5	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	mg/L	< 10			10	Pass	
Method Blank							
Alkalinity (speciated)							
Bicarbonate Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Carbonate Alkalinity (as CaCO3)	mg/L	< 10			10	Pass	
Hydroxide Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Total Alkalinity (as CaCO3)	mg/L	< 20			20	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Arsenic (filtered)	mg/L	< 0.001			0.001	Pass	
Beryllium	mg/L	< 0.001			0.001	Pass	
Beryllium (filtered)	mg/L	< 0.001			0.001	Pass	
Boron	mg/L	< 0.05			0.05	Pass	
Boron (filtered)	mg/L	< 0.05			0.05	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Cadmium (filtered)	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Chromium (filtered)	mg/L	< 0.001			0.001	Pass	
Cobalt	mg/L	< 0.001			0.001	Pass	
Cobalt (filtered)	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Copper (filtered)	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Lead (filtered)	mg/L	< 0.001			0.001	Pass	
Manganese	mg/L	< 0.005			0.005	Pass	
Manganese (filtered)	mg/L	< 0.005			0.005	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Mercury (filtered)	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Nickel (filtered)	mg/L	< 0.001			0.001	Pass	
Selenium	mg/L	< 0.001			0.001	Pass	
Selenium (filtered)	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
Zinc (filtered)	mg/L	< 0.005			0.005	Pass	
Method Blank							
Alkali Metals							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Calcium	mg/L	< 0.5			0.5	Pass	
Magnesium	mg/L	< 0.5			0.5	Pass	
Potassium	mg/L	< 0.5			0.5	Pass	
Sodium	mg/L	< 0.5			0.5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	113			70-130	Pass	
TRH C6-C10	%	105			70-130	Pass	
TRH >C10-C16	%	108			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	110			70-130	Pass	
TRH C10-C14	%	113			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	122			70-130	Pass	
Toluene	%	118			70-130	Pass	
Ethylbenzene	%	102			70-130	Pass	
m&p-Xylenes	%	108			70-130	Pass	
Xylenes - Total	%	110			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	79			70-130	Pass	
Acenaphthylene	%	76			70-130	Pass	
Anthracene	%	99			70-130	Pass	
Benz(a)anthracene	%	74			70-130	Pass	
Benzo(a)pyrene	%	76			70-130	Pass	
Benzo(b&j)fluoranthene	%	103			70-130	Pass	
Benzo(g.h.i)perylene	%	86			70-130	Pass	
Benzo(k)fluoranthene	%	87			70-130	Pass	
Chrysene	%	78			70-130	Pass	
Dibenz(a.h)anthracene	%	72			70-130	Pass	
Fluoranthene	%	74			70-130	Pass	
Fluorene	%	81			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	99			70-130	Pass	
Naphthalene	%	87			70-130	Pass	
Phenanthrene	%	71			70-130	Pass	
Pyrene	%	78			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	77			70-130	Pass	
Dimethoate	%	75			70-130	Pass	
Ethion	%	106			70-130	Pass	
Fenitrothion	%	93			70-130	Pass	
Methyl parathion	%	92			70-130	Pass	
Mevinphos	%	96			70-130	Pass	
LCS - % Recovery							
Phenols (Halogenated)							
2-Chlorophenol	%	71			30-130	Pass	
2.4-Dichlorophenol	%	73			30-130	Pass	
2.4.5-Trichlorophenol	%	103			30-130	Pass	
2.4.6-Trichlorophenol	%	72			30-130	Pass	
2.6-Dichlorophenol	%	81			30-130	Pass	
4-Chloro-3-methylphenol	%	67			30-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Pentachlorophenol	%	70			30-130	Pass	
Tetrachlorophenols - Total	%	53			30-130	Pass	
LCS - % Recovery							
Phenols (non-Halogenated)							
2-Cyclohexyl-4.6-dinitrophenol	%	55			30-130	Pass	
2-Methyl-4.6-dinitrophenol	%	75			30-130	Pass	
2-Methylphenol (o-Cresol)	%	57			30-130	Pass	
2-Nitrophenol	%	83			30-130	Pass	
2.4-Dimethylphenol	%	63			30-130	Pass	
2.4-Dinitrophenol	%	62			30-130	Pass	
3&4-Methylphenol (m&p-Cresol)	%	55			30-130	Pass	
4-Nitrophenol	%	36			30-130	Pass	
Dinoseb	%	72			30-130	Pass	
Phenol	%	39			30-130	Pass	
LCS - % Recovery							
Chloride	%	102			70-130	Pass	
Sulphate (as SO4)	%	114			70-130	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	%	101			70-130	Pass	
LCS - % Recovery							
Alkalinity (speciated)							
Carbonate Alkalinity (as CaCO3)	%	80			70-130	Pass	
Total Alkalinity (as CaCO3)	%	86			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	91			80-120	Pass	
Beryllium	%	83			80-120	Pass	
Boron	%	106			80-120	Pass	
Cadmium	%	94			80-120	Pass	
Chromium	%	95			80-120	Pass	
Cobalt	%	101			80-120	Pass	
Copper	%	100			80-120	Pass	
Lead	%	100			80-120	Pass	
Manganese	%	100			80-120	Pass	
Mercury	%	88			75-125	Pass	
Nickel	%	100			80-120	Pass	
Selenium	%	89			80-120	Pass	
Zinc	%	98			80-120	Pass	
LCS - % Recovery							
Alkali Metals							
Calcium	%	103			70-130	Pass	
Magnesium	%	103			70-130	Pass	
Potassium	%	103			70-130	Pass	
Sodium	%	110			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
				Result 1					
Chloride	M20-Ja20448	NCP	%	128			70-130	Pass	
Sulphate (as SO4)	M20-Ja20448	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ja26667	NCP	%	91			75-125	Pass	
Beryllium	M20-Ja26667	NCP	%	85			75-125	Pass	
Boron	M20-Ja19551	NCP	%	122			75-125	Pass	
Cadmium	M20-Ja26667	NCP	%	95			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chromium	M20-Ja26667	NCP	%	96			75-125	Pass	
Cobalt	M20-Ja26667	NCP	%	101			75-125	Pass	
Copper	M20-Ja26667	NCP	%	96			75-125	Pass	
Lead	M20-Ja26667	NCP	%	104			75-125	Pass	
Manganese	M20-Ja26667	NCP	%	97			75-125	Pass	
Mercury	M20-Ja26667	NCP	%	96			70-130	Pass	
Nickel	M20-Ja26667	NCP	%	98			75-125	Pass	
Selenium	M20-Ja26667	NCP	%	89			75-125	Pass	
Zinc	M20-Ja26667	NCP	%	96			75-125	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Calcium	M20-Ja21885	NCP	%	94			70-130	Pass	
Magnesium	M20-Ja21885	NCP	%	95			70-130	Pass	
Potassium	B20-Ja19831	NCP	%	97			70-130	Pass	
Spike - % Recovery									
Alkali Metals				Result 1					
Sodium	M20-Ja23008	CP	%	94			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic (filtered)	M20-Ja19673	NCP	%	99			70-130	Pass	
Beryllium (filtered)	M20-Ja19673	NCP	%	100			75-125	Pass	
Boron (filtered)	M20-Ja19673	NCP	%	60			75-125	Fail	Q08
Cadmium (filtered)	M20-Ja19673	NCP	%	96			70-130	Pass	
Chromium (filtered)	M20-Ja19673	NCP	%	99			70-130	Pass	
Cobalt (filtered)	M20-Ja19673	NCP	%	97			75-125	Pass	
Copper (filtered)	M20-Ja19673	NCP	%	95			70-130	Pass	
Lead (filtered)	M20-Ja19673	NCP	%	99			70-130	Pass	
Manganese (filtered)	M20-Ja19673	NCP	%	82			70-130	Pass	
Mercury (filtered)	M20-Ja19673	NCP	%	101			70-130	Pass	
Nickel (filtered)	M20-Ja19673	NCP	%	96			70-130	Pass	
Selenium (filtered)	M20-Ja19673	NCP	%	72			70-130	Pass	
Zinc (filtered)	M20-Ja19673	NCP	%	21			70-130	Fail	Q08
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ja21445	NCP	%	112			70-130	Pass	
TRH C6-C10	M20-Ja21445	NCP	%	97			70-130	Pass	
TRH >C10-C16	B20-Ja20370	NCP	%	109			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ja21445	NCP	%	102			70-130	Pass	
TRH C10-C14	B20-Ja20370	NCP	%	116			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ja21445	NCP	%	116			70-130	Pass	
Toluene	M20-Ja21445	NCP	%	113			70-130	Pass	
Ethylbenzene	M20-Ja21445	NCP	%	103			70-130	Pass	
m&p-Xylenes	M20-Ja21445	NCP	%	103			70-130	Pass	
o-Xylene	M20-Ja21445	NCP	%	107			70-130	Pass	
Xylenes - Total	M20-Ja21445	NCP	%	105			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
				Result 1	Result 2	RPD			
Chloride	M20-Ja20447	NCP	mg/L	170	150	14	30%	Pass	
pH (at 25°C)	M20-Ja21764	NCP	pH Units	8.1	8.1	pass	30%	Pass	
Sulphate (as SO4)	M20-Ja20447	NCP	mg/L	44	47	6.0	30%	Pass	
Total Dissolved Solids Dried at 180°C ± 2°C	M20-Ja21442	NCP	mg/L	7100	6600	8.0	30%	Pass	
Duplicate									
Alkalinity (speciated)				Result 1	Result 2	RPD			
Bicarbonate Alkalinity (as CaCO3)	M20-Ja21764	NCP	mg/L	910	840	8.0	30%	Pass	
Carbonate Alkalinity (as CaCO3)	M20-Ja21764	NCP	mg/L	< 10	< 10	<1	30%	Pass	
Hydroxide Alkalinity (as CaCO3)	M20-Ja21764	NCP	mg/L	< 20	< 20	<1	30%	Pass	
Total Alkalinity (as CaCO3)	M20-Ja21764	NCP	mg/L	910	840	8.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ja26667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Beryllium	M20-Ja26667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Boron	M20-Ja19551	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Cadmium	M20-Ja26667	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M20-Ja26667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cobalt	M20-Ja26667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M20-Ja26667	NCP	mg/L	0.042	0.043	2.0	30%	Pass	
Lead	M20-Ja26667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Manganese	M20-Ja26667	NCP	mg/L	0.030	0.030	<1	30%	Pass	
Mercury	M20-Ja26667	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel	M20-Ja26667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Selenium	M20-Ja26667	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Zinc	M20-Ja26667	NCP	mg/L	0.026	0.028	6.0	30%	Pass	
Duplicate									
Alkali Metals				Result 1	Result 2	RPD			
Calcium	M20-Ja23008	CP	mg/L	7.7	5.9	27	30%	Pass	
Magnesium	M20-Ja23008	CP	mg/L	3.5	3.1	14	30%	Pass	
Potassium	M20-Ja23008	CP	mg/L	1.0	1.1	6.0	30%	Pass	
Sodium	M20-Ja23008	CP	mg/L	17	15	7.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic (filtered)	M20-Ja19673	NCP	mg/L	0.007	0.007	4.0	30%	Pass	
Beryllium (filtered)	M20-Ja19673	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Boron (filtered)	M20-Ja19673	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
Cadmium (filtered)	M20-Ja19673	NCP	mg/L	0.0011	0.0011	1.0	30%	Pass	
Chromium (filtered)	M20-Ja19673	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cobalt (filtered)	M20-Ja19673	NCP	mg/L	0.004	0.004	1.0	30%	Pass	
Copper (filtered)	M20-Ja19673	NCP	mg/L	0.016	0.016	2.0	30%	Pass	
Lead (filtered)	M20-Ja19673	NCP	mg/L	0.010	0.010	2.0	30%	Pass	
Manganese (filtered)	M20-Ja19673	NCP	mg/L	0.16	0.16	3.0	30%	Pass	
Mercury (filtered)	M20-Ja19673	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Nickel (filtered)	M20-Ja19673	NCP	mg/L	0.006	0.006	1.0	30%	Pass	
Selenium (filtered)	M20-Ja19673	NCP	mg/L	0.25	0.25	1.0	30%	Pass	
Zinc (filtered)	M20-Ja19673	NCP	mg/L	0.90	0.92	2.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ja23011	CP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M20-Ja23011	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M20-Ja19788	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M20-Ja19788	NCP	mg/L	< 0.1		<1	30%	Pass	
TRH >C34-C40	M20-Ja19788	NCP	mg/L	< 0.1		<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ja23011	CP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M20-Ja19788	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M20-Ja19788	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	M20-Ja19788	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ja23011	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M20-Ja23011	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M20-Ja23011	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M20-Ja23011	CP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M20-Ja23011	CP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total	M20-Ja23011	CP	mg/L	< 0.003	< 0.003	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

Michael Cassidy	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Julie Kay	Senior Analyst-Inorganic (VIC)
Scott Beddoes	Senior Analyst-Inorganic (VIC)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Agon Environmental Pty Ltd
3/224 Glen Osmond Road
Fullarton
SA 5063

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sophie Hambour**

Report **699081-W**
Project name JOHN STOKES SQUARE
Project ID JF1006
Received Date Jan 29, 2020

Client Sample ID			**JF1066_WAT01_201021**
Sample Matrix			**Water**
Eurofins Sample No.			**M20-Ja28609**
Date Sampled			**Jan 21, 2020**
Test/Reference	LOR	Unit	
TRH - 2013 NEPM Fractions (after silica gel clean-up)			
TRH >C10-C16 (after silica gel clean-up)	0.05	mg/L	< 0.05
TRH >C16-C34 (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH >C34-C40 (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH - 1999 NEPM Fractions (after silica gel clean-up)			
TRH C10-C36 (Total) (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH C10-C14 (after silica gel clean-up)	0.05	mg/L	< 0.05
TRH C15-C28 (after silica gel clean-up)	0.1	mg/L	< 0.1
TRH C29-C36 (after silica gel clean-up)	0.1	mg/L	< 0.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
TRH - 2013 NEPM Fractions (after silica gel clean-up)	Melbourne	Jan 29, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
TRH - 1999 NEPM Fractions (after silica gel clean-up)	Melbourne	Jan 29, 2020	7 Days
- Method: TRH C6-C36 (Silica Gel Cleanup) - MGT 100A			

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Company Name: Agon Environmental Pty Ltd
Address: 3/224 Glen Osmond Road
Fullarton
SA 5063

Project Name: JOHN STOKES SQUARE
Project ID: JF1006

Order No.:
Report #: 699081
Phone: 08 8338 1009
Fax:

Received: Jan 29, 2020 3:14 PM
Due: Feb 3, 2020
Priority: 5 Day
Contact Name: Sophie Hambour

Eurofins Analytical Services Manager : Michael Cassidy

Sample Detail						TRH (after Silica Gel cleanup)
Melbourne Laboratory - NATA Site # 1254 & 14271						X
Sydney Laboratory - NATA Site # 18217						
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
External Laboratory						
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**	
1	JF1066_WAT01_201021	Jan 21, 2020		Water	M20-Ja28609	X
Test Counts						1

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
Method Blank							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	mg/L	< 0.05			0.05	Pass	
TRH C15-C28 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
TRH C29-C36 (after silica gel clean-up)	mg/L	< 0.1			0.1	Pass	
LCS - % Recovery							
TRH - 2013 NEPM Fractions (after silica gel clean-up)							
TRH >C10-C16 (after silica gel clean-up)	%	92			70-130	Pass	
LCS - % Recovery							
TRH - 1999 NEPM Fractions (after silica gel clean-up)							
TRH C10-C14 (after silica gel clean-up)	%	98			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
TRH - 2013 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH >C10-C16 (after silica gel clean-up)	M20-Ja23236	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34 (after silica gel clean-up)	M20-Ja23236	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH >C34-C40 (after silica gel clean-up)	M20-Ja23236	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
TRH - 1999 NEPM Fractions (after silica gel clean-up)				Result 1	Result 2	RPD			
TRH C10-C36 (Total) (after silica gel clean-up)	M20-Ja23236	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C10-C14 (after silica gel clean-up)	M20-Ja23236	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28 (after silica gel clean-up)	M20-Ja23236	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36 (after silica gel clean-up)	M20-Ja23236	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Authorised By

Michael Cassidy	Analytical Services Manager
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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APPENDIX D

Stockpile Characterisation Memorandums

Memorandum

To:	Bill Kmon	At:	HK Solutions
From:	Diana Bedder	At:	SLR Consulting Australia Pty Ltd
Date:	6 May 2020	Ref:	680.10679-M02-v1.0.docx
Subject:	Stockpile Sampling and Characterisation John Stokes Square, Darwin		

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1 Introduction

HK Solutions commissioned SLR Consulting Australia Pty Ltd (SLR) to undertake Stockpile Sampling and Characterisation Assessment at 47 Progress Dr Nightcliff NT 0810 (herein referred to as the "site") (refer to Figure 1, Attachment A).

1.1 Background

This Stockpile Sampling and Characterisation Assessment (the "Assessment") was part of the "John Stokes Square housing complex" project, currently under redevelopment. At the time of this Assessment, excavation activities were also being undertaken at the site.

1.2 Objective

The objective of this Assessment was to determine if stockpiled soil was suitable for on-site re-use. It is understood, should this assessment deem the stockpiled soil be unsuitable for re-use then the analytical results will be used to facilitate off-site disposal.

1.3 Scope of Works

The following scope of works were undertaken to meet the aforementioned objective.

- SLR supervision of excavation, screening and stockpiling of excavated spoil
- Completion of an inspection and sampling program to characterise each stockpile (STP).
- Samples were collected and analysed for contaminants of potential concern (CoPCs) at a National Association of Testing Authorities (NATA) accredited laboratory.
- CoPCs were deemed to be:
  - Total Recoverable Hydrocarbons (TRH).
  - Total Petroleum Hydrocarbons (TPH).
  - Benzene, Toluene, Ethylbenzene and Xylene (BTEX).

- Organochlorine/ Organophosphate (OC/OP) pesticides.
- Metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc, and mercury).
- Asbestos.

- Submission of all soil samples to a National Association of Testing Authorities (NATA) accredited laboratory, with selected samples analysed for key CoPCs.
- Preparation of this report.

1.4 Limitations

The following information will assist in understanding the uncertainties relating to the interpretation of the data obtained during this investigation and the recommendations presented in the report and help with assessment and interpretation of the report.

SLR assumes no responsibility for the quality or accuracy of data obtained from external sources, or for occurrences outside the scope of works defined in this report.

All work conducted, and reports produced by SLR are prepared for a particular Client's objective and are based on a specific scope, conditions and limitations, as agreed upon between SLR and the Client. Information and/or report(s) prepared by SLR may therefore not be suitable for any use other than the intended objective.

Before passing on to a third party any information and/or report(s) prepared by SLR, the Client is to inform fully the third party of the objective and scope, and all limitations and conditions, including any other relevant information which applies to the information and/or report(s) prepared by SLR.

It is the responsibility of third parties to investigate fully to their satisfaction if any information and/or report(s) prepared by SLR, is suitable for a specific objective.

Services were conducted in a conscientious and professional manner. The nature of the task, however, and the likely disproportion between any damage or loss which might arise from the work and any report prepared as a result and the cost of our services is such that SLR cannot guarantee that all issues of concern/contamination have been identified.

The report(s) and/or information produced by SLR should not be reproduced and/or presented/reviewed except in full.

2 Methodology

Works undertaken were completed in general accordance within the following guidelines and standards.

- National Environment Protection Council (1999, 2013 revision), National Environment Protection (Assessment of Site Contamination) Measure (ASC NEMP).
- AS 4482.1-2005, Guide to the Sampling and Investigation of Potentially Contaminated Soil. Part 1: Non-volatile and semi-volatile compounds.
- Western Australian Department of Health (DoH) 2019 Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia, Consultation Draft November 2019.

In addition, SLR's Standard Operating Procedures (SOPs) were followed to ensure integrity was maintained and sampling procedures were completed in general accordance with the relevant guidelines and standards.

2.1 Soil Sampling Methodology

Soil samples were collected in accordance with the following methodology outlined below in Table 1.

Table 1 Summary of soil and ACM sampling methodology

Activity	Detail / Comment
Stockpile soil sampling	In general accordance with NEPM 2013, samples were collected from approximately 200 - 300 mm below the stockpile surface. Environmental samples were collected and handled by an experienced SLR environmental scientist / engineer. The sample density for stockpiled material is detailed in Table 2 below.
Sample preservation	Sample collection was undertaken in general accordance with AS4482.1-2005. Dedicated disposable nitrile gloves and laboratory supplied sample containers were used. Samples were placed in clean soil jars and sealed with a screw cap lid or laboratory supplied asbestos bags.
Sample submission	Chain of Custody (COC) documentation were completed at the time of sample collection and accompanied the samples to the laboratory.
Sample analysis	All samples were submitted to a NATA accredited laboratory, Eurofins Environment Testing Australia Pty Ltd (Eurofins), for analysis. Selected soil samples were analysed for either all or a combination of the following contaminants of potential concern. • Total Recoverable Hydrocarbons (TRH). • Total Petroleum Hydrocarbons (TPH). • Benzene, Toluene, Ethylbenzene and Xylene (BTEX). • Organochlorine/ Organophosphate (OC/OP) pesticides. • Metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc, and mercury). • Asbestos.
Quality Assurance / Quality Control (QA/QC)	Duplicate soil samples were collected and analysed at a rate exceeding 1 in 18.6[1]. Seven (7) rinsate samples were also collected to ensure sample methodology did not potentially effect sample collection.

[1] Rate of collection based on number of QC collected during stockpile and validation sampling events which occurred concurrently.

Table 2 Sample density for each stockpile

Stockpile ID	Approximate Stockpile Volume (m^3)	No. of samples
STP1	40	4
STP2	100	4
STP3	200	8
STP4	<100	4
STP5	250	10
STP6	275	11
STP7	275	11
STP8	250	10
STP9	125	5
STPW	Not applicable[1]	10

[1] waste material (including construction and demolition (C&D) waste and soil) designated for off-site disposal

2.2 Nominated Investigation Levels

The nominated investigation levels (ILs) adopted for this Assessment are:

- National Environment Protection (Assessment of Site Contamination) Amendment Measure No.1 (ASC NEPM):
  - Health Based Investigation Levels (HILs) for Commercial Industrial D Soils;
  - Health Screening Levels (HSLs) for Commercial Industrial Soil HSL D for Vapour Intrusion, Clay;
  - Ecological Screening Levels (ESLs) for Commercial and Industrial, Coarse Soil;
  - Ecological Investigation Levels (EILs) for Commercial and Industrial; and
  - Management Limits in Commercial / Industrial, Coarse Soil.
- Western Australian Department of Health (DoH) 2019:
  - Soil Asbestos Screening Criteria for Fibrous Asbestos (FA) / Asbestos Fines (AF), all site uses; and
  - Soil Asbestos Screening Criteria for Asbestos Containing Material (ACM), non-sensitive commercial and industrial sites.

3 Results

3.1 Field Observations

The following observations pertaining to potential contamination were noted during field investigations.

- Generally, the stockpiles consisted of a gravelly CLAY, red, high plasticity, with minor inclusions of C&D waste including concrete, rubble, scrap metal and ceramic tiles.
- With the exception of the identification of suspected ACM, no visual or olfactory evidence of contamination was identified.
- Three (3) suspected ACM fragments were identified on the ground surface (ACM2, ACM3 and ACM4) (refer to Figure 1, Attachment A). Additionally, a bonded asbestos fragment (chrysotile) was identified at STP7_11B. All suspected ACM fragments that were identified during field investigations were removed from site for laboratory testing (refer to the analytical results presented in Attachment B).

3.2 Stockpile Analytical Results

A total of 86 soil samples (including QA/QC samples) were analysed as part of this Assessment. Refer to Figure 1 in Attachment A for the sample locations and Attachment B for the tabulated analytical results. Refer to Attachment C for a copy of the Certified Laboratory Reports. Table 3 below provides a summary of the analytical soil results with respect to the detected analytes and the corresponding nominated ILs.

Table 3 Summary of analytical results

Analytes	Range of results (mg/kg)	Analytes	Range of results (mg/kg)
Arsenic	9 - 35	Aldrin	<LOR – 1.5
Chromium	54 - 240	Dieldrin	<LOR - 3.6
Copper	9.2 - 15	Aldrin and dieldrin	<LOR - 4 .6
Lead	14 - 100	Endrin	<LOR –1.0
Nickel	7 - 24	Heptachlor	<LOR – 0.06
Zinc	20 - 110	TRH >C16-C34 (F3 Fraction)	<LOR - 110

LOR = Limit of Reporting

3.2.1 Asbestos

A total of 53 stockpile samples were analysed in accordance with ASC NEPM and DoH 2019 guidelines. A summary of the asbestos analytical results are provided in Table 4 below.

Table 4 Summary of asbestos results

Asbestos type	Sample ID	Asbestos Concentration (%w/w)	Exceedance (Yes/No)
Chrysotile (ACM)	STP1_2	0.21%	Yes
	ACM1	0.19%	Yes
	ACM5	0.16%	Yes
Chrysotile and Amosite (FA)	STP3-5	0.55%	Yes
Chrysotile (AF)	STP4_S	0.0008%	No

Asbestos type	Sample ID	Asbestos Concentration (%w/w)	Exceedance (Yes/No)
	STP5_8	0.000017%	No
	STP8_10	0.000038%	No
Chrysotile (FA)	STP7_6	0.0004%	No

3.3 QA/QC Analytical Results

3.3.1 Field QA/QC

A total of three (3) duplicate samples were collected and submitted for laboratory analysis. The primary and supplicate sample combinations are listed below in Table 5.

Table 5 Summary of QC combinations

Parent Sample	Duplicate	Sample Medium	Sample Date
STP2_1	QC2	Soil	24 April 2020
STP2_4	QC3		24 April 2020
STPW_4	QC4		24 April 2020
SPT5_10	QC13		30 April 2020

With the exception of the analytes listed below in Table 6, the remaining RPDs were considered acceptable for the primary and duplicate sample. For the purpose of this investigation, a 50% RPD acceptance criteria has been adopted.

Table 6 Summary of RPDs exceeding the acceptable limit

Parent sample	Sample date	Duplicate	Analyte	RPD %
STPW_4	30-04-2020	QC4	Zinc	56.79%

3.3.2 Equipment Rinsate

Seven (7) equipment rinsate sample were collected and analysed for quality assurance purposes. With the exception of the analytes listed below in Table 7, no analytes were detected at concentrations exceeding the laboratory LOR. Refer to Attachment D for a copy of the Certified Laboratory Reports.

Table 7 Summary of analytes exceeding the LOR

Sample ID	Sample Date	Analyte	Range of results (mg/kg)
RIN7	30-04-2020	Zinc	<LOR – 31
		TRH >C16-C34 (F3 Fraction)	<LOR - 100

Analytical detection of moderate to long chain length hydrocarbons and zinc were identified in one rinsate sample collected during the field program. The source of the detectable analyte concentrations within the rinsate samples was believed to be associated with impurities in the demineralised water used for rinsate collection. As samples were collected by hand (using disposable nitrile gloves) directly from either the source or hand tools (shovel), the analytical detects within the rinsate samples are not believed to affect the integrity of the primary analytical results.

3.3.3 QA/QC Conclusions

Based on the review of the field and laboratory QA/QC results, SLR recommends the analytical data is suitable for its intended purpose.

4 Conclusions and Recommendations

Analytically, asbestos (ACM, FA and AF) was identified above the investigation levels within the following stockpiles: STP1_2, STP3_5 and STP7_6.

As depicted in Figure 1 in Attachment A, SLR recommends that soil within the vicinity of these locations is segregated for off-site disposal, and stockpiles inspected by and experienced asbestos assessor following removal of hotspots. It should be noted that TCLP analysis may be necessary and is dependent on the receiving facility requirements. Clarity should be sought from the receiving facility prior to disposal.

Based on the analytical results, once segregation has occurred, the remaining stockpiled material is considered suitable for re-use on site based on the current and proposed land use. Mixing of the stockpiled material with other imported geotechnical suitable material (e.g. crushed concrete) may occur for construction purposes within the excavated areas. SLR understands this material will be placed in the excavated areas shown in Figure 1 under the supervision of a suitably experienced asbestos assessor placed in 200 mm layers. Suitably has been determined based on SLR's understanding that this area will be sealed under a concrete slab.

5 Further Communication

Should you have any queries relating the any of the above information, please do not hesitate to contact Paul Turyn on +61 428 665 405.

Yours sincerely



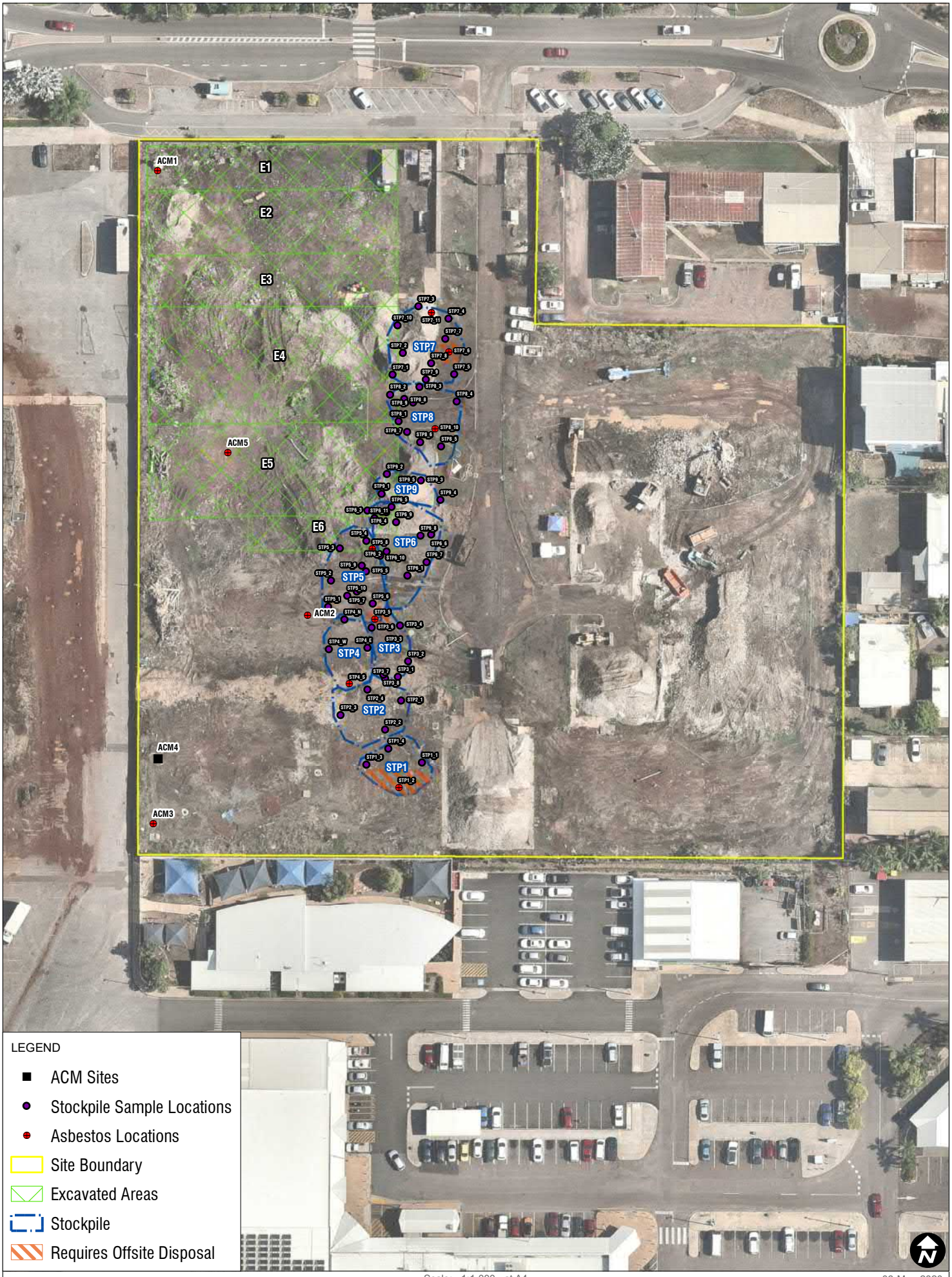
DIANA BEDDER

Senior Project Consultant

Checked/
Authorised by: RH

Attachment A: Figures
Attachment B: Analytical Results
Attachment C: Laboratory Documentation

Attachment A - Figures



Scale: 1:1,000 at A4
GDA 1994 MGA Zone 52

06-May-2020
680.10679

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Data Source: © Nearmap 2020
Imagery Date: 3rd Nov 2019

John Stokes Square Redevelopment Headworks
Environmental Risk Assessment
Stockpile Locations and Sampling Regime

FIGURE 1

H:\Projects-SLR\610-SrvSYD\680-DRW\680.10679\68010679 Stockpiles.mxd

Attachment B - Analytical Results

Table 01
Stockpile Analytical Results
TRH, TPH and BTEXN
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Sample ID								STP_TS_1	STP_TS_2	STP_TS_3	STP1_1	STP1_2	STP1_3	STP1_4	STP2_1	QC2
Laboratory ID								715370	715370	715370	715370	715370	715370	715370	715973	715973
Sample Collection Date								23-04-2020	24-04-2020	25-04-2020	26-04-2020	27-04-2020	23-04-2020	23-04-2020	24-04-2020	25-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil	soil	soil	soil	soil	Duplicate of STP2_1
BTEXN Compounds																
Benzene	mg/kg	0.1		4				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		NL				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons																
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50	<50	<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50	<50	<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions																
TRH >C_6-C_{10} (F1)	mg/kg	20		310			700	<20	<20	<20	<20	<20	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL			1,000	<50	<50	<50	<50	<50	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100					5000	<100	<100	<100	<100	<100	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100					10,000	<100	<100	<100	<100	<100	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NL = non limiting

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3)Commerical Industrial Soil HSL D for Vapour Intrusion, Clay, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) for site specific EILs, Commerical and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) Management Limits in Commercial / Industrial, Coarse Soil

Table 01
Stockpile Analytical Results
TRH, TPH and BTEXN
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Sample ID								RPD %	STP2_2	STP2_3	STP2_4	QC3	RPD %
Laboratory ID									715973	715973	715973	715973	
Sample Collection Date									25-04-2020	26-04-2020	27-04-2020	27-04-2020	
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)		soil	soil	soil	Duplicate of STP2_4	
BTEXN Compounds													
Benzene	mg/kg	0.1		4				-	<0.1	<0.1	<0.1	<0.1	-
Toluene	mg/kg	0.1		NL				-	<0.1	<0.1	<0.1	<0.1	-
Ethylbenzene	mg/kg	0.1		NL				-	<0.1	<0.1	<0.1	<0.1	-
Xylene (m & p)	mg/kg	0.2		NL				-	<0.2	<0.2	<0.2	<0.2	-
Xylene (o)	mg/kg	0.1		NL				-	<0.1	<0.1	<0.1	<0.1	-
Xylene (Total)	mg/kg	0.3		NL				-	<0.3	<0.3	<0.3	<0.3	-
Naphthalene	mg/kg	0.5		NL	370			-	<0.5	<0.5	<0.5	<0.5	-
Total Petroleum Hydrocarbons								-					-
TPH >C_6-C_9	mg/kg	20						-	<20	<20	<20	<20	-
TPH >C_{10}-C_{14}	mg/kg	20						-	<20	<20	<20	<20	-
TPH >C_{15}-C_{28}	mg/kg	50						-	<50	<50	<50	<50	-
TPH >C_{29}-C_{36}	mg/kg	50						-	<50	<50	<50	<50	-
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions								-					-
TRH >C_6-C_{10} (F1)	mg/kg	20		310			700	-	<20	<20	<20	<20	-
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL			1,000	-	<50	<50	<50	<50	-
TRH >C_{16}-C_{34} (F3)	mg/kg	100					5000	-	<100	<100	<100	<100	-
TRH >C_{34}-C_{40} (F4)	mg/kg	100					10,000	-	<100	<100	<100	<100	-

Notes
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Table 01
Stockpile Analytical Results
TRH, TPH and BTEXN
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Sample ID								STP3-1	STP3-2	STP3-3	STP3-4	STP3-5	STP3-6	STP3-7	STP3-8	STP4_E
Laboratory ID								716051	716051	716051	716051	716051	716051	716051	716051	716374
Sample Collection Date								24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	28-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil	soil	soil	soil	soil	soil
BTEXN Compounds																
Benzene	mg/kg	0.1		4				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		NL				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons																
TPH $>C_6$-C_9	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20	<20
TPH $>C_{15}$-C_{28}	mg/kg	50						<50	<50	<50	<50	<50	<50	<50	<50	<50
TPH $>C_{29}$-C_{36}	mg/kg	50						<50	<50	<50	<50	<50	<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions																
TRH $>C_6$-C_{10} (F1)	mg/kg	20		310			700	<20	<20	<20	<20	<20	<20	<20	<20	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL			1,000	<50	<50	<50	<50	<50	<50	<50	<50	<50
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100					5000	<100	<100	<100	<100	<100	<100	<100	<100	<100
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100					10,000	<100	<100	<100	<100	<100	<100	<100	<100	<100

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IL(05): ASC NEPM 2013 Table 1B(7) Management Limits in Commercial / Industrial, Coarse Soil

Table 01
Stockpile Analytical Results
TRH, TPH and BTEXN
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Sample ID								STP4_N	STP4_S	STP4_W	QC13	RPD %	STP5_1	STP5_2	STP5_3	STP5_4
Laboratory ID								716374	716374	716374	716762		716544	716544	716544	716544
Sample Collection Date								28-04-2020	28-04-2020	28-04-2020	30-04-2020		29-04-2020	29-04-2020	29-04-2020	29-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	Duplicate of STP4_W		soil	soil	soil	soil
BTEXN Compounds																
Benzene	mg/kg	0.1		4				<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		NL				<0.3	<0.3	<0.3	<0.3	-	<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons												-				
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20	-	<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20	-	<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50	-	<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50	-	<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions												-				
TRH >C_6-C_{10} (F1)	mg/kg	20		310			700	<20	<20	<20	<20	-	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL			1,000	<50	<50	<50	<50	-	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100					5000	<100	<100	<100	<100	-	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100					10,000	<100	<100	<100	<100	-	<100	<100	<100	<100

Notes
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Table 01
Stockpile Analytical Results
TRH, TPH and BTEXN
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Sample ID								STP5_5	STP5_6	STP5_7	STP5_8	STP5_9	STP5_10	STP6_1	STP6_2	STP6_3
Laboratory ID								716544	716544	716544	716762	716762	716762	716544	716544	716544
Sample Collection Date								29-04-2020	29-04-2020	29-04-2020	30-04-2020	30-04-2020	30-04-2020	29-04-2020	29-04-2020	29-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil	soil	soil	soil	soil	soil
BTEXN Compounds																
Benzene	mg/kg	0.1		4				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		NL				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons																
TPH $>C_6$-C_9	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20	<20
TPH $>C_{15}$-C_{28}	mg/kg	50						<50	<50	<50	<50	<50	<50	<50	<50	<50
TPH $>C_{29}$-C_{36}	mg/kg	50						<50	<50	<50	<50	<50	<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions																
TRH $>C_6$-C_{10} (F1)	mg/kg	20		310			700	<20	<20	<20	<20	<20	<20	<20	<20	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL			1,000	<50	<50	<50	<50	<50	<50	<50	<50	<50
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100					5000	<100	<100	<100	<100	<100	<100	<100	<100	<100
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100					10,000	<100	<100	<100	<100	<100	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
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Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3)Commerical Industrial Soil HSL D for Vapour Intrusion, Clay, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) for site specific EILs, Commerical and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) Management Limits in Commercial / Industrial, Coarse Soil

Table 01
Stockpile Analytical Results
TRH, TPH and BTEXN
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Sample ID								STP6_4	STP6_5	STP6_6	STP6_7	STP6_8	STP6_9	STP6_10	STP6_11	STP7_1
Laboratory ID								716544	716544	716544	716544	716762	716762	716762	716762	716544
Sample Collection Date								29-04-2020	29-04-2020	29-04-2020	29-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	29-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil	soil	soil	soil	soil	soil
BTEXN Compounds																
Benzene	mg/kg	0.1		4				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		NL				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons																
TPH $>C_6$-C_9	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	<20	<20
TPH $>C_{15}$-C_{28}	mg/kg	50						<50	<50	<50	<50	<50	<50	96	<50	<50
TPH $>C_{29}$-C_{36}	mg/kg	50						<50	<50	<50	<50	<50	<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions																
TRH $>C_6$-C_{10} (F1)	mg/kg	20		310			700	<20	<20	<20	<20	<20	<20	<20	<20	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL			1,000	<50	<50	<50	<50	<50	<50	<50	<50	<50
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100					5000	<100	<100	<100	<100	<100	<100	110	<100	<100
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100					10,000	<100	<100	<100	<100	<100	<100	<100	<100	<100

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Nominated Investigation Levels (ILs):
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IL(03): ASC NEPM 2013 Table 1B(5) for site specific EILs, Commerical and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) Management Limits in Commercial / Industrial, Coarse Soil

Table 01
Stockpile Analytical Results
TRH, TPH and BTEXN
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Sample ID								STP7_2	STP7_3	STP7_4	STP7_5	STP7_6	STP7_7	STP7_8	STP7_8B	STP7_9
Laboratory ID								716544	716544	716544	716544	716544	716762	716762	716762	716762
Sample Collection Date								29-04-2020	29-04-2020	29-04-2020	29-04-2020	29-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil	soil	soil	soil	soil	soil
BTEXN Compounds																
Benzene	mg/kg	0.1		4				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
Toluene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
Ethylbenzene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1
Xylene (Total)	mg/kg	0.3		NL				<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	-	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5
Total Petroleum Hydrocarbons																
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	-	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20	<20	<20	<20	-	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50	<50	<50	<50	-	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50	<50	<50	<50	-	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions																
TRH >C_6-C_{10} (F1)	mg/kg	20		310			700	<20	<20	<20	<20	<20	<20	<20	-	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL			1,000	<50	<50	<50	<50	<50	<50	<50	-	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100					5000	<100	<100	<100	<100	<100	<100	<100	-	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100					10,000	<100	<100	<100	<100	<100	<100	<100	-	<100

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IL(05): ASC NEPM 2013 Table 1B(7) Management Limits in Commercial / Industrial, Coarse Soil

Table 01
Stockpile Analytical Results
TRH, TPH and BTEXN
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Sample ID								STP7_10	STP7_11	STP7_11B	STP8_1	STP8_2	STP8_3	STP8_4	STP8_5	STP8_6
Laboratory ID								716762	716762	716762	716762	716762	716762	716762	716762	716762
Sample Collection Date								30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil	soil	soil	soil	soil	soil
BTEXN Compounds																
Benzene	mg/kg	0.1		4				<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL				<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL				<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		NL				<0.3	<0.3	-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons																
TPH >C_6-C_9	mg/kg	20						<20	<20	-	<20	<20	<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	-	<20	<20	<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	-	<50	<50	<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	-	<50	<50	<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions																
TRH >C_6-C_{10} (F1)	mg/kg	20		310			700	<20	<20	-	<20	<20	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL			1,000	<50	<50	-	<50	<50	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100					5000	<100	<100	-	<100	<100	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100					10,000	<100	<100	-	<100	<100	<100	<100	<100	<100

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IL(03): ASC NEPM 2013 Table 1B(5) for site specific EILs, Commerical and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) Management Limits in Commercial / Industrial, Coarse Soil

Table 01
Stockpile Analytical Results
TRH, TPH and BTEXN
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Sample ID								STP8_7	STP8_8	STP8_9	STP8_10	STP9_1	STP9_2	STP9_3	STP9_4	STP9_5
Laboratory ID								716762	716762	716762	716762	716762	716762	716762	716762	716762
Sample Collection Date								30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil	soil	soil	soil	soil	soil
BTEXN Compounds																
Benzene	mg/kg	0.1		4				<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL				<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL				<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		NL				<0.3	-	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	-	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons																
TPH $>C_6$-C_9	mg/kg	20						<20	-	<20	<20	<20	<20	<20	<20	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						<20	-	<20	<20	<20	<20	<20	<20	<20
TPH $>C_{15}$-C_{28}	mg/kg	50						<50	-	<50	<50	<50	<50	<50	<50	<50
TPH $>C_{29}$-C_{36}	mg/kg	50						<50	-	<50	<50	<50	<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions																
TRH $>C_6$-C_{10} (F1)	mg/kg	20		310			700	<20	-	<20	<20	<20	<20	<20	<20	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL			1,000	<50	-	<50	<50	<50	<50	<50	<50	<50
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100					5000	<100	-	<100	<100	<100	<100	<100	<100	<100
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100					10,000	<100	-	<100	<100	<100	<100	<100	<100	<100

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IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
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IL(03): ASC NEPM 2013 Table 1B(5) for site specific EILs, Commerical and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) Management Limits in Commercial / Industrial, Coarse Soil

Table 01
Stockpile Analytical Results
TRH, TPH and BTEXN
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Sample ID								STPW_1	STPW_2	STPW_3	STPW_4	QC4	RPD %	STPW_5	STPW_6	STPW_7
Laboratory ID								715973	715973	715973	715973	715973		716762	716762	716762
Sample Collection Date								28-04-2020	29-04-2020	30-04-2020	30-04-2020	30-04-2020		30-04-2020	30-04-2020	30-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil	Duplcate of STPW_4		soil	soil	soil
BTEXN Compounds																
Benzene	mg/kg	0.1		4				<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		NL				<0.3	<0.3	<0.3	<0.3	<0.3	-	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5	<0.5	-	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons													-			
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20	<20	-	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20	<20	-	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50	<50	-	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50	<50	-	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions													-			
TRH >C_6-C_{10} (F1)	mg/kg	20		310			700	<20	<20	<20	<20	<20	-	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL			1,000	<50	<50	<50	<50	<50	-	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100					5000	<100	<100	<100	<100	<100	-	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100					10,000	<100	<100	<100	<100	<100	-	<100	<100	<100

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Table 01
Stockpile Analytical Results
TRH, TPH and BTEXN
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Sample ID								STPW_8	STPW_9	STPW_10
Laboratory ID								716762	716762	716762
Sample Collection Date								30-04-2020	30-04-2020	30-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil
BTEXN Compounds										
Benzene	mg/kg	0.1		4				<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL				<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL				<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		NL				<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons										
TPH >C_6-C_9	mg/kg	20						<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions										
TRH >C_6-C_{10} (F1)	mg/kg	20		310			700	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL			1,000	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100					5000	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100					10,000	<100	<100	<100

Notes
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IL(02): ASC NEPM 2013 Table 1A(3)Commerical Industrial Soil HSL D for Vapour Intrusion, Clay, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) for site specific EILs, Commerical and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) Management Limits in Commercial / Industrial, Coarse Soil

Table 02
Stockpile Analytical Results
OCPs and OPPs
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP_TS_1	STP_TS_2	STP_TS_3	STP1_1	STP1_2	STP1_3	STP1_4	STP2_1	QC2
Sample ID					716070	716070	716070	716070	716070	716070	716070	716073	716073
Sample Collection Date					23-04-2020	24-04-2020	25-04-2020	26-04-2020	27-04-2020	23-04-2020	23-04-2020	24-04-2020	25-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	soil	soil	soil	soil	soil	soil	soil	soil	Duplicate of STP2_1
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	0.09	0.09	0.08	<0.05	0.07	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		0.67	0.73	0.48	0.67	0.73	0.48	0.83	0.31	0.4
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			0.12	0.2	2.1	0.58	0.65	0.48	0.76	0.31	0.4
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	0.06	0.06	<0.05	0.06	<0.05	<0.06
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			0.12	0.2	2.98	0.73	0.79	0.48	0.89	0.31	0.4
Other organochlorine pesticides EPAVic	mg/kg	0.1			<1	<1	<1	<1	<1	<1	<1	<1	0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
'-' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) for site specific EILs, Commerical and Industrial, fresh contaminant

Results Values in highlighted cells exceed nominated ILs

Table 02
Stockpile Analytical Results
OCPs and OPPs
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID						STP2_2	STP2_3	STP2_4	QC3		STP3-1	STP3-2	STP3-3
Sample ID					RPD%	716073	716073	716073	716073	RPD%	716051	716051	716051
Sample Collection Date						25-04-2020	26-04-2020	27-04-2020	27-04-2020		24-04-2020	24-04-2020	24-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**		soil	soil	soil	soil		soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			-	<0.05	<0.05	0.07	<0.05	-	<0.05	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		25.35%	0.42	0.34	0.51	0.45	12.50%	0.21	0.15	0.19
b-BHC	mg/kg	0.05			-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		-	<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**			<0.05	<0.05	<0.05	<0.05		<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			25.35%	0.42	0.34	0.44	0.45	2.25%	0.21	0.15	0.19
Endrin	mg/kg	0.05			-	0.28	<0.05	0.32	<0.05	-	0.15	0.11	0.17
Endrin ketone	mg/kg	0.05			-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		-	<0.07	<0.08	<0.09	<0.10	-	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		-	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			25.35%	0.42	0.34	0.51	0.45	12.50%	0.21	0.15	0.19
Other organochlorine pesticides EPAVic	mg/kg	0.1			-	<1	<1	<1	<1	-	0.15	0.11	0.17
Toxaphene	mg/kg	1	**160**		-	<1	<1	<1	<1	-	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			-	<2	<2	<2	<2	-	<2	<2	<2
Demeton-O	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			-	<2	<2	<2	<2	-	<2	<2	<2
Mevinphos (Phosdrin)	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			-	<2	<2	<2	<2	-	<2	<2	<2
Parathion	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			-	<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
'-' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established

Nominated Investigat
IL(01): ASC NEPM 201
IL(02): ASC NEPM 201

Results Values in hi

Table 02
Stockpile Analytical Results
OCPs and OPPs
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP3-4	STP3-5	STP3-6	STP3-7	STP3-8	STP4_E	STP4_N	STP4_S	STP4_W
Sample ID					716051	716051	716051	716051	716051	716374	716374	716374	716374
Sample Collection Date					24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	28-04-2020	28-04-2020	28-04-2020	28-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06
Aldrin + Dieldrin	mg/kg	0.05	**45**		0.18	0.26	0.24	0.35	1.3	0.16	0.37	0.16	0.54
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			0.18	0.26	0.24	0.35	1.3	0.16	0.37	0.16	0.48
Endrin	mg/kg	0.05			0.17	<0.05	0.21	0.24	1.0	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			0.18	0.26	0.24	0.35	1.3	0.16	0.37	0.16	0.54
Other organochlorine pesticides EPAVic	mg/kg	0.1			0.17	<0.1	0.21	0.24	1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<2	<2	<2	<2	<2	<0.2	<0.2	<0.2	<0.2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<2	<2	<2	<2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
'-' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established

Nominated Investigat
IL(01): ASC NEPM 201
IL(02): ASC NEPM 201

Results Values in hi

Table 02
Stockpile Analytical Results
OCPs and OPPs
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP5_1	STP5_2	STP5_3	STP5_4	STP5_5	STP5_6	STP5_7	STP5_8	STP5_9
Sample ID					716544	716544	716544	716544	716544	716544	716544	716762	716762
Sample Collection Date					29-04-2020	29-04-2020	29-04-2020	29-04-2020	29-04-2020	29-04-2020	29-04-2020	30-04-2020	30-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			0.07	0.09	<0.05	0.10	<0.05	<0.05	<0.05	0.09	0.11
Aldrin + Dieldrin	mg/kg	0.05	**45**		0.64	0.51	0.26	0.36	0.34	0.14	0.3	0.45	0.48
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			0.57	0.42	0.26	0.26	0.34	0.14	0.30	0.36	0.37
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			0.64	0.51	0.26	0.36	0.34	0.14	0.3	0.45	0.48
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
'-' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established

Nominated Investigat
IL(01): ASC NEPM 201
IL(02): ASC NEPM 201

Results Values in hi

Table 02
Stockpile Analytical Results
OCPs and OPPs
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP5_10	QC13		STP6_1	STP6_2	STP6_3	STP6_4	STP6_5	STP6_6
Sample ID					716762	716762	RPD%	716544	716544	716544	716544	716544	716544
Sample Collection Date					30-04-2020	30-04-2020		29-04-2020	29-04-2020	29-04-2020	29-04-2020	29-04-2020	29-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	soil	soil		soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			0.06	<0.05		0.06	<0.05	<0.05	0.06	<0.05	0.10
Aldrin + Dieldrin	mg/kg	0.05	**45**		0.25	0.38	41.27%	0.33	0.38	0.29	0.37	0.22	0.42
b-BHC	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			0.19	0.38	66.67%	0.27	0.38	0.29	0.31	0.22	0.32
Endrin	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			0.25	0.38	41.27%	0.33	0.38	0.29	0.37	0.22	0.42
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	-	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	-	<2	<2	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<2	<2	-	<2	<2	<2	<2	<2	<2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<2	<2	-	<2	<2	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
'-' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established

Nominated Investigat
IL(01): ASC NEPM 201
IL(02): ASC NEPM 201

Results Values in hi

Table 02
Stockpile Analytical Results
OCPs and OPPs
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP6_7	STP6_8	STP6_9	STP6_10	STP6_11	STP7_1	STP7_2	STP7_3	STP7_4
Sample ID					716544	716762	716762	716762	716762	716544	716544	716544	716544
Sample Collection Date					29-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	29-04-2020	29-04-2020	29-04-2020	29-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			0.09	0.12	0.21	0.17	0.08	0.08	0.14	0.10	0.13
Aldrin + Dieldrin	mg/kg	0.05	**45**		0.67	0.86	1.03	0.81	0.5	0.46	0.5	0.39	0.42
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			0.58	0.74	0.82	0.64	0.42	0.38	0.36	0.29	0.29
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			0.67	0.86	1.03	0.81	0.5	0.46	0.5	0.39	0.42
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
'-' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established

Nominated Investigat
IL(01): ASC NEPM 201
IL(02): ASC NEPM 201

Results Values in hi

Table 02
Stockpile Analytical Results
OCPs and OPPs
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP7_5	STP7_6	STP7_7	STP7_8	STP7_8B	STP7_9	STP7_10	STP7_11	STP7_11B
Sample ID					716544	716544	716762	716762	716762	716762	716762	716762	716762
Sample Collection Date					29-04-2020	29-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			0.12	0.19	0.33	1.0	-	1.5	0.58	0.33	-
Aldrin + Dieldrin	mg/kg	0.05	**45**		0.4	0.52	1.83	4.6	-	2.7	1.78	0.95	-
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			0.28	0.33	1.5	3.6	-	1.2	1.2	0.62	-
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			0.4	0.52	1.83	4.6	-	2.7	1.78	0.95	-
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established

Nominated Investigat
IL(01): ASC NEPM 201
IL(02): ASC NEPM 201

Results Values in hi

Table 02
Stockpile Analytical Results
OCPs and OPPs
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP8_1	STP8_2	STP8_3	STP8_4	STP8_5	STP8_6	STP8_7	STP8_8	STP8_9
Sample ID					716762	716762	716762	716762	716762	716762	716762	716762	716762
Sample Collection Date					30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	0.06	<0.05	<0.05	<0.05	-	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		0.23	0.12	0.09	0.36	0.09	0.13	0.15	-	0.11
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			0.23	0.12	0.09	0.30	0.09	0.13	0.15	-	0.11
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			0.23	0.12	0.09	0.36	0.09	0.13	0.15	-	0.11
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established

Nominated Investigat
IL(01): ASC NEPM 201
IL(02): ASC NEPM 201

Results Values in hi

Table 02
Stockpile Analytical Results
OCPs and OPPs
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP8_10	STP9_1	STP9_2	STP9_3	STP9_4	STP9_5	STPW_1	STPW_2	STPW_3
Sample ID					716762	716762	716762	716762	716762	716762	715973	715973	715973
Sample Collection Date					30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	28-04-2020	29-04-2020	30-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.06	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		0.29	0.15	0.15	0.22	0.1	0.07	0.31	0.69	0.28
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			0.29	0.15	0.15	0.22	0.10	0.07	0.31	0.63	0.28
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.24		0.25
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			0.29	0.15	0.15	0.22	0.1	0.07	0.31	0.69	0.28
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.24	<0.1	0.25
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<2	<3
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<3	<4
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<2	<2	<2	<2	<2	<2	<2	<3	<4
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.3	<0.4
Omethoate	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<3	<4
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
'-' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established

Nominated Investigat
IL(01): ASC NEPM 201
IL(02): ASC NEPM 201

Results Values in hi

Table 02
Stockpile Analytical Results
OCPs and OPPs
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STPW_4	QC4		STPW_5	STPW_6	STPW_7	STPW_8	STPW_9	STPW_10
Sample ID					715973	715973	RPD%	716762	716762	716762	716762	716762	716762
Sample Collection Date					30-04-2020	30-04-2020		30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	soil	soil		soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			0.12	0.12		0.07	0.31	<0.05	0.06	0.10	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		0.75	0.71	5.48%	0.59	0.58	0.19	0.42	0.57	0.36
b-BHC	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			0.63	0.59	6.56%	0.52	0.27	0.19	0.36	0.47	0.36
Endrin	mg/kg	0.05			0.45	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.06	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			0.75	0.71	5.48%	0.59	0.58	0.19	0.42	0.57	0.36
Other organochlorine pesticides EPAVic	mg/kg	0.1			0.45	<1	-	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<4	<1	-	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<5	<2	-	<2	<2	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<0.2	<2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<5	<0.2	-	<2	<2	<2	<2	<2	<2
Naled (Dibrom)	mg/kg	0.2			<0.5	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<5	<2	-	<2	<2	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established

Nominated Investigat
IL(01): ASC NEPM 201
IL(02): ASC NEPM 201

Results Values in hi

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID							STP_TS_1	STP_TS_2	STP_TS_3	STP1_1	STP1_2
Sample ID							716070	716070	716070	716070	716070
Sample Collection Date							23-04-2020	24-04-2020	25-04-2020	26-04-2020	27-04-2020
Matrix Type							soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	**IL(03)**	**IL(04)**					
Metals											
Arsenic	mg/kg	2	**3,000**	**80**			12	9	13	16	20
Cadmium	mg/kg	0.4	**900**				<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**			85	54	87	180	210
Copper	mg/kg	5	**240,000**	**75**			15	10	15	12	12
Lead	mg/kg	5	**1,500**	**440**			34	14	25	17	21
Mercury	mg/kg	0.1	**730/180***				<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**			10	7	13	14	15
Zinc	mg/kg	5	**400,000**	**150**			68	47	110	27	23
Asbestos											
Asbestos Identification	-	-	**NE**	**NE**			ND	ND	ND	ND	Chrysotile (ACM)
ACM Raw Weight	g	0.0001	**NE**	**NE**			-	-	-	-	10
Estimated Asbestos Content	g	0.0001	**NE**	**NE**			-	-	-	-	1
Asbestos Concentration	% w/w	0.001	**NE**	**NE**	**0.001**	**0.05**	-	-	-	-	**0.12**

Notes:

LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

Nominated Investigation Levels (ILs):

IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) for site specific EILs, Commerical and Industrial, fresh contaminant
IL(03): Department of Health 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): Department of Health 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commerical and industrial sites

Results

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP1_3	STP1_4	STP2_1	QC2	RPD%	STP2_2
Sample ID					716070	716070	716073	716073		716073
Sample Collection Date					23-04-2020	23-04-2020	24-04-2020	25-04-2020		25-04-2020
Matrix Type					soil	soil	soil	Duplicate of STP2_1		soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	15	15	18	17	5.71%	17
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	-	<0.4
Chromium	mg/kg	5	**3600^**	**340**	120	150	160	150	6.45%	160
Copper	mg/kg	5	**240,000**	**75**	12	12	13	14	7.41%	13
Lead	mg/kg	5	**1,500**	**440**	16	16	16	17	6.06%	17
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	<0.1	-	<0.1
Nickel	mg/kg	5	**6,000**	**40**	14	14	16	18	11.76%	17
Zinc	mg/kg	5	**400,000**	**150**	29	28	23	31	29.63%	25
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**	ND	ND	ND	ND	-	ND
ACM Raw Weight	g	0.0001	**NE**	**NE**	-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001	**NE**	**NE**	-	-	-	-	-	-
Asbestos Concentration	% w/w	0.001	**NE**	**NE**	-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP2_3	STP2_4	QC3	RPD%	STP3-1	STP3-2
Sample ID					716073	716073	716073		716051	716051
Sample Collection Date					26-04-2020	27-04-2020	27-04-2020		24-04-2020	24-04-2020
Matrix Type					soil	soil	Duplicate of STP2_4		soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	20	20	19	5.13%	17	28
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	-	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**	200	200	220	9.52%	130	240
Copper	mg/kg	5	**240,000**	**75**	11	13	12	8.00%	13	15
Lead	mg/kg	5	**1,500**	**440**	18	17	18	5.71%	16	22
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	-	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	14	18	17	5.71%	14	18
Zinc	mg/kg	5	**400,000**	**150**	21	27	22	20.41%	28	26
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**	ND	ND	ND	-	ND	ND
ACM Raw Weight	g	0.0001	**NE**	**NE**	-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001	**NE**	**NE**	-	-	-	-	-	-
Asbestos Concentration	% w/w	0.001	**NE**	**NE**	-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Indus
IL(02): ASC NEPM 2013 Table 1B(5) for generic EILs, Comm
IL(03): Department of Health 2019, Soil Asbestos Screening
IL(04): Department of Health 2019, Soil Asbestos Screening

Results

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP3-3	STP3-4	STP3-5	STP3-6	STP3-7	STP3-8
Sample ID					716051	716051	716051	716051	716051	716051
Sample Collection Date					24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	17	19	15	16	19	16
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**	150	160	120	190	200	140
Copper	mg/kg	5	**240,000**	**75**	14	14	13	13	12	11
Lead	mg/kg	5	**1,500**	**440**	17	19	18	17	17	14
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	15	15	15	16	14	14
Zinc	mg/kg	5	**400,000**	**150**	33	28	32	27	22	20
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**	ND	ND	Chrysotile and Amosite (FA)	ND	ND	ND
ACM Raw Weight	g	0.0001	**NE**	**NE**	-	-	7.1	-	-	-
Estimated Asbestos Content	g	0.0001	**NE**	**NE**	-	-	2.8	-	-	-
Asbestos Concentration	% w/w	0.001	**NE**	**NE**	-	-	**0.55**	-	-	-

Notes:

LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

trial D Soil
erical and Industrial
Criteria for FA/AF, all site uses
Criteria for ACM, non sensitive commerical and industrial sites

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP4_E	STP4_N	STP4_S	STP4_W	STP5_1	STP5_2
Sample ID					716374	716374	716374	716374	716544	716544
Sample Collection Date					28-04-2020	28-04-2020	28-04-2020	28-04-2020	29-04-2020	29-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	20	20	21	23	27	16
Cadmium	mg/kg	0.4	**900**		0.7	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**	170	180	240	160	230	140
Copper	mg/kg	5	**240,000**	**75**	14	13	12	13	11	11
Lead	mg/kg	5	**1,500**	**440**	19	19	18	21	20	16
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	17	19	16	14	19	16
Zinc	mg/kg	5	**400,000**	**150**	29	25	27	23	30	42
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**	ND	ND	Chrysotile (AF)	ND	ND	ND
ACM Raw Weight	g	0.0001	**NE**	**NE**	-	-	0.056	-	-	-
Estimated Asbestos Content	g	0.0001	**NE**	**NE**	-	-	0.0056	-	-	-
Asbestos Concentration	% w/w	0.001	**NE**	**NE**	-	-	0.0008	-	-	-

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* inorganic / methyl mercury
# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP5_3	STP5_4	STP5_5	STP5_6	STP5_7	STP5_8
Sample ID					716544	716544	716544	716544	716544	716762
Sample Collection Date					29-04-2020	29-04-2020	29-04-2020	29-04-2020	29-04-2020	30-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	16	19	17	17	23	21
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**	130	170	130	180	200	190
Copper	mg/kg	5	**240,000**	**75**	12	9.2	12	12	11	12
Lead	mg/kg	5	**1,500**	**440**	16	16	16	16	18	19
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	17	12	15	17	20	18
Zinc	mg/kg	5	**400,000**	**150**	56	26	35	29	38	28
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**	ND	ND	ND	ND	ND	Chrysotile (AF)
ACM Raw Weight	g	0.0001	**NE**	**NE**	-	-	-	-	-	0.0002
Estimated Asbestos Content	g	0.0001	**NE**	**NE**	-	-	-	-	-	0.00018
Asbestos Concentration	% w/w	0.001	**NE**	**NE**	-	-	-	-	-	0.000017

Notes:
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* inorganic / methyl mercury
# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP5_9	STP5_10	QC13	RPD%	STP6_1	STP6_2
Sample ID					716762	716762	716762		716544	716544
Sample Collection Date					30-04-2020	30-04-2020	30-04-2020		29-04-2020	29-04-2020
Matrix Type					soil	soil	soil		soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	24	26	23	12.24%	21	20
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	-	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**	230	170	200	16.22%	220	190
Copper	mg/kg	5	**240,000**	**75**	11	11	13	16.67%	10	12
Lead	mg/kg	5	**1,500**	**440**	18	17	24	34.15%	18	19
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	-	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	17	15	21	33.33%	14	17
Zinc	mg/kg	5	**400,000**	**150**	27	28	39	32.84%	37	39
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**				-	ND	ND
ACM Raw Weight	g	0.0001	**NE**	**NE**				-	-	-
Estimated Asbestos Content	g	0.0001	**NE**	**NE**				-	-	-
Asbestos Concentration	% w/w	0.001	**NE**	**NE**				-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
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mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP6_3	STP6_4	STP6_5	STP6_6	STP6_7	STP6_8
Sample ID					716544	716544	716544	716544	716544	716762
Sample Collection Date					29-04-2020	29-04-2020	29-04-2020	29-04-2020	29-04-2020	30-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	19	23	22	20	17	20
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**	190	190	210	150	160	160
Copper	mg/kg	5	**240,000**	**75**	9.9	11	12	11	11	13
Lead	mg/kg	5	**1,500**	**440**	17	17	22	17	16	16
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	20	18	20	17	15	18
Zinc	mg/kg	5	**400,000**	**150**	41	21	24	41	38	31
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**	ND	ND	ND	ND	ND	
ACM Raw Weight	g	0.0001	**NE**	**NE**	-	-	-	-	-	
Estimated Asbestos Content	g	0.0001	**NE**	**NE**	-	-	-	-	-	
Asbestos Concentration	% w/w	0.001	**NE**	**NE**	-	-	-	-	-	

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
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mg/kg = milligrams per kilogram
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ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP6_9	STP6_10	STP6_11	STP7_1	STP7_2	STP7_3
Sample ID					716762	716762	716762	716544	716544	716544
Sample Collection Date					30-04-2020	30-04-2020	30-04-2020	29-04-2020	29-04-2020	29-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	19	22	21	17	18	22
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**	160	180	150	130	170	190
Copper	mg/kg	5	**240,000**	**75**	9.9	12	13	12	12	12
Lead	mg/kg	5	**1,500**	**440**	15	19	19	16	16	20
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	15	16	17	17	16	18
Zinc	mg/kg	5	**400,000**	**150**	29	49	35	42	37	30
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**				ND	ND	ND
ACM Raw Weight	g	0.0001	**NE**	**NE**				-	-	-
Estimated Asbestos Content	g	0.0001	**NE**	**NE**				-	-	-
Asbestos Concentration	% w/w	0.001	**NE**	**NE**				-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
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mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP7_4	STP7_5	STP7_6	STP7_7	STP7_8	STP7_8B
Sample ID					716544	716544	716544	716762	716762	716762
Sample Collection Date					29-04-2020	29-04-2020	29-04-2020	30-04-2020	30-04-2020	30-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	19	19	17	17	23	-
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	-
Chromium	mg/kg	5	**3600^**	**340**	140	130	130	140	200	-
Copper	mg/kg	5	**240,000**	**75**	11	11	11	10	10	-
Lead	mg/kg	5	**1,500**	**440**	17	17	15	14	19	-
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	<0.1	<0.1	-
Nickel	mg/kg	5	**6,000**	**40**	15	16	15	15	17	-
Zinc	mg/kg	5	**400,000**	**150**	28	35	38	30	29	-
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**	ND	ND	Chrysotile (FA)			ND
ACM Raw Weight	g	0.0001	**NE**	**NE**	-	-	0.011			-
Estimated Asbestos Content	g	0.0001	**NE**	**NE**	-	-	0.0032			-
Asbestos Concentration	% w/w	0.001	**NE**	**NE**	-	-	**0.0004**			-

Notes:
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* inorganic / methyl mercury
# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP7_9	STP7_10	STP7_11	STP7_11B	STP8_1	STP8_2
Sample ID					716762	716762	716762	716762	716762	716762
Sample Collection Date					30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	21	26	15	-	35	18
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	-	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**	190	220	130	-	190	150
Copper	mg/kg	5	**240,000**	**75**	11	11	13	-	10	12
Lead	mg/kg	5	**1,500**	**440**	18	21	15	-	18	14
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	-	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	18	16	18	-	15	15
Zinc	mg/kg	5	**400,000**	**150**	29	35	33	-	20	23
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**						
ACM Raw Weight	g	0.0001	**NE**	**NE**						
Estimated Asbestos Content	g	0.0001	**NE**	**NE**						
Asbestos Concentration	% w/w	0.001	**NE**	**NE**						

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
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^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP8_3	STP8_4	STP8_5	STP8_6	STP8_7	STP8_8
Sample ID					716762	716762	716762	716762	716762	716762
Sample Collection Date					30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	28	17	24	27	24	-
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	-
Chromium	mg/kg	5	**3600^**	**340**	230	130	200	230	190	-
Copper	mg/kg	5	**240,000**	**75**	12	13	11	12	12	-
Lead	mg/kg	5	**1,500**	**440**	19	15	18	22	19	-
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	<0.1	<0.1	-
Nickel	mg/kg	5	**6,000**	**40**	20	16	18	20	19	-
Zinc	mg/kg	5	**400,000**	**150**	27	32	23	21	22	-
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**						
ACM Raw Weight	g	0.0001	**NE**	**NE**						
Estimated Asbestos Content	g	0.0001	**NE**	**NE**						
Asbestos Concentration	% w/w	0.001	**NE**	**NE**						

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
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mg/kg = milligrams per kilogram
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ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP8_9	STP8_10	STP9_1	STP9_2	STP9_3	STP9_4
Sample ID					716762	716762	716762	716762	716762	716762
Sample Collection Date					30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	20	21	23	18	28	22
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**	190	210	140	130	180	180
Copper	mg/kg	5	**240,000**	**75**	12	12	13	11	13	12
Lead	mg/kg	5	**1,500**	**440**	16	18	16	15	18	20
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	18	24	15	15	21	19
Zinc	mg/kg	5	**400,000**	**150**	21	25	27	22	35	22
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**		Chrysotile and amosite (AF)				
ACM Raw Weight	g	0.0001	**NE**	**NE**		0.0031				
Estimated Asbestos Content	g	0.0001	**NE**	**NE**		0.00031				
Asbestos Concentration	% w/w	0.001	**NE**	**NE**		0.000038				

Notes:
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ND = Non detect
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# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STP9_5	STPW_1	STPW_2	STPW_3	STPW_4	QC4
Sample ID					716762	715973	715973	715973	715973	715973
Sample Collection Date					30-04-2020	28-04-2020	29-04-2020	30-04-2020	30-04-2020	30-04-2020
Matrix Type					soil	soil	soil	soil	soil	Duplicate of STPW_4
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	33	13	19	29	19	22
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**	200	110	180	230	150	170
Copper	mg/kg	5	**240,000**	**75**	11	13	13	15	12	14
Lead	mg/kg	5	**1,500**	**440**	18	15	17	100	17	18
Mercury	mg/kg	0.1	**730/180***		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	16	16	16	19	15	16
Zinc	mg/kg	5	**400,000**	**150**	18	29	26	37	29	52
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**		ND	ND	ND	ND	ND
ACM Raw Weight	g	0.0001	**NE**	**NE**		-	-	-	-	-
Estimated Asbestos Content	g	0.0001	**NE**	**NE**		-	-	-	-	-
Asbestos Concentration	% w/w	0.001	**NE**	**NE**		-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
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mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					RPD%	STPW_5	STPW_6	STPW_7	STPW_8	STPW_9
Sample ID						716762	716762	716762	716762	716762
Sample Collection Date						30-04-2020	30-04-2020	30-04-2020	30-04-2020	30-04-2020
Matrix Type						soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	14.63%	23	17	17	18	22
Cadmium	mg/kg	0.4	**900**		-	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	5	**3600^**	**340**	12.50%	220	120	150	160	180
Copper	mg/kg	5	**240,000**	**75**	15.38%	13	11	13	13	13
Lead	mg/kg	5	**1,500**	**440**	5.71%	21	17	17	17	19
Mercury	mg/kg	0.1	**730/180***		-	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	6.45%	17	13	18	18	16
Zinc	mg/kg	5	**400,000**	**150**	**56.79%**	35	33	33	32	29
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**	-					
ACM Raw Weight	g	0.0001	**NE**	**NE**	-					
Estimated Asbestos Content	g	0.0001	**NE**	**NE**	-					
Asbestos Concentration	% w/w	0.001	**NE**	**NE**	-					

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					STPW_10	ACM1	ACM5	STP7_11B	ACM2	ACM3
Sample ID					716762	716070	716056		715973	716056
Sample Collection Date					30-04-2020	23-04-2020	27-04-2020	20-04-2020	24-04-2020	27-04-2020
Matrix Type					soil	soil	soil	fibrous cement fragment	fibre cement material	fibre cement material
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	20	-	-		-	-
Cadmium	mg/kg	0.4	**900**		<0.4	-	-		-	-
Chromium	mg/kg	5	**3600^**	**340**	160	-	-		-	-
Copper	mg/kg	5	**240,000**	**75**	12	-	-		-	-
Lead	mg/kg	5	**1,500**	**440**	17	-	-		-	-
Mercury	mg/kg	0.1	**730/180***		<0.1	-	-		-	-
Nickel	mg/kg	5	**6,000**	**40**	19	-	-		-	-
Zinc	mg/kg	5	**400,000**	**150**	50	-	-		-	-
Asbestos										
Asbestos Identification	-	-	**NE**	**NE**		Chrysotile (ACM)	Chrysotile (ACM)	Chrysotile	Chrysotile (ACM)	Chrysotile[#]
ACM Raw Weight	g	0.0001	**NE**	**NE**		11	13	-	-	-
Estimated Asbestos Content	g	0.0001	**NE**	**NE**		1.7	1.3	-	-	-
Asbestos Concentration	% w/w	0.001	**NE**	**NE**		**0.19**	**0.16**	-	-	

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
[#] Weathered

Table 03
Stockpile Analytical Results
Metals and Asbestos
Environmental Risk Assessment
John Stokes Square, Darwin
680.10679

Laboratory ID					ACM4
Sample ID					716056
Sample Collection Date					27-04-2020
Matrix Type					fibrous plaster cement
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	
Metals					
Arsenic	mg/kg	2	**3,000**	**80**	-
Cadmium	mg/kg	0.4	**900**		-
Chromium	mg/kg	5	**3600^**	**340**	-
Copper	mg/kg	5	**240,000**	**75**	-
Lead	mg/kg	5	**1,500**	**440**	-
Mercury	mg/kg	0.1	**730/180***		-
Nickel	mg/kg	5	**6,000**	**40**	-
Zinc	mg/kg	5	**400,000**	**150**	-
Asbestos					
Asbestos Identification	-	-	**NE**	**NE**	ND
ACM Raw Weight	g	0.0001	**NE**	**NE**	-
Estimated Asbestos Content	g	0.0001	**NE**	**NE**	-
Asbestos Concentration	% w/w	0.001	**NE**	**NE**	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ Chromium (VI) or Chromium (III)
* inorganic / methyl mercury
# Weathered

Laboratory ID			R1	R2	R3	R4	RIN5	RIN6	RIN7
Sample ID			716332	716332	716332	716332	716544	716544	716762
Sample Collection Date			23-04-2020	24-04-2020	25-04-2020	27-04-2020	28-04-2020	29-04-2020	30-04-2020
Matrix Type			water	water	water	water	water	water	water
BTEXN Compounds									
Benzene	µg/L	1	<1	<1	<1	<1	<1	<1	<1
Toluene	µg/L	1	<1	<1	<1	<1	<1	<1	<1
Ethylbenzene	µg/L	1	<1	<1	<1	<1	<1	<1	<1
Xylene (m & p)	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Xylene (o)	µg/L	1	<1	<1	<1	<1	<1	<1	<1
Xylene Total	µg/L	3	<3	<3	<3	<3	<3	<3	<3
Naphthalene	µg/L	10	<10	<10	<10	<10	<10	<10	<10
Total Petroleum Hydrocarbons									
TPH $>C_6$-C_9	µg/L	20	<20	<20	<20	<20	<20	<20	<20
TPH $>C_{10}$-C_{14}	µg/L	50	<50	<50	<50	<50	<50	<50	<50
TPH $>C_{15}$-C_{28}	µg/L	100	<100	<100	<100	<100	<100	<100	100
TPH $>C_{29}$-C_{36}	µg/L	100	<100	<100	<100	<100	<100	<100	<100
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions									
TRH $>C_6$-C_{10} (F1)	µg/L	20	<20	<20	<20	<20	<20	<20	<20
TRH $>C_{10}$-C_{16} (F2)	µg/L	50	<50	<50	<50	<50	<50	<50	<50
TRH $>C_{16}$-C_{34} (F3)	µg/L	100	<100	<100	<100	<100	<100	<100	100
TRH $>C_{34}$-C_{40} (F4)	µg/L	100	<100	<100	<100	<100	<100	<100	<100
Organochlorine Pesticides									
4,4-DDE	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin + Dieldrin	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
DDT+DDE+DDD	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Organochlorine pesticides EPAVic	µg/L	1	<1	<1	<1	<1	<1	<1	<1
Other organochlorine pesticides EPAVic	µg/L	1	<1	<1	<1	<1	<1	<1	<1
Endrin ketone	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (Lindane)	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorobenzene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/L	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Organophosphorus Pesticides									
Azinophos methyl	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Bolstar (Sulprofos)	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Chlorfenvinphos	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Chlorpyrifos	µg/L	20	<20	<20	<20	<20	<20	<20	<20
Chlorpyrifos-methyl	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Coumaphos	µg/L	20	<20	<20	<20	<20	<20	<20	<20
Diazinon	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Dichlorvos	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Demeton-O	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Demeton-S	µg/L	20	<20	<20	<20	<20	<20	<20	<20
Dimethoate	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Disulfoton	µg/L	2	<2	<2	<2	<2	<2	<2	<2
EPN	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Ethion	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Ethoprop	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Fenitrothion	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Fensulfothion	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Fenthion	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Malathion	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Merphos	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Methyl parathion	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Mevinphos (Phosdrin)	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Monocrotophos	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Naled (Dibrom)	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Omethoate	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Phorate	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Pyrazophos	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Ronnel	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Terbufos	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Tokuthion	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Pirimiphos-methyl	mg/L	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
Parathion	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Trichloronate	µg/L	2	<2	<2	<2	<2	<2	<2	<2
Tetrachlorvinphos	mg/L	0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Metals									
Arsenic	µg/L	1	<1	<1	<1	<1	<1	<1	<1
Cadmium	µg/L	0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chromium (III+VI)	µg/L	1	<1	<1	<1	<1	<1	<1	<1
Copper	µg/L	1	<1	<1	<1	<1	<1	<1	<1
Lead	µg/L	1	<1	<1	<1	<1	<1	<1	<1
Mercury	µg/L	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	µg/L	1	<1	<1	<1	<1	<1	<1	<1
Zinc	µg/L	5	<5	<5	<5	<5	<5	<5	31

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
'-' unable to be calculated / not analysed
µg/L = millgram per litre

Attachment C - Laboratory Documentation

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld F, 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company	SLR Consulting (NT)	Project №	680.10679
Address	21 Parap Rd, Parap, NT, Australia, 0820	Project Name	JSS Remediation
Contact Name	Sarah Doherty	Project Manager	Sarah Doherty
Phone №	0417 647 498	EDD Format (Excel, EQuIS etc)	Esdat & CSV
Special Directions	Fast TAT- please confirm expected time of delivery asap.	Sampler(s)	
Purchase Order		Handed over by	
Quote ID №	200422SLRNT	Email for Results	sdoherty@slrconsulting.com

Analytes — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to advise SUITE analysis.

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix Soil (S) Water (W)	B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil charterisation	Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar charaterisation	Rinsate bottles	Sample Comments / Dangerous Goods Hazard Warning
1	Char1	23/04/20	S						X					1		
2	STP_TS_1	23/04/20	S	X	X		X			1	1					
3	STP_TS_2	23/04/20	S	X	X		X			1	1					
4	STP_TS_2	23/04/20	S	X	X		X			1	1					
5	ACM1	23/04/20	S	X	X		X			1	1		1			
6	STP1_1	23/04/20	S	X	X		X			1	1					
7	STP1_2	23/04/20	S	X	X		X			1	1		1			
8	STP1_3	23/04/20	S	X	X		X			1	1					
9	STP1_4	23/04/20	S	X	X		X			1	1					
10																
	Add new rows		Total Counts	8	8		8		1	8	8		2	1		

Containers (change container type & size if necessary)

Required Turnaround Time (TAT) (Default will be 5 days if not ticked) — ♦Surcharge will apply

- ☐ Overnight (specify Date)♦
- ☑ Same day♦
- ☐ 1 day♦
- ☐ 2 days♦
- ☐ 3 days♦
- ☑ 5 days (standard)
- ☐ Other( )

Method of Shipment	Courier (#)	Hand Delivered	Postal	Name	Signature	Date / Time
Eurofins | mgt Laboratory Use Only	Received By	Ashvin Desai	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 23/04/20 Time Temperature 32.0C
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date Time Report № 715370

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

eurofins | Environment Testing

Melbourne
6 Monterey Road
Dandenong South Vic 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS Remediation
Project ID:	680.10679
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 23, 2020 4:00 PM
Eurofins reference:	**715370**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

Australia

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NATA # 1261
Site # 23736

New Zealand

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 24, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	Char1	Apr 23, 2020		Soil	M20-Ap33439				X	X	
2	STP_TS_1	Apr 23, 2020		Soil	M20-Ap33440	X		X	X		X
3	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33441	X		X	X		X
4	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33442	X		X	X		X
5	ACM1	Apr 23, 2020		Soil	M20-Ap33443	X		X	X		X
6	STP1_1	Apr 23, 2020		Soil	M20-Ap33444	X		X	X		X
7	STP1_2	Apr 23, 2020		Soil	M20-Ap33445	X		X	X		X
8	STP1_3	Apr 23, 2020		Soil	M20-Ap33446	X		X	X		X
9	STP1_4	Apr 23, 2020		Soil	M20-Ap33447	X		X	X		X
10	QC1	Apr 23, 2020		Soil	M20-Ap34638		X				

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

Australia

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Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 24, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271		X	X	X	X	X
Sydney Laboratory - NATA Site # 18217	X					
Brisbane Laboratory - NATA Site # 20794					X	
Perth Laboratory - NATA Site # 23736						
Test Counts	8	1	8	9	1	8

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **715370-S**
Project name JSS Remediation
Project ID 680.10679
Received Date Apr 23, 2020

Client Sample ID			**Char1**	**STP_TS_1**	**STP_TS_2**	**STP_TS_3**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap33439**	**M20-Ap33440**	**M20-Ap33441**	**M20-Ap33442**
Date Sampled			**Apr 23, 2020**	**Apr 23, 2020**	**Apr 23, 2020**	**Apr 23, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	< 50	77	68
TRH C29-C36	50	mg/kg	-	< 50	150	81
TRH C10-C36 (Total)	50	mg/kg	-	< 50	227	149
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	93	78	87
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	< 100	180	120
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	180	120
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	0.4
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	0.09
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	0.12	0.20	2.1
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05

Client Sample ID			Char1	STP_TS_1	STP_TS_2	STP_TS_3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33439	M20-Ap33440	M20-Ap33441	M20-Ap33442
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	0.39
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	-	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	0.12	0.2	2.19
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	0.12	0.2	2.98
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	0.79
Dibutylchlorendate (surr.)	1	%	-	70	58	67
Tetrachloro-m-xylene (surr.)	1	%	-	59	57	58
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	< 2	< 2	< 2
Naled	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	-	< 2	< 2	< 2
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2

Client Sample ID			Char1	STP_TS_1	STP_TS_2	STP_TS_3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33439	M20-Ap33440	M20-Ap33441	M20-Ap33442
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	92	73	96
% Clay	1	%	17	-	-	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	65	-	-	-
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	6.6	-	-	-
Total Organic Carbon	0.1	%	1.7	-	-	-
% Moisture	1	%	9.3	11	21	11
Heavy Metals						
Arsenic	2	mg/kg	-	12	9.0	13
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	85	54	87
Copper	5	mg/kg	-	15	10	15
Iron	20	mg/kg	120000	-	-	-
Lead	5	mg/kg	-	34	14	25
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	-	10	6.7	13
Zinc	5	mg/kg	-	68	47	110
Heavy Metals						
Iron (%)	0.01	%	12	-	-	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	11	-	-	-

Client Sample ID			STP1_1	STP1_2	STP1_3	STP1_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33444	M20-Ap33445	M20-Ap33446	M20-Ap33447
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	85	84	96	99
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			STP1_1	STP1_2	STP1_3	STP1_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33444	M20-Ap33445	M20-Ap33446	M20-Ap33447
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.09	0.08	< 0.05	0.07
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.58	0.65	0.48	0.76
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	0.06	0.06	< 0.05	0.06
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.67	0.73	0.48	0.83
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.73	0.79	0.48	0.89
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	101	70	64	63
Tetrachloro-m-xylene (surr.)	1	%	106	128	124	135
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP1_1	STP1_2	STP1_3	STP1_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33444	M20-Ap33445	M20-Ap33446	M20-Ap33447
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	91	62	66	67
% Moisture	1	%	8.6	9.4	8.7	9.2
Heavy Metals						
Arsenic	2	mg/kg	16	20	15	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	180	210	120	150
Copper	5	mg/kg	12	12	12	12
Lead	5	mg/kg	17	21	16	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	14	15	14	14
Zinc	5	mg/kg	27	23	29	28

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 24, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 24, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
NEPM Screen for Soil Classification			
% Clay	Brisbane	Apr 27, 2020	0 Days
- Method: LTM-GEN-7040			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Apr 27, 2020	7 Days
- Method: LTM-INO-4030 Conductivity			
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Melbourne	Apr 27, 2020	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Total Organic Carbon	Melbourne	Apr 27, 2020	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Heavy Metals	Melbourne	Apr 27, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Cation Exchange Capacity	Melbourne	Apr 28, 2020	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
% Moisture	Melbourne	Apr 23, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 24, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	Char1	Apr 23, 2020		Soil	M20-Ap33439				X	X	
2	STP_TS_1	Apr 23, 2020		Soil	M20-Ap33440	X		X	X		X
3	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33441	X		X	X		X
4	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33442	X		X	X		X
5	ACM1	Apr 23, 2020		Soil	M20-Ap33443	X		X	X		X
6	STP1_1	Apr 23, 2020		Soil	M20-Ap33444	X		X	X		X
7	STP1_2	Apr 23, 2020		Soil	M20-Ap33445	X		X	X		X
8	STP1_3	Apr 23, 2020		Soil	M20-Ap33446	X		X	X		X
9	STP1_4	Apr 23, 2020		Soil	M20-Ap33447	X		X	X		X
10	QC1	Apr 23, 2020		Soil	M20-Ap34638		X				

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 24, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271		X	X	X	X	X
Sydney Laboratory - NATA Site # 18217	X					
Brisbane Laboratory - NATA Site # 20794					X	
Perth Laboratory - NATA Site # 23736						
Test Counts	8	1	8	9	1	8

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	113			80-120	Pass	
Cadmium	%	102			80-120	Pass	
Chromium	%	109			80-120	Pass	
Copper	%	105			80-120	Pass	
Iron	%	117			80-120	Pass	
Lead	%	103			80-120	Pass	
Mercury	%	108			75-125	Pass	
Nickel	%	110			80-120	Pass	
Zinc	%	108			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap33441	CP	%	115			75-125	Pass	
Cadmium	M20-Ap33441	CP	%	101			75-125	Pass	
Copper	M20-Ap33441	CP	%	121			75-125	Pass	
Lead	M20-Ap33441	CP	%	112			75-125	Pass	
Mercury	M20-Ap33441	CP	%	114			70-130	Pass	
Nickel	M20-Ap33441	CP	%	114			75-125	Pass	
Zinc	M20-Ap33441	CP	%	133			75-125	Fail	Q08
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap33447	CP	%	110			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap33447	CP	%	100			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap33440	CP	mg/kg	12	16	26	30%	Pass	
Cadmium	M20-Ap33440	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap33440	CP	mg/kg	85	110	28	30%	Pass	
Copper	M20-Ap33440	CP	mg/kg	15	16	11	30%	Pass	
Lead	M20-Ap33440	CP	mg/kg	34	31	9.0	30%	Pass	
Mercury	M20-Ap33440	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Nickel	M20-Ap33440	CP	mg/kg	10	12	13	30%	Pass	
Zinc	M20-Ap33440	CP	mg/kg	68	63	7.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap33441	CP	mg/kg	9.0	9.3	3.0	30%	Pass	
Cadmium	M20-Ap33441	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap33441	CP	mg/kg	54	56	4.0	30%	Pass	
Copper	M20-Ap33441	CP	mg/kg	10	10	3.0	30%	Pass	
Lead	M20-Ap33441	CP	mg/kg	14	15	4.0	30%	Pass	
Mercury	M20-Ap33441	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap33441	CP	mg/kg	6.7	7.1	5.0	30%	Pass	
Zinc	M20-Ap33441	CP	mg/kg	47	48	2.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap33445	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap33445	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap33445	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap33445	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap33445	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Jonathon Angell	Senior Analyst-Inorganic (QLD)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	715370-AID
Project Name	JSS Remediation
Project ID	680.10679
Received Date	Apr 23, 2020
Date Reported	Apr 28, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name JSS Remediation
Project ID 680.10679
Date Sampled Apr 23, 2020
Report 715370-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP_TS_1	20-Ap33440	Apr 23, 2020	Approximate Sample 619g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP_TS_2	20-Ap33441	Apr 23, 2020	Approximate Sample 375g Sample consisted of: Brown coarse-grained soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP_TS_3	20-Ap33442	Apr 23, 2020	Approximate Sample 711g Sample consisted of: Brown coarse-grained soil, brick, plaster and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
ACM1	20-Ap33443	Apr 23, 2020	Approximate Sample 922g Sample consisted of: Brown coarse-grained soil, plaster and rocks	ACM: Chrysotile, amosite and crocidolite asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 11g Total estimated asbestos content in ACM = 1.7g* Total estimated asbestos concentration in ACM = 0.19% w/w* Organic fibre detected. No trace asbestos detected.
STP1_1	20-Ap33444	Apr 23, 2020	Approximate Sample 798g Sample consisted of: Brown coarse-grained soil, plaster and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP1_2	20-Ap33445	Apr 23, 2020	Approximate Sample 885g Sample consisted of: Brown coarse-grained soil, brick, plaster and rocks	ACM: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 10g Total estimated asbestos content in ACM = 1.0g* Total estimated asbestos concentration in ACM = 0.12% w/w* Organic fibre detected. No trace asbestos detected.
STP1_3	20-Ap33446	Apr 23, 2020	Approximate Sample 716g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP1_4	20-Ap33447	Apr 23, 2020	Approximate Sample 749g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 23, 2020	Indefinite

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 28, 2020
Priority: 3 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	Char1	Apr 23, 2020		Soil	M20-Ap33439				X	X	
2	STP_TS_1	Apr 23, 2020		Soil	M20-Ap33440	X		X	X		X
3	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33441	X		X	X		X
4	STP_TS_3	Apr 23, 2020		Soil	M20-Ap33442	X		X	X		X
5	ACM1	Apr 23, 2020		Soil	M20-Ap33443	X					
6	STP1_1	Apr 23, 2020		Soil	M20-Ap33444	X		X	X		X
7	STP1_2	Apr 23, 2020		Soil	M20-Ap33445	X		X	X		X
8	STP1_3	Apr 23, 2020		Soil	M20-Ap33446	X		X	X		X
9	STP1_4	Apr 23, 2020		Soil	M20-Ap33447	X		X	X		X
10	QC1	Apr 23, 2020		Soil	M20-Ap34638		X				

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Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271		X	X	X	X	X
Sydney Laboratory - NATA Site # 18217	X					
Brisbane Laboratory - NATA Site # 20794					X	
Perth Laboratory - NATA Site # 23736						
Test Counts	8	1	7	8	1	7

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

M20-Ap33441: Sample received was less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ **Sydney Laboratory**
Unit F3 Bld F 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ **Brisbane Laboratory**
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ **Perth Laboratory**
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08 9251 9600 EnviroSampleWA@eurofins.com

☐ **Melbourne Laboratory**
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company	SLR Consulting (NT)	Project №	
Address	5/21 Parap Rd Parap NT 0820	Project Name	JSS
Contact Name	Sarah Doherty	Project Manager	Sarah Doherty
Phone №	417647498	EDD Format (ESdat, EQuIS etc)	Esdat & csv
Special Directions	Jars go to Melbourne, ACM goes to Sydney	Sampler(s)	Sarah Doherty
Purchase Order		Handed over by	
Quote ID №	200422SLRNT	Email for Results	gsheridan@slrconsulting.com; pturyn@slrconsulting.com; sdoherty@slrconsulting.com

Analyses (Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing)

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil characterisation	Hold	Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar characterisation	Rinsate bottles
1	ACM2	24/04/20	S					X						1		
2	STP2_1	24/04/20	S	X	X		X				1	1				
3	STP2_2	24/04/20	S	X	X		X				1	1				
4	STP2_3	24/04/20	S	X	X		X				1	1				
5	STP2_4	24/04/20	S	X	X		X				1	1				
6	STPW_1	24/04/20	S	X	X	X					1		1			
7	STPW_2	24/04/20	S	X	X	X					1		1			
8	STPW_3	24/04/20	S	X	X	X					1		1			
9	STPW_4	24/04/20	S	X	X	X					1		1			
10	QC2	24/04/20	S	X	X		X				1	1				
11	QC3	24/04/20	S	X	X		X				1	1				
12	QC4	24/04/20	S	X	X	X					1		1			
13	Rin1	23/04/20	S	X	X										4	
14	Rin2	24/04/20	S	X	X										4	
	Add new rows		Total Counts	13	13	5	6	1			11	6	5	1	8	

Containers (Change container type & size if necessary.)

Required Turnaround Time (TAT) (Default will be 5 days if not ticked.)

♦Surcharge will apply
- ☐ Overnight (reporting by 9am)♦
- ☑ Same day♦
- ☐ 1 day♦
- ☐ 2 days♦
- ☐ 3 days♦
- ☐ 5 days (Standard)
- ☐ Other( )

Sample Comments / Dangerous Goods Hazard Warning

Method of Shipment	Courier (#	Hand Delivered	Postal	Name	Signature	Date	Time
Eurofins | mgt Laboratory Use Only	Received By: Tony Wong	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date: 28/4/2020	Time: 9:00	Temperature
	Received By	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	Time	Report № 715973

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

#AU_CAU001_EnviroSampleVic

From: #AU09_EnviroSampleDRW
Sent: Wednesday, 29 April 2020 1:54 PM
To: Enviro Sample Vic Transit
Cc: Sarah Doherty
Subject: RE: 715973- water samples

Hi team ,
As discussed with Sarah from SLR just now over phone ,Kindly delete those 2 water sample Rin1 & Rin2 from report .

Kind Regards,
Ashvin Desai
Sample Receipt Officer

Eurofins
3/83 Coonawarra Road
Winnellie NT 0820
AUSTRALIA
Phone: +61 8 8154 3103
Office Contact: +61 428 489 614

Email : EnviroSampleDRW@eurofins.com
Website : http://environment.eurofins.com.au

From: Enviro Sample Vic Transit
Sent: Wednesday, 29 April 2020 1:19 PM
To: #AU09_EnviroSampleDRW
Subject: RE: 715973- water samples

Hi Ashvin,

We've just had another look and it doesn't look like we've received them sorry.

Kind regards,

Zoe Burke

From: #AU09_EnviroSampleDRW
Sent: Wednesday, 29 April 2020 1:30 PM
To: Enviro Sample Vic Transit
Subject: RE: 715973- water samples

Hi team,
It should be in esky which you received today morning from Darwin.
As discussed with client on yesterday while dropping off sample he told he kept those 2 remaining water sample in to these eksies.
Please check if not found do let me know .

Kind Regards,
Ashvin Desai
Sample Receipt Officer

Eurofins
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Winnellie NT 0820
AUSTRALIA
Phone: +61 8 8154 3103
Office Contact: +61 428 489 614

Email : EnviroSampleDRW@eurofins.com
Website : http://environment.eurofins.com.au

From: Enviro Sample Vic Transit
Sent: Wednesday, 29 April 2020 12:49 PM
To: #AU09_EnviroSampleDRW
Subject: 715973- water samples

Hi team,

Did you receive the water samples from the client?
Should be samples for Ap39017 and Ap39018?

Sincerely,

Zoe Burke

Enviro Sample Transit
Sample Receipt Victoria

Eurofins | Environment Testing

6 MONTEREY ROAD
SOUTH DANDENONG VIC 3175
AUSTRALIA

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Phone : +61 2 9900 8400
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NATA # 1261 Site # 20794

Perth
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Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	2 Day
Date/Time received:	Apr 27, 2020
Eurofins reference:	**715973**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☒ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☑ Sample containers for volatile analysis received with zero headspace.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

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IANZ # 1327

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Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 715973
Phone: +61 2 9428 8100
Fax:

Received: Apr 27, 2020 12:00 AM
Due: Apr 29, 2020
Priority: 2 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X					
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	ACM2	Apr 24, 2020		Building Materials	M20-Ap39005			X					
2	STP2_1	Apr 24, 2020		Soil	M20-Ap39006		X			X		X	X
3	STP2_2	Apr 24, 2020		Soil	M20-Ap39007		X			X		X	X
4	STP2_3	Apr 24, 2020		Soil	M20-Ap39008		X			X		X	X
5	STP2_4	Apr 24, 2020		Soil	M20-Ap39009		X			X		X	X
6	STPW_1	Apr 24, 2020		Soil	M20-Ap39010	X				X		X	X
7	STPW_2	Apr 24, 2020		Soil	M20-Ap39011	X				X		X	X
8	STPW_3	Apr 24, 2020		Soil	M20-Ap39012	X				X		X	X
9	STPW_4	Apr 24, 2020		Soil	M20-Ap39013	X				X		X	X
10	QC2	Apr 24, 2020		Soil	M20-Ap39014		X			X		X	X

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

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Christchurch
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Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 715973
Phone: +61 2 9428 8100
Fax:

Received: Apr 27, 2020 12:00 AM
Due: Apr 29, 2020
Priority: 2 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X					
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
11	QC3	Apr 24, 2020		Soil	M20-Ap39015		X			X		X	X
12	QC4	Apr 24, 2020		Soil	M20-Ap39016	X					X	X	X
13	Rin1	Apr 23, 2020		Water	M20-Ap39017				X				
14	Rin2	Apr 24, 2020		Water	M20-Ap39018				X				
Test Counts						5	6	1	2	10	1	11	11

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **715973-S**
Project name JSS
Received Date Apr 27, 2020

Client Sample ID			**STP2_1**	**STP2_2**	**STP2_3**	**STP2_4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap39006**	**M20-Ap39007**	**M20-Ap39008**	**M20-Ap39009**
Date Sampled			**Apr 24, 2020**	**Apr 24, 2020**	**Apr 24, 2020**	**Apr 24, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	63	75	51	59
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.07
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.31	0.42	0.34	0.44
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	0.28	< 0.05	0.32

Client Sample ID			STP2_1	STP2_2	STP2_3	STP2_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39006	M20-Ap39007	M20-Ap39008	M20-Ap39009
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.31	0.42	0.34	0.51
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.31	0.7	0.34	0.83
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	0.28	< 0.1	0.32
Dibutylchlorendate (surr.)	1	%	139	107	117	87
Tetrachloro-m-xylene (surr.)	1	%	97	76	72	73
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	110	82	92	69

Client Sample ID			STP2_1	STP2_2	STP2_3	STP2_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39006	M20-Ap39007	M20-Ap39008	M20-Ap39009
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	18	17	20	20
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	160	160	200	200
Copper	5	mg/kg	13	13	11	13
Lead	5	mg/kg	16	17	18	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	16	17	14	18
Zinc	5	mg/kg	23	25	21	27
% Moisture	1	%	7.4	9.2	8.8	10

Client Sample ID			STPW_1	STPW_2	STPW_3	STPW_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39010	M20-Ap39011	M20-Ap39012	M20-Ap39013
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	54	51	55	61
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	0.06	< 0.05	0.12
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			STPW_1	STPW_2	STPW_3	STPW_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39010	M20-Ap39011	M20-Ap39012	M20-Ap39013
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	0.31	0.63	0.28	0.63
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	0.24	< 0.05	0.25	0.45
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.31	0.69	0.28	0.75
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.55	0.69	0.53	1.2
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	0.24	< 0.1	0.25	0.45
Dibutylchlorendate (surr.)	1	%	82	105	107	94
Tetrachloro-m-xylene (surr.)	1	%	72	73	72	71
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STPW_1	STPW_2	STPW_3	STPW_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39010	M20-Ap39011	M20-Ap39012	M20-Ap39013
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	66	81	80	76
Heavy Metals						
Arsenic	2	mg/kg	13	19	29	19
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	110	180	230	150
Copper	5	mg/kg	13	13	15	12
Lead	5	mg/kg	15	17	100	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	16	16	19	15
Zinc	5	mg/kg	29	26	37	29
% Moisture	1	%	7.0	8.5	7.2	9.0

Client Sample ID			QC2	QC3	QC4
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39014	M20-Ap39015	M20-Ap39016
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50
BTEX					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	103	146	79
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100

Client Sample ID			QC2	QC3	QC4
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39014	M20-Ap39015	M20-Ap39016
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit			
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	0.12
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.40	0.45	0.59
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.4	0.45	0.71
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.5	0.45	0.71
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	115	90	117
Tetrachloro-m-xylene (surr.)	1	%	74	72	69
Organophosphorus Pesticides					
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2

Client Sample ID			QC2	QC3	QC4
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39014	M20-Ap39015	M20-Ap39016
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	85	73	88
Polychlorinated Biphenyls					
Aroclor-1016	0.1	mg/kg	-	-	< 0.1
Aroclor-1221	0.1	mg/kg	-	-	< 0.1
Aroclor-1232	0.1	mg/kg	-	-	< 0.1
Aroclor-1242	0.1	mg/kg	-	-	< 0.1
Aroclor-1248	0.1	mg/kg	-	-	< 0.1
Aroclor-1254	0.1	mg/kg	-	-	< 0.1
Aroclor-1260	0.1	mg/kg	-	-	< 0.1
Total PCB*	0.1	mg/kg	-	-	< 0.1
Dibutylchlorendate (surr.)	1	%	-	-	117
Tetrachloro-m-xylene (surr.)	1	%	-	-	69
Heavy Metals					
Arsenic	2	mg/kg	17	19	22
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	150	220	170
Copper	5	mg/kg	14	12	14
Lead	5	mg/kg	17	18	18
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	18	17	16
Zinc	5	mg/kg	31	22	52
% Moisture	1	%	7.2	9.0	8.9

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 28, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 28, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B15			
Organochlorine Pesticides	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
Polychlorinated Biphenyls	Melbourne	Apr 28, 2020	28 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8082)			
% Moisture	Melbourne	Apr 27, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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Project Name: JSS

Order No.:
Report #: 715973
Phone: +61 2 9428 8100
Fax:

Received: Apr 27, 2020 12:00 AM
Due: Apr 29, 2020
Priority: 2 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X					
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	ACM2	Apr 24, 2020		Building Materials	M20-Ap39005			X					
2	STP2_1	Apr 24, 2020		Soil	M20-Ap39006		X			X		X	X
3	STP2_2	Apr 24, 2020		Soil	M20-Ap39007		X			X		X	X
4	STP2_3	Apr 24, 2020		Soil	M20-Ap39008		X			X		X	X
5	STP2_4	Apr 24, 2020		Soil	M20-Ap39009		X			X		X	X
6	STPW_1	Apr 24, 2020		Soil	M20-Ap39010	X				X		X	X
7	STPW_2	Apr 24, 2020		Soil	M20-Ap39011	X				X		X	X
8	STPW_3	Apr 24, 2020		Soil	M20-Ap39012	X				X		X	X
9	STPW_4	Apr 24, 2020		Soil	M20-Ap39013	X				X		X	X
10	QC2	Apr 24, 2020		Soil	M20-Ap39014		X			X		X	X

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Phone: +61 2 9428 8100
Fax:

Received: Apr 27, 2020 12:00 AM
Due: Apr 29, 2020
Priority: 2 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X					
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
11	QC3	Apr 24, 2020		Soil	M20-Ap39015		X			X		X	X
12	QC4	Apr 24, 2020		Soil	M20-Ap39016	X					X	X	X
13	Rin1	Apr 23, 2020		Water	M20-Ap39017				X				
14	Rin2	Apr 24, 2020		Water	M20-Ap39018				X				
Test Counts						5	6	1	2	10	1	11	11

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	76			70-130	Pass	
TRH C10-C14	%	109			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	97			70-130	Pass	
Toluene	%	110			70-130	Pass	
Ethylbenzene	%	95			70-130	Pass	
m&p-Xylenes	%	71			70-130	Pass	
Xylenes - Total*	%	82			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	106			70-130	Pass	
TRH C6-C10	%	70			70-130	Pass	
TRH >C10-C16	%	109			70-130	Pass	
LCS - % Recovery							

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Organochlorine Pesticides							
Chlordanes - Total	%	85			70-130	Pass	
4.4'-DDD	%	98			70-130	Pass	
4.4'-DDE	%	97			70-130	Pass	
4.4'-DDT	%	74			70-130	Pass	
a-BHC	%	89			70-130	Pass	
Aldrin	%	95			70-130	Pass	
b-BHC	%	89			70-130	Pass	
d-BHC	%	97			70-130	Pass	
Dieldrin	%	96			70-130	Pass	
Endosulfan I	%	115			70-130	Pass	
Endosulfan II	%	102			70-130	Pass	
Endosulfan sulphate	%	82			70-130	Pass	
Endrin	%	88			70-130	Pass	
Endrin aldehyde	%	103			70-130	Pass	
Endrin ketone	%	102			70-130	Pass	
g-BHC (Lindane)	%	109			70-130	Pass	
Heptachlor	%	78			70-130	Pass	
Heptachlor epoxide	%	78			70-130	Pass	
Hexachlorobenzene	%	97			70-130	Pass	
Methoxychlor	%	81			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	83			70-130	Pass	
Dimethoate	%	77			70-130	Pass	
Ethion	%	77			70-130	Pass	
Fenitrothion	%	80			70-130	Pass	
Methyl parathion	%	78			70-130	Pass	
Mevinphos	%	81			70-130	Pass	
LCS - % Recovery							
Polychlorinated Biphenyls							
Aroclor-1260	%	96			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	106			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	110			80-120	Pass	
Copper	%	109			80-120	Pass	
Lead	%	107			80-120	Pass	
Mercury	%	101			75-125	Pass	
Nickel	%	104			80-120	Pass	
Zinc	%	102			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap39871	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap39871	NCP	%	94			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap40589	NCP	%	102			70-130	Pass	
4.4'-DDD	M20-Ap40589	NCP	%	118			70-130	Pass	
4.4'-DDE	M20-Ap40589	NCP	%	117			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
4.4'-DDT	M20-Ap40589	NCP	%	94			70-130	Pass	
a-BHC	M20-Ap40589	NCP	%	82			70-130	Pass	
Aldrin	M20-Ap40589	NCP	%	77			70-130	Pass	
b-BHC	M20-Ap40589	NCP	%	74			70-130	Pass	
d-BHC	M20-Ap40589	NCP	%	80			70-130	Pass	
Dieldrin	M20-Ap40589	NCP	%	105			70-130	Pass	
Endosulfan I	M20-Ap40589	NCP	%	94			70-130	Pass	
Endosulfan II	M20-Ap40589	NCP	%	112			70-130	Pass	
Endosulfan sulphate	M20-Ap40589	NCP	%	80			70-130	Pass	
Endrin	M20-Ap40589	NCP	%	78			70-130	Pass	
Endrin aldehyde	M20-Ap40589	NCP	%	122			70-130	Pass	
Endrin ketone	M20-Ap40589	NCP	%	119			70-130	Pass	
g-BHC (Lindane)	M20-Ap40589	NCP	%	98			70-130	Pass	
Heptachlor	M20-Ap40589	NCP	%	71			70-130	Pass	
Heptachlor epoxide	M20-Ap40589	NCP	%	77			70-130	Pass	
Hexachlorobenzene	M20-Ap40589	NCP	%	90			70-130	Pass	
Methoxychlor	M20-Ap40589	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap39007	CP	%	84			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap39007	CP	%	106			70-130	Pass	
Toluene	M20-Ap39007	CP	%	110			70-130	Pass	
Ethylbenzene	M20-Ap39007	CP	%	124			70-130	Pass	
m&p-Xylenes	M20-Ap39007	CP	%	102			70-130	Pass	
o-Xylene	M20-Ap39007	CP	%	126			70-130	Pass	
Xylenes - Total*	M20-Ap39007	CP	%	110			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap39007	CP	%	112			70-130	Pass	
TRH C6-C10	M20-Ap39007	CP	%	72			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap39007	CP	%	95			75-125	Pass	
Cadmium	M20-Ap39007	CP	%	100			75-125	Pass	
Copper	M20-Ap39007	CP	%	89			75-125	Pass	
Lead	M20-Ap39007	CP	%	86			75-125	Pass	
Mercury	M20-Ap39007	CP	%	99			70-130	Pass	
Nickel	M20-Ap39007	CP	%	91			75-125	Pass	
Zinc	M20-Ap39007	CP	%	93			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39006	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap40597	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap40597	NCP	mg/kg	470	580	21	30%	Pass	
TRH C29-C36	M20-Ap40597	NCP	mg/kg	290	350	20	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39006	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39006	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39006	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39006	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
o-Xylene	M20-Ap39006	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39006	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39006	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39006	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap40597	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap40597	NCP	mg/kg	680		21	30%	Pass	
TRH >C34-C40	M20-Ap40597	NCP	mg/kg	100		20	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap40589	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap40589	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Methyl parathion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap40589	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap40589	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39006	CP	mg/kg	18	19	5.0	30%	Pass	
Cadmium	M20-Ap39006	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39006	CP	mg/kg	160	170	4.0	30%	Pass	
Copper	M20-Ap39006	CP	mg/kg	13	13	3.0	30%	Pass	
Lead	M20-Ap39006	CP	mg/kg	16	17	2.0	30%	Pass	
Mercury	M20-Ap39006	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39006	CP	mg/kg	16	16	2.0	30%	Pass	
Zinc	M20-Ap39006	CP	mg/kg	23	24	4.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39006	CP	%	7.4	7.8	5.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39007	CP	mg/kg	17	17	<1	30%	Pass	
Cadmium	M20-Ap39007	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39007	CP	mg/kg	160	160	3.0	30%	Pass	
Copper	M20-Ap39007	CP	mg/kg	13	13	1.0	30%	Pass	
Lead	M20-Ap39007	CP	mg/kg	17	17	<1	30%	Pass	
Mercury	M20-Ap39007	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39007	CP	mg/kg	17	17	<1	30%	Pass	
Zinc	M20-Ap39007	CP	mg/kg	25	26	5.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39016	CP	%	8.9	9.6	8.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	715973-AID
Project Name	JSS
Received Date	Apr 27, 2020
Date Reported	Apr 29, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name JSS
Project ID
Date Sampled Apr 24, 2020
Report 715973-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
ACM2	20-Ap39005	Apr 24, 2020	Approximate Sample 26g / 120x30x3mm Sample consisted of: Grey fibre cement material	Chrysotile asbestos detected.
STP2_1	20-Ap39006	Apr 24, 2020	Approximate Sample 794g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP2_2	20-Ap39007	Apr 24, 2020	Approximate Sample 1039g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP2_3	20-Ap39008	Apr 24, 2020	Approximate Sample 906g Sample consisted of: Brown coarse-grained soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP2_4	20-Ap39009	Apr 24, 2020	Approximate Sample 906g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STPW_1	20-Ap39010	Apr 24, 2020	Approximate Sample 236g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
STPW_2	20-Ap39011	Apr 24, 2020	Approximate Sample 291g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
STPW_3	20-Ap39012	Apr 24, 2020	Approximate Sample 345g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STPW_4	20-Ap39013	Apr 24, 2020	Approximate Sample 665g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
QC2	20-Ap39014	Apr 24, 2020	Approximate Sample 821g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC3	20-Ap39015	Apr 24, 2020	Approximate Sample 829g Sample consisted of: Brown coarse-grained soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC4	20-Ap39016	Apr 24, 2020	Approximate Sample 792g Sample consisted of: Brown coarse-grained soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 27, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 27, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 27, 2020	Indefinite

eurofins | Environment Testing

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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
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Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

New Zealand

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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 715973
Phone: +61 2 9428 8100
Fax:

Received: Apr 27, 2020 12:00 AM
Due: Apr 29, 2020
Priority: 2 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X					
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	ACM2	Apr 24, 2020		Building Materials	M20-Ap39005			X					
2	STP2_1	Apr 24, 2020		Soil	M20-Ap39006		X			X		X	X
3	STP2_2	Apr 24, 2020		Soil	M20-Ap39007		X			X		X	X
4	STP2_3	Apr 24, 2020		Soil	M20-Ap39008		X			X		X	X
5	STP2_4	Apr 24, 2020		Soil	M20-Ap39009		X			X		X	X
6	STPW_1	Apr 24, 2020		Soil	M20-Ap39010	X				X		X	X
7	STPW_2	Apr 24, 2020		Soil	M20-Ap39011	X				X		X	X
8	STPW_3	Apr 24, 2020		Soil	M20-Ap39012	X				X		X	X
9	STPW_4	Apr 24, 2020		Soil	M20-Ap39013	X				X		X	X
10	QC2	Apr 24, 2020		Soil	M20-Ap39014		X			X		X	X

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

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Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
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Order No.:
Report #: 715973
Phone: +61 2 9428 8100
Fax:

Received: Apr 27, 2020 12:00 AM
Due: Apr 29, 2020
Priority: 2 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Eurofins | mgt Suite B15	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X					
Brisbane Laboratory - NATA Site # 20794													
Perth Laboratory - NATA Site # 23736													
11	QC3	Apr 24, 2020		Soil	M20-Ap39015		X			X		X	X
12	QC4	Apr 24, 2020		Soil	M20-Ap39016	X					X	X	X
13	Rin1	Apr 23, 2020		Water	M20-Ap39017				X				
14	Rin2	Apr 24, 2020		Water	M20-Ap39018				X				
Test Counts						5	6	1	2	10	1	11	11

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

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☐ Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company	SLR Consulting (NT)	Project No		Project Manager	Sarah Doherty
Address	5/21 Parap Rd Parap NT 0820	Project Name	JSS	EDD Format (Esdat, Ecdis etc)	Esdat & csv
Contact Name	Sarah Doherty				
Phone No	417647498				
Special Directions					
Purchase Order					
Quote ID No	200422SLRNT				

Sampler(s)	Sarah Doherty
Handed over by	
Email for Results	gsheridan@slrconsulting.com; pturyn@slrconsulting.com; sdoherty@slrconsulting.com

Containers (Change container type & size if necessary)

Required Turnaround Time (TAT) (Default will be 5 days if not stated)

*Surcharge will apply

☐ Overnight (requesting by 5pm)* ☑ Same day* ☐ 1 day* ☐ 2 days* ☐ 3 days* ☐ 5 days (Standard) ☐ Other( )

Analyses (Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing)

No	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix Solid (S) Water (W)	B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil charterisation	Hold	Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar charaterisation	Rinsate bottles	Sample Comments / Dangerous Goods Hazard Warning
1	STP3-1	24/04/20	S	X	X		X				1	1					
2	STP3-2	24/04/20	S	X	X		X				1	1		1			
3	STP3-3	24/04/20	S	X	X		X				1	1					
4	STP3-4	24/04/20	S	X	X		X				1	1					
5	STP3-5	24/04/20	S	X	X		X				1	1		1			
6	STP3-6	24/04/20	S	X	X		X				1	1					
7	STP3-7	24/04/20	S	X	X		X				1	1					
8	STP3-8	24/04/20	S	X	X		X				1	1					
9	V1	23/04/20	S	X	X		X				1	1					
10	V2									X	1		1				
11	V3			X	X	X					1		1				
12	V4									X	1		1				
13	V5			X	X	X					1		1				
14	V6			X	X		X				1	1					

Carbene
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2/4 9a
71607

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Btu OC Ale

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eurofins | Environment Testing

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NATA # 1261
Site # 1254 & 14271

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Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 28, 2020 9:00 AM
Eurofins reference:	**716051**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

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IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716051
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	STP3-1	Apr 24, 2020		Soil	M20-Ap39870		X		X	X	X
2	STP3-2	Apr 24, 2020		Soil	M20-Ap39871		X		X	X	X
3	STP3-3	Apr 24, 2020		Soil	M20-Ap39872		X		X	X	X
4	STP3-4	Apr 24, 2020		Soil	M20-Ap39873		X		X	X	X
5	STP3-5	Apr 24, 2020		Soil	M20-Ap39874		X		X	X	X
6	STP3-6	Apr 24, 2020		Soil	M20-Ap39875		X		X	X	X
7	STP3-7	Apr 24, 2020		Soil	M20-Ap39876		X		X	X	X
8	STP3-8	Apr 24, 2020		Soil	M20-Ap39877		X		X	X	X
9	V1	Apr 24, 2020		Soil	M20-Ap39878		X		X	X	X
10	V3	Apr 24, 2020		Soil	M20-Ap39879	X			X	X	X
11	V5	Apr 24, 2020		Soil	M20-Ap39880	X			X	X	X

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Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
12	V6	Apr 24, 2020		Soil	M20-Ap39881		X		X	X	X
13	V8	Apr 24, 2020		Soil	M20-Ap39882	X			X	X	X
14	V10	Apr 24, 2020		Soil	M20-Ap39883	X			X	X	X
15	V11	Apr 24, 2020		Soil	M20-Ap39884		X		X	X	X
16	V13	Apr 24, 2020		Soil	M20-Ap39885	X			X	X	X
17	V16	Apr 24, 2020		Soil	M20-Ap39886		X		X	X	X
18	V17	Apr 24, 2020		Soil	M20-Ap39887	X			X	X	X
19	V19	Apr 24, 2020		Soil	M20-Ap39888	X			X	X	X
20	V21	Apr 24, 2020		Soil	M20-Ap39889		X		X	X	X
21	V23	Apr 24, 2020		Soil	M20-Ap39890	X			X	X	X
22	V25	Apr 24, 2020		Soil	M20-Ap39891	X			X	X	X
23	V26	Apr 24, 2020		Soil	M20-Ap39892		X		X	X	X
24	V29	Apr 24, 2020		Soil	M20-Ap39893	X			X	X	X

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
25	V31	Apr 24, 2020		Soil	M20-Ap39894		X		X	X	X
26	DUP1	Apr 24, 2020		Soil	M20-Ap39895	X			X	X	X
27	V2	Apr 24, 2020		Soil	M20-Ap39896			X			
28	V4	Apr 24, 2020		Soil	M20-Ap39897			X			
29	V7	Apr 24, 2020		Soil	M20-Ap39898			X			
30	V9	Apr 24, 2020		Soil	M20-Ap39899			X			
31	V12	Apr 24, 2020		Soil	M20-Ap39900			X			
32	V14	Apr 24, 2020		Soil	M20-Ap39901			X			
33	V15	Apr 24, 2020		Soil	M20-Ap39902			X			
34	V18	Apr 24, 2020		Soil	M20-Ap39903			X			
35	V20	Apr 24, 2020		Soil	M20-Ap39904			X			
36	V22	Apr 24, 2020		Soil	M20-Ap39905			X			
37	V24	Apr 24, 2020		Soil	M20-Ap39906			X			

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Project Name: JSS

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Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
38	V27	Apr 24, 2020		Soil	M20-Ap39907			X			
39	V28	Apr 24, 2020		Soil	M20-Ap39908			X			
40	V30	Apr 24, 2020		Soil	M20-Ap39909			X			
41	V32	Apr 24, 2020		Soil	M20-Ap39910			X			
42	DUP2	Apr 24, 2020		Soil	M20-Ap39911			X			
Test Counts						11	15	16	26	26	26

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **716051-S**
Project name JSS
Received Date Apr 28, 2020

Client Sample ID			**STP3-1**	**STP3-2**	**STP3-3**	**STP3-4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap39870**	**M20-Ap39871**	**M20-Ap39872**	**M20-Ap39873**
Date Sampled			**Apr 24, 2020**	**Apr 24, 2020**	**Apr 24, 2020**	**Apr 24, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	101	99	99	105
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.21	0.15	0.19	0.18
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	0.15	0.11	0.17	0.17

Client Sample ID			STP3-1	STP3-2	STP3-3	STP3-4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39870	M20-Ap39871	M20-Ap39872	M20-Ap39873
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.21	0.15	0.19	0.18
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.36	0.26	0.36	0.35
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	0.15	0.11	0.17	0.17
Dibutylchlorendate (surr.)	1	%	110	76	112	99
Tetrachloro-m-xylene (surr.)	1	%	69	59	82	79
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	85	71	92	89

Client Sample ID			STP3-1	STP3-2	STP3-3	STP3-4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39870	M20-Ap39871	M20-Ap39872	M20-Ap39873
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	17	28	17	19
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	130	240	150	160
Copper	5	mg/kg	13	15	14	14
Lead	5	mg/kg	16	22	17	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	14	18	15	15
Zinc	5	mg/kg	28	26	33	28
% Moisture	1	%	8.8	8.7	9.8	9.6

Client Sample ID			STP3-5	STP3-6	STP3-7	STP3-8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39874	M20-Ap39875	M20-Ap39876	M20-Ap39877
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	105	124	116	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			STP3-5	STP3-6	STP3-7	STP3-8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39874	M20-Ap39875	M20-Ap39876	M20-Ap39877
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	0.26	0.24	0.35	1.3
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	0.21	0.24	1.0
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.26	0.24	0.35	1.3
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.26	0.45	0.59	2.3
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	0.21	0.24	1
Dibutylchlorendate (surr.)	1	%	105	80	109	103
Tetrachloro-m-xylene (surr.)	1	%	73	66	84	75
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP3-5	STP3-6	STP3-7	STP3-8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39874	M20-Ap39875	M20-Ap39876	M20-Ap39877
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	82	69	82	89
Heavy Metals						
Arsenic	2	mg/kg	15	16	19	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	120	190	200	140
Copper	5	mg/kg	13	13	12	11
Lead	5	mg/kg	18	17	17	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	16	14	14
Zinc	5	mg/kg	32	27	22	20
% Moisture	1	%	10	10	9.0	9.2

Client Sample ID			V1	V3	V5	V6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39878	M20-Ap39879	M20-Ap39880	M20-Ap39881
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	102	104	108	95
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			V1	V3	V5	V6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39878	M20-Ap39879	M20-Ap39880	M20-Ap39881
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.22	0.23	0.18	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	0.08	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.22	0.23	0.18	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.22	0.23	0.26	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	102	85	112	123
Tetrachloro-m-xylene (surr.)	1	%	74	69	88	58
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V1	V3	V5	V6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39878	M20-Ap39879	M20-Ap39880	M20-Ap39881
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	79	70	100	93
Heavy Metals						
Arsenic	2	mg/kg	15	20	18	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	180	240	250	210
Copper	5	mg/kg	11	10	8.5	10
Lead	5	mg/kg	15	17	16	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	12	12	13
Zinc	5	mg/kg	20	16	11	13
% Moisture	1	%	5.8	4.4	4.9	19

Client Sample ID			V8	V10	V11	V13
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39882	M20-Ap39883	M20-Ap39884	M20-Ap39885
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	109	101	104	101

Client Sample ID			V8	V10	V11	V13
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39882	M20-Ap39883	M20-Ap39884	M20-Ap39885
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.06	< 0.05	0.22	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	0.06	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.06	< 0.05	0.22	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.28	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	79	88	118	91
Tetrachloro-m-xylene (surr.)	1	%	76	63	84	58
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V8	V10	V11	V13
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39882	M20-Ap39883	M20-Ap39884	M20-Ap39885
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	124	67	124	67
Heavy Metals						
Arsenic	2	mg/kg	22	15	15	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	210	170	190	150
Copper	5	mg/kg	10	11	10	12
Lead	5	mg/kg	15	15	15	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	11	12	13	17
Zinc	5	mg/kg	20	8.8	15	9.7
% Moisture	1	%	3.2	4.6	3.6	7.2

Client Sample ID			V16	V17	V19	V21
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39886	M20-Ap39887	M20-Ap39888	M20-Ap39889
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			V16	V17	V19	V21
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39886	M20-Ap39887	M20-Ap39888	M20-Ap39889
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	104	109	103	114
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	118	110	103	115
Tetrachloro-m-xylene (surr.)	1	%	73	68	60	71
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V16	V17	V19	V21
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39886	M20-Ap39887	M20-Ap39888	M20-Ap39889
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	95	71	72	96
Heavy Metals						
Arsenic	2	mg/kg	14	12	14	13
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	150	130	190	170
Copper	5	mg/kg	12	12	11	9.9
Lead	5	mg/kg	15	13	14	12
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	16	15	12
Zinc	5	mg/kg	15	10	8.9	7.1
% Moisture	1	%	4.4	5.8	4.7	6.0

Client Sample ID			V23	V25	V26	V29
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39890	M20-Ap39891	M20-Ap39892	M20-Ap39893
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	102	98	104	112
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.15	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.15	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.15	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	119	116	96	113
Tetrachloro-m-xylene (surr.)	1	%	65	78	66	68

Client Sample ID			V23	V25	V26	V29
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39890	M20-Ap39891	M20-Ap39892	M20-Ap39893
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	90	58	50	73
Heavy Metals						
Arsenic	2	mg/kg	7.9	12	18	9.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	80	160	200	120
Copper	5	mg/kg	6.3	9.7	11	11
Lead	5	mg/kg	8.2	13	14	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	7.7	13	12	13
Zinc	5	mg/kg	11	8.0	7.2	8.9
% Moisture	1	%	2.3	4.4	9.9	3.6

Client Sample ID			V31	DUP1
Sample Matrix			Soil	Soil
Eurofins Sample No.			M20-Ap39894	M20-Ap39895
Date Sampled			Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50
BTEX				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	122	107
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	0.39
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.39
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	0.39
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	117	130
Tetrachloro-m-xylene (surr.)	1	%	52	56

Client Sample ID			V31	DUP1
Sample Matrix			Soil	Soil
Eurofins Sample No.			M20-Ap39894	M20-Ap39895
Date Sampled			Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit		
Organophosphorus Pesticides				
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	77	109
Heavy Metals				
Arsenic	2	mg/kg	13	13
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	160	170
Copper	5	mg/kg	13	11
Lead	5	mg/kg	18	13
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	17	13
Zinc	5	mg/kg	13	18
% Moisture	1	%	9.5	5.0

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 28, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 28, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
% Moisture	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716051
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	STP3-1	Apr 24, 2020		Soil	M20-Ap39870		X		X	X	X
2	STP3-2	Apr 24, 2020		Soil	M20-Ap39871		X		X	X	X
3	STP3-3	Apr 24, 2020		Soil	M20-Ap39872		X		X	X	X
4	STP3-4	Apr 24, 2020		Soil	M20-Ap39873		X		X	X	X
5	STP3-5	Apr 24, 2020		Soil	M20-Ap39874		X		X	X	X
6	STP3-6	Apr 24, 2020		Soil	M20-Ap39875		X		X	X	X
7	STP3-7	Apr 24, 2020		Soil	M20-Ap39876		X		X	X	X
8	STP3-8	Apr 24, 2020		Soil	M20-Ap39877		X		X	X	X
9	V1	Apr 24, 2020		Soil	M20-Ap39878		X		X	X	X
10	V3	Apr 24, 2020		Soil	M20-Ap39879	X			X	X	X
11	V5	Apr 24, 2020		Soil	M20-Ap39880	X			X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
12	V6	Apr 24, 2020		Soil	M20-Ap39881		X		X	X	X
13	V8	Apr 24, 2020		Soil	M20-Ap39882	X			X	X	X
14	V10	Apr 24, 2020		Soil	M20-Ap39883	X			X	X	X
15	V11	Apr 24, 2020		Soil	M20-Ap39884		X		X	X	X
16	V13	Apr 24, 2020		Soil	M20-Ap39885	X			X	X	X
17	V16	Apr 24, 2020		Soil	M20-Ap39886		X		X	X	X
18	V17	Apr 24, 2020		Soil	M20-Ap39887	X			X	X	X
19	V19	Apr 24, 2020		Soil	M20-Ap39888	X			X	X	X
20	V21	Apr 24, 2020		Soil	M20-Ap39889		X		X	X	X
21	V23	Apr 24, 2020		Soil	M20-Ap39890	X			X	X	X
22	V25	Apr 24, 2020		Soil	M20-Ap39891	X			X	X	X
23	V26	Apr 24, 2020		Soil	M20-Ap39892		X		X	X	X
24	V29	Apr 24, 2020		Soil	M20-Ap39893	X			X	X	X

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
25	V31	Apr 24, 2020		Soil	M20-Ap39894		X		X	X	X
26	DUP1	Apr 24, 2020		Soil	M20-Ap39895	X			X	X	X
27	V2	Apr 24, 2020		Soil	M20-Ap39896			X			
28	V4	Apr 24, 2020		Soil	M20-Ap39897			X			
29	V7	Apr 24, 2020		Soil	M20-Ap39898			X			
30	V9	Apr 24, 2020		Soil	M20-Ap39899			X			
31	V12	Apr 24, 2020		Soil	M20-Ap39900			X			
32	V14	Apr 24, 2020		Soil	M20-Ap39901			X			
33	V15	Apr 24, 2020		Soil	M20-Ap39902			X			
34	V18	Apr 24, 2020		Soil	M20-Ap39903			X			
35	V20	Apr 24, 2020		Soil	M20-Ap39904			X			
36	V22	Apr 24, 2020		Soil	M20-Ap39905			X			
37	V24	Apr 24, 2020		Soil	M20-Ap39906			X			

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
38	V27	Apr 24, 2020		Soil	M20-Ap39907			X			
39	V28	Apr 24, 2020		Soil	M20-Ap39908			X			
40	V30	Apr 24, 2020		Soil	M20-Ap39909			X			
41	V32	Apr 24, 2020		Soil	M20-Ap39910			X			
42	DUP2	Apr 24, 2020		Soil	M20-Ap39911			X			
Test Counts						11	15	16	26	26	26

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	124			70-130	Pass	
TRH C10-C14	%	99			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	120			70-130	Pass	
Toluene	%	116			70-130	Pass	
Ethylbenzene	%	119			70-130	Pass	
m&p-Xylenes	%	118			70-130	Pass	
Xylenes - Total*	%	99			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	121			70-130	Pass	
TRH C6-C10	%	119			70-130	Pass	
TRH >C10-C16	%	114			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	85			70-130	Pass	
4.4'-DDD	%	98			70-130	Pass	
4.4'-DDE	%	97			70-130	Pass	
4.4'-DDT	%	74			70-130	Pass	
a-BHC	%	89			70-130	Pass	
Aldrin	%	95			70-130	Pass	
b-BHC	%	89			70-130	Pass	
d-BHC	%	97			70-130	Pass	
Dieldrin	%	96			70-130	Pass	
Endosulfan I	%	115			70-130	Pass	
Endosulfan II	%	102			70-130	Pass	
Endosulfan sulphate	%	82			70-130	Pass	
Endrin	%	88			70-130	Pass	
Endrin aldehyde	%	103			70-130	Pass	
Endrin ketone	%	102			70-130	Pass	
g-BHC (Lindane)	%	109			70-130	Pass	
Heptachlor	%	78			70-130	Pass	
Heptachlor epoxide	%	78			70-130	Pass	
Hexachlorobenzene	%	97			70-130	Pass	
Methoxychlor	%	81			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	83			70-130	Pass	
Dimethoate	%	77			70-130	Pass	
Ethion	%	77			70-130	Pass	
Fenitrothion	%	80			70-130	Pass	
Methyl parathion	%	78			70-130	Pass	
Mevinphos	%	81			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	87			80-120	Pass	
Cadmium	%	103			80-120	Pass	
Chromium	%	91			80-120	Pass	
Copper	%	92			80-120	Pass	
Lead	%	92			80-120	Pass	
Mercury	%	112			75-125	Pass	
Nickel	%	88			80-120	Pass	
Zinc	%	85			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDT	M20-Ap40589	NCP	%	94			70-130	Pass	
Methoxychlor	M20-Ap40589	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap39871	CP	%	127			70-130	Pass	
TRH C10-C14	M20-Ap39871	CP	%	95			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap39871	CP	%	123			70-130	Pass	
Toluene	M20-Ap39871	CP	%	122			70-130	Pass	
Ethylbenzene	M20-Ap39871	CP	%	126			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	M20-Ap39871	CP	%	126			70-130	Pass	
o-Xylene	M20-Ap39871	CP	%	129			70-130	Pass	
Xylenes - Total*	M20-Ap39871	CP	%	115			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap39871	CP	%	129			70-130	Pass	
TRH C6-C10	M20-Ap39871	CP	%	122			70-130	Pass	
TRH >C10-C16	M20-Ap39871	CP	%	94			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap39871	CP	%	79			75-125	Pass	
Cadmium	M20-Ap39871	CP	%	98			75-125	Pass	
Copper	M20-Ap39871	CP	%	100			75-125	Pass	
Lead	M20-Ap39871	CP	%	76			75-125	Pass	
Mercury	M20-Ap39871	CP	%	104			70-130	Pass	
Nickel	M20-Ap39871	CP	%	102			75-125	Pass	
Zinc	M20-Ap39871	CP	%	100			75-125	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap36520	NCP	%	127			70-130	Pass	
Dimethoate	M20-Ap36520	NCP	%	76			70-130	Pass	
Ethion	M20-Ap36520	NCP	%	89			70-130	Pass	
Fenitrothion	M20-Ap36520	NCP	%	112			70-130	Pass	
Methyl parathion	M20-Ap36520	NCP	%	116			70-130	Pass	
Mevinphos	M20-Ap36520	NCP	%	86			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap39881	CP	%	99			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap39881	CP	%	102			70-130	Pass	
Toluene	M20-Ap39881	CP	%	110			70-130	Pass	
Ethylbenzene	M20-Ap39881	CP	%	115			70-130	Pass	
m&p-Xylenes	M20-Ap39881	CP	%	114			70-130	Pass	
o-Xylene	M20-Ap39881	CP	%	119			70-130	Pass	
Xylenes - Total*	M20-Ap39881	CP	%	116			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap39881	CP	%	123			70-130	Pass	
TRH C6-C10	M20-Ap39881	CP	%	97			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap39881	CP	%	107			75-125	Pass	
Cadmium	M20-Ap39881	CP	%	99			75-125	Pass	
Copper	M20-Ap39881	CP	%	108			75-125	Pass	
Lead	M20-Ap39881	CP	%	102			75-125	Pass	
Mercury	M20-Ap39881	CP	%	102			70-130	Pass	
Nickel	M20-Ap39881	CP	%	106			75-125	Pass	
Zinc	M20-Ap39881	CP	%	101			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap39891	CP	%	101			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzene	M20-Ap39891	CP	%	94			70-130	Pass	
Toluene	M20-Ap39891	CP	%	105			70-130	Pass	
Ethylbenzene	M20-Ap39891	CP	%	108			70-130	Pass	
m&p-Xylenes	M20-Ap39891	CP	%	108			70-130	Pass	
o-Xylene	M20-Ap39891	CP	%	112			70-130	Pass	
Xylenes - Total*	M20-Ap39891	CP	%	109			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap39891	CP	%	117			70-130	Pass	
TRH C6-C10	M20-Ap39891	CP	%	97			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap39891	CP	%	126			70-130	Pass	
4.4'-DDD	M20-Ap39891	CP	%	101			70-130	Pass	
4.4'-DDE	M20-Ap39891	CP	%	122			70-130	Pass	
a-BHC	M20-Ap39891	CP	%	117			70-130	Pass	
Aldrin	M20-Ap39891	CP	%	107			70-130	Pass	
b-BHC	M20-Ap39891	CP	%	121			70-130	Pass	
d-BHC	M20-Ap39891	CP	%	94			70-130	Pass	
Dieldrin	M20-Ap39891	CP	%	80			70-130	Pass	
Endosulfan I	M20-Ap39891	CP	%	96			70-130	Pass	
Endosulfan II	M20-Ap39891	CP	%	111			70-130	Pass	
Endosulfan sulphate	M20-Ap39891	CP	%	105			70-130	Pass	
Endrin	M20-Ap39891	CP	%	74			70-130	Pass	
Endrin aldehyde	M20-Ap39891	CP	%	120			70-130	Pass	
Endrin ketone	M20-Ap39891	CP	%	110			70-130	Pass	
g-BHC (Lindane)	M20-Ap39891	CP	%	120			70-130	Pass	
Heptachlor	M20-Ap39891	CP	%	79			70-130	Pass	
Heptachlor epoxide	M20-Ap39891	CP	%	82			70-130	Pass	
Hexachlorobenzene	M20-Ap39891	CP	%	96			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap39891	CP	%	95			75-125	Pass	
Cadmium	M20-Ap39891	CP	%	99			75-125	Pass	
Chromium	M20-Ap39891	CP	%	103			75-125	Pass	
Copper	M20-Ap39891	CP	%	102			75-125	Pass	
Lead	M20-Ap39891	CP	%	97			75-125	Pass	
Mercury	M20-Ap39891	CP	%	102			70-130	Pass	
Nickel	M20-Ap39891	CP	%	99			75-125	Pass	
Zinc	M20-Ap39891	CP	%	95			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39870	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap40597	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap40597	NCP	mg/kg	470	580	21	30%	Pass	
TRH C29-C36	M20-Ap40597	NCP	mg/kg	290	350	20	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39870	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39870	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39870	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39870	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39870	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39870	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39870	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39870	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap40597	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap40597	NCP	mg/kg	680		21	30%	Pass	
TRH >C34-C40	M20-Ap40597	NCP	mg/kg	100		20	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap40589	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap40589	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap40589	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Omethoate	M20-Ap40589	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39870	CP	%	8.8	9.9	12	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39871	CP	mg/kg	28	29	2.0	30%	Pass	
Cadmium	M20-Ap39871	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39871	CP	mg/kg	240	240	1.0	30%	Pass	
Copper	M20-Ap39871	CP	mg/kg	15	16	2.0	30%	Pass	
Lead	M20-Ap39871	CP	mg/kg	22	22	<1	30%	Pass	
Mercury	M20-Ap39871	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39871	CP	mg/kg	18	18	1.0	30%	Pass	
Zinc	M20-Ap39871	CP	mg/kg	26	26	1.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39880	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39880	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39880	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39880	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39880	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39880	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39880	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39880	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39880	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Toxaphene	M20-Ap24124	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39880	CP	mg/kg	18	18	3.0	30%	Pass	
Cadmium	M20-Ap39880	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39880	CP	mg/kg	250	190	26	30%	Pass	
Copper	M20-Ap39880	CP	mg/kg	8.5	11	25	30%	Pass	
Lead	M20-Ap39880	CP	mg/kg	16	16	<1	30%	Pass	
Mercury	M20-Ap39880	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39880	CP	mg/kg	12	12	2.0	30%	Pass	
Zinc	M20-Ap39880	CP	mg/kg	11	13	14	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39880	CP	%	4.9	4.6	7.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39881	CP	mg/kg	15	15	1.0	30%	Pass	
Cadmium	M20-Ap39881	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39881	CP	mg/kg	210	200	5.0	30%	Pass	
Copper	M20-Ap39881	CP	mg/kg	10	10	1.0	30%	Pass	
Lead	M20-Ap39881	CP	mg/kg	15	15	2.0	30%	Pass	
Mercury	M20-Ap39881	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39881	CP	mg/kg	13	13	1.0	30%	Pass	
Zinc	M20-Ap39881	CP	mg/kg	13	14	2.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39890	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39890	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39890	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39890	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39890	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39890	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39890	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39890	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39890	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39890	CP	%	2.3	2.3	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39891	CP	mg/kg	12	12	2.0	30%	Pass	
Cadmium	M20-Ap39891	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39891	CP	mg/kg	160	170	3.0	30%	Pass	
Copper	M20-Ap39891	CP	mg/kg	9.7	9.7	1.0	30%	Pass	
Lead	M20-Ap39891	CP	mg/kg	13	13	2.0	30%	Pass	
Mercury	M20-Ap39891	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39891	CP	mg/kg	13	14	1.0	30%	Pass	
Zinc	M20-Ap39891	CP	mg/kg	8.0	7.7	4.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	716051-AID
Project Name	JSS
Received Date	Apr 28, 2020
Date Reported	Apr 29, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name JSS
Project ID
Date Sampled Apr 24, 2020
Report 716051-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP3-1	20-Ap39870	Apr 24, 2020	Approximate Sample 568g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP3-2	20-Ap39871	Apr 24, 2020	Approximate Sample 585g Sample consisted of: Brown fine-grained clayey soil, fibre plaster cement material and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP3-3	20-Ap39872	Apr 24, 2020	Approximate Sample 580g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP3-4	20-Ap39873	Apr 24, 2020	Approximate Sample 515g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP3-5	20-Ap39874	Apr 24, 2020	Approximate Sample 516g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	FA: Chrysotile and amosite asbestos detected in weathered fibre cement fragments. Approximate raw weight of FA = 7.1g Estimated asbestos content in FA = 2.8g* Total estimated asbestos concentration in FA = 0.55% w/w* Organic fibre detected. No trace asbestos detected.
STP3-6	20-Ap39875	Apr 24, 2020	Approximate Sample 649g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP3-7	20-Ap39876	Apr 24, 2020	Approximate Sample 490g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP3-8	20-Ap39877	Apr 24, 2020	Approximate Sample 630g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V1	20-Ap39878	Apr 24, 2020	Approximate Sample 706g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V3	20-Ap39879	Apr 24, 2020	Approximate Sample 180g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V5	20-Ap39880	Apr 24, 2020	Approximate Sample 177g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V6	20-Ap39881	Apr 24, 2020	Approximate Sample 688g Sample consisted of: Brown fine-grained clayey soil and rocks	FA: Chrysotile asbestos detected in weathered fibre cement fragments. Approximate raw weight of FA = 0.0080g Estimated asbestos content in FA = 0.0024g* Total estimated asbestos concentration in FA = 0.00035% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V8	20-Ap39882	Apr 24, 2020	Approximate Sample 226g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V10	20-Ap39883	Apr 24, 2020	Approximate Sample 187g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V11	20-Ap39884	Apr 24, 2020	Approximate Sample 573g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V13	20-Ap39885	Apr 24, 2020	Approximate Sample 195g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V16	20-Ap39886	Apr 24, 2020	Approximate Sample 645g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V17	20-Ap39887	Apr 24, 2020	Approximate Sample 170g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V19	20-Ap39888	Apr 24, 2020	Approximate Sample 162g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V21	20-Ap39889	Apr 24, 2020	Approximate Sample 501g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V23	20-Ap39890	Apr 24, 2020	Approximate Sample 236g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V25	20-Ap39891	Apr 24, 2020	Approximate Sample 155g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V26	20-Ap39892	Apr 24, 2020	Approximate Sample 517g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V29	20-Ap39893	Apr 24, 2020	Approximate Sample 206g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V31	20-Ap39894	Apr 24, 2020	Approximate Sample 505g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
DUP1	20-Ap39895	Apr 24, 2020	Approximate Sample 160g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 28, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 28, 2020	Indefinite

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NATA # 1261 Site # 20794

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Project Name: JSS

Order No.:
Report #: 716051
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	STP3-1	Apr 24, 2020		Soil	M20-Ap39870		X		X	X	X
2	STP3-2	Apr 24, 2020		Soil	M20-Ap39871		X		X	X	X
3	STP3-3	Apr 24, 2020		Soil	M20-Ap39872		X		X	X	X
4	STP3-4	Apr 24, 2020		Soil	M20-Ap39873		X		X	X	X
5	STP3-5	Apr 24, 2020		Soil	M20-Ap39874		X		X	X	X
6	STP3-6	Apr 24, 2020		Soil	M20-Ap39875		X		X	X	X
7	STP3-7	Apr 24, 2020		Soil	M20-Ap39876		X		X	X	X
8	STP3-8	Apr 24, 2020		Soil	M20-Ap39877		X		X	X	X
9	V1	Apr 24, 2020		Soil	M20-Ap39878		X		X	X	X
10	V3	Apr 24, 2020		Soil	M20-Ap39879	X			X	X	X
11	V5	Apr 24, 2020		Soil	M20-Ap39880	X			X	X	X

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Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
12	V6	Apr 24, 2020		Soil	M20-Ap39881		X		X	X	X
13	V8	Apr 24, 2020		Soil	M20-Ap39882	X			X	X	X
14	V10	Apr 24, 2020		Soil	M20-Ap39883	X			X	X	X
15	V11	Apr 24, 2020		Soil	M20-Ap39884		X		X	X	X
16	V13	Apr 24, 2020		Soil	M20-Ap39885	X			X	X	X
17	V16	Apr 24, 2020		Soil	M20-Ap39886		X		X	X	X
18	V17	Apr 24, 2020		Soil	M20-Ap39887	X			X	X	X
19	V19	Apr 24, 2020		Soil	M20-Ap39888	X			X	X	X
20	V21	Apr 24, 2020		Soil	M20-Ap39889		X		X	X	X
21	V23	Apr 24, 2020		Soil	M20-Ap39890	X			X	X	X
22	V25	Apr 24, 2020		Soil	M20-Ap39891	X			X	X	X
23	V26	Apr 24, 2020		Soil	M20-Ap39892		X		X	X	X
24	V29	Apr 24, 2020		Soil	M20-Ap39893	X			X	X	X

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
25	V31	Apr 24, 2020		Soil	M20-Ap39894		X		X	X	X
26	DUP1	Apr 24, 2020		Soil	M20-Ap39895	X			X	X	X
27	V2	Apr 24, 2020		Soil	M20-Ap39896			X			
28	V4	Apr 24, 2020		Soil	M20-Ap39897			X			
29	V7	Apr 24, 2020		Soil	M20-Ap39898			X			
30	V9	Apr 24, 2020		Soil	M20-Ap39899			X			
31	V12	Apr 24, 2020		Soil	M20-Ap39900			X			
32	V14	Apr 24, 2020		Soil	M20-Ap39901			X			
33	V15	Apr 24, 2020		Soil	M20-Ap39902			X			
34	V18	Apr 24, 2020		Soil	M20-Ap39903			X			
35	V20	Apr 24, 2020		Soil	M20-Ap39904			X			
36	V22	Apr 24, 2020		Soil	M20-Ap39905			X			
37	V24	Apr 24, 2020		Soil	M20-Ap39906			X			

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
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NT 0801

Project Name: JSS

Order No.:
Report #: 716051
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
38	V27	Apr 24, 2020		Soil	M20-Ap39907			X			
39	V28	Apr 24, 2020		Soil	M20-Ap39908			X			
40	V30	Apr 24, 2020		Soil	M20-Ap39909			X			
41	V32	Apr 24, 2020		Soil	M20-Ap39910			X			
42	DUP2	Apr 24, 2020		Soil	M20-Ap39911			X			
Test Counts						11	15	16	26	26	26

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

M20-Ap39876: Sample received was less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Address	5/21 Parap Rd Parap NT 0820
Contact Name	Sarah Doherty
Phone №	417647498
Special Directions	Jars go to Melbourne, ACM goes to Sydney
Purchase Order	
Quote ID №	200422SLRNT

Project Name: JSS

EDD Format (Estat, EQuIS etc): Esdat & csv

Handed over by:

Email for Results: jsheridan@slrconsulting.com; pturyn@slrconsulting.com; sdoherty@slrconsulting.com

Analyses (Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to direct SUITE pricing)

Containers (Change container type & size if necessary)

Required Turnaround Time (TAT) (Default will be 5 days if not ticked)

*Surcharge will apply

- ☐ Overnight (reporting by 9am)*
- ☑ Same day*
- ☐ 1 day*
- ☐ 2 days*
- ☐ 3 days*
- ☐ 6 days (Standard)
- ☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil charterisation	Hold	Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar charterisation	Rinsate bottles	Sample Comments / Dangerous Goods Hazard Warning
1	ACM3	27/04/20	s					X						1			
2	ACM4	27/04/20	s					X						1			
3	ACM5	27/04/20	s				X					1		1			
4	V33	27/04/20	s								1		1				
5	V34	27/04/20	s	X	X	X					1		1				
6	V35	27/04/20	s								1		1				
7	V36	27/04/20	s	X	X		X				1		1				
8	V37	27/04/20	s								1	1					
9	V38	27/04/20	s	X	X	X					1		1				
10	V39	27/04/20	s								1		1				
11	V40	27/04/20	s								1		1				
12	V41	27/04/20	s	X	X		X				1		1				
13	V42	27/04/20	s	X	X	X					1	1					
14	V43	27/04/20	s								1		1				
15	V44	27/04/20	s	X	X	X					1		1				
16	V45	27/04/20	s								1		1				
17	V46	27/04/20	s	X	X		X				1		1				
18	V47	27/04/20	s	X	X	X					1	1					
19	V48	27/04/20	s								1		1				
20	V49	27/04/20	s	X	X	X					1		1				
21	V50	27/04/20	s								1		1				
22	V51	27/04/20	s	X	X		X				1		1				
23	V52	27/04/20	s	X	X	X					1	1					
24	V53	27/04/20	s								1		1				
25	V54	27/04/20	s								1		1				
26	V55	27/04/20	s	X	X	X					1		1				
27	V56	27/04/20	s	X	X		X				1		1				
28	V57	27/04/20	s	X	X	X					1	1					
29	V58	27/04/20	s								1		1				
30	V59	27/04/20	s	X	X	X					1		1				
31	V60	27/04/20	s								1		1				
32	V61	27/04/20	s	X	X		X				1		1				
33	V62	27/04/20	s	X	X	X					1	1					

Catherine
EF
28/4 9am

716076

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ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	Same day
Date/Time received:	Apr 28, 2020 9:00 AM
Eurofins reference:	**716056**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Notes

Can't analyse B6 & B14 for V36 as we didn't receive jar

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716056
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	ACM3	Apr 27, 2020		Building Materials	M20-Ap39978			X				
2	ACM4	Apr 27, 2020		Building Materials	M20-Ap39979			X				
3	ACM5	Apr 27, 2020		Soil	M20-Ap39980		X					
4	V34	Apr 27, 2020		Soil	M20-Ap39981	X				X	X	X
5	V38	Apr 27, 2020		Soil	M20-Ap39982	X				X	X	X
6	V41	Apr 27, 2020		Soil	M20-Ap39983		X			X	X	X
7	V42	Apr 27, 2020		Soil	M20-Ap39984	X				X	X	X
8	V44	Apr 27, 2020		Soil	M20-Ap39985	X				X	X	X
9	V46	Apr 27, 2020		Soil	M20-Ap39986		X			X	X	X

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Project Name: JSS

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Report #: 716056
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Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
10	V47	Apr 27, 2020		Soil	M20-Ap39987	X				X	X	X
11	V49	Apr 27, 2020		Soil	M20-Ap39988	X				X	X	X
12	V51	Apr 27, 2020		Soil	M20-Ap39989		X			X	X	X
13	V52	Apr 27, 2020		Soil	M20-Ap39990	X				X	X	X
14	V55	Apr 27, 2020		Soil	M20-Ap39991	X				X	X	X
15	V56	Apr 27, 2020		Soil	M20-Ap39992		X			X	X	X
16	V57	Apr 27, 2020		Soil	M20-Ap39993	X				X	X	X
17	V59	Apr 27, 2020		Soil	M20-Ap39994	X				X	X	X
18	V61	Apr 27, 2020		Soil	M20-Ap39995		X			X	X	X
19	V62	Apr 27, 2020		Soil	M20-Ap39996	X				X	X	X
20	V33	Apr 27, 2020		Soil	M20-Ap39997				X			
21	V37-A	Apr 27, 2020		Soil	M20-Ap39998				X			
22	V37-B	Apr 27, 2020		Soil	M20-Ap39999				X			

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
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NT 0801

Project Name: JSS

Order No.:
Report #: 716056
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
23	V39	Apr 27, 2020		Soil	M20-Ap40000				X			
24	V40	Apr 27, 2020		Soil	M20-Ap40001				X			
25	V43	Apr 27, 2020		Soil	M20-Ap40002				X			
26	V45	Apr 27, 2020		Soil	M20-Ap40003				X			
27	V48	Apr 27, 2020		Soil	M20-Ap40004				X			
28	V50	Apr 27, 2020		Soil	M20-Ap40005				X			
29	V53	Apr 27, 2020		Soil	M20-Ap40006				X			
30	V35	Apr 27, 2020		Soil	M20-Ap40007				X			
31	V54	Apr 27, 2020		Soil	M20-Ap40008				X			
32	V58	Apr 27, 2020		Soil	M20-Ap40009				X			
33	V60	Apr 27, 2020		Soil	M20-Ap40010				X			
34	V36	Apr 27, 2020		Soil	M20-Ap40076		X					
Test Counts						11	7	2	14	16	16	16

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention: **Sarah Doherty**

Report **716056-S**
Project name JSS
Received Date Apr 28, 2020

Client Sample ID			**V34**	**V38**	**V41**	**V42**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap39981**	**M20-Ap39982**	**M20-Ap39983**	**M20-Ap39984**
Date Sampled			**Apr 27, 2020**	**Apr 27, 2020**	**Apr 27, 2020**	**Apr 27, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	290	47	45	44
TRH C15-C28	50	mg/kg	560	94	98	110
TRH C29-C36	50	mg/kg	150	< 50	< 50	82
TRH C10-C36 (Total)	50	mg/kg	1000	141	143	236
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	115	103	117	123
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	360	60	58	55
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	360	60	58	55
TRH >C16-C34	100	mg/kg	500	< 100	< 100	140
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	860	< 100	< 100	195
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	0.13	0.19	0.10
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V34	V38	V41	V42
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39981	M20-Ap39982	M20-Ap39983	M20-Ap39984
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.13	0.19	0.1
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	0.13	0.19	0.35
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.25
Dibutylchlorendate (surr.)	1	%	86	94	149	107
Tetrachloro-m-xylene (surr.)	1	%	117	68	97	60
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	127	78	106	91

Client Sample ID			V34	V38	V41	V42
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39981	M20-Ap39982	M20-Ap39983	M20-Ap39984
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	16	19	14	20
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	230	190	150	220
Copper	5	mg/kg	11	9.8	11	11
Lead	5	mg/kg	24	17	13	18
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	13	13	16
Zinc	5	mg/kg	14	17	28	18
% Moisture	1	%	23	14	4.8	3.5

Client Sample ID			V44	V46	V47	V49
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39985	M20-Ap39986	M20-Ap39987	M20-Ap39988
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	29
TRH C15-C28	50	mg/kg	70	< 50	< 50	63
TRH C29-C36	50	mg/kg	230	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	300	< 50	< 50	92
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	108	107	115	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	200	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	230	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	430	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V44	V46	V47	V49
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39985	M20-Ap39986	M20-Ap39987	M20-Ap39988
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	0.13	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.13	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.13	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	122	67	126	103
Tetrachloro-m-xylene (surr.)	1	%	70	79	78	68
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V44	V46	V47	V49
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39985	M20-Ap39986	M20-Ap39987	M20-Ap39988
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	133	87	72	86
Heavy Metals						
Arsenic	2	mg/kg	14	22	16	46
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	130	190	160	260
Copper	5	mg/kg	30	11	9.0	8.8
Lead	5	mg/kg	80	17	13	280
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	9.3	15	10	12
Zinc	5	mg/kg	120	24	14	13
% Moisture	1	%	3.1	13	11	5.2

Client Sample ID			V51	V52	V55	V56
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39989	M20-Ap39990	M20-Ap39991	M20-Ap39992
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	47	42	47	54
TRH C15-C28	50	mg/kg	95	90	91	110
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	142	132	138	164
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	116	120	101	125
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	60	54	59	69
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	60	54	59	69
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			V51	V52	V55	V56
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39989	M20-Ap39990	M20-Ap39991	M20-Ap39992
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.10	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.1	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	113	88	93	70
Tetrachloro-m-xylene (surr.)	1	%	67	111	145	86
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V51	V52	V55	V56
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39989	M20-Ap39990	M20-Ap39991	M20-Ap39992
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	81	121	133	111
Heavy Metals						
Arsenic	2	mg/kg	23	24	20	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	300	290	200	150
Copper	5	mg/kg	7.8	9.3	12	9.9
Lead	5	mg/kg	18	21	19	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	12	12	14	16
Zinc	5	mg/kg	14	35	19	15
% Moisture	1	%	13	7.5	3.1	10

Client Sample ID			V57	V59	V61	V62
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39993	M20-Ap39994	M20-Ap39995	M20-Ap39996
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	55	55	51	51
TRH C15-C28	50	mg/kg	100	110	110	100
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	155	165	161	151
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	127	123	127	102

Client Sample ID			V57	V59	V61	V62
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39993	M20-Ap39994	M20-Ap39995	M20-Ap39996
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	69	69	66	65
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	69	69	66	65
TRH >C16-C34	100	mg/kg	< 100	100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	169	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	0.09	0.11
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	0.09	0.11
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.19	0.11
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	90	117	84	77
Tetrachloro-m-xylene (surr.)	1	%	146	145	107	116
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V57	V59	V61	V62
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39993	M20-Ap39994	M20-Ap39995	M20-Ap39996
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	112	120	123	113
Heavy Metals						
Arsenic	2	mg/kg	16	13	22	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	240	100	150	140
Copper	5	mg/kg	7.9	10	8.3	9.4
Lead	5	mg/kg	15	12	20	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	11	11	12
Zinc	5	mg/kg	11	35	39	25
% Moisture	1	%	4.1	2.7	2.7	4.2

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 28, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 28, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
% Moisture	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

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NATA # 1261 Site # 18217

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NATA # 1261 Site # 20794

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716056
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	ACM3	Apr 27, 2020		Building Materials	M20-Ap39978			X				
2	ACM4	Apr 27, 2020		Building Materials	M20-Ap39979			X				
3	ACM5	Apr 27, 2020		Soil	M20-Ap39980		X					
4	V34	Apr 27, 2020		Soil	M20-Ap39981	X				X	X	X
5	V38	Apr 27, 2020		Soil	M20-Ap39982	X				X	X	X
6	V41	Apr 27, 2020		Soil	M20-Ap39983		X			X	X	X
7	V42	Apr 27, 2020		Soil	M20-Ap39984	X				X	X	X
8	V44	Apr 27, 2020		Soil	M20-Ap39985	X				X	X	X
9	V46	Apr 27, 2020		Soil	M20-Ap39986		X			X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
10	V47	Apr 27, 2020		Soil	M20-Ap39987	X				X	X	X
11	V49	Apr 27, 2020		Soil	M20-Ap39988	X				X	X	X
12	V51	Apr 27, 2020		Soil	M20-Ap39989		X			X	X	X
13	V52	Apr 27, 2020		Soil	M20-Ap39990	X				X	X	X
14	V55	Apr 27, 2020		Soil	M20-Ap39991	X				X	X	X
15	V56	Apr 27, 2020		Soil	M20-Ap39992		X			X	X	X
16	V57	Apr 27, 2020		Soil	M20-Ap39993	X				X	X	X
17	V59	Apr 27, 2020		Soil	M20-Ap39994	X				X	X	X
18	V61	Apr 27, 2020		Soil	M20-Ap39995		X			X	X	X
19	V62	Apr 27, 2020		Soil	M20-Ap39996	X				X	X	X
20	V33	Apr 27, 2020		Soil	M20-Ap39997				X			
21	V37-A	Apr 27, 2020		Soil	M20-Ap39998				X			
22	V37-B	Apr 27, 2020		Soil	M20-Ap39999				X			

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Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
23	V39	Apr 27, 2020		Soil	M20-Ap40000				X			
24	V40	Apr 27, 2020		Soil	M20-Ap40001				X			
25	V43	Apr 27, 2020		Soil	M20-Ap40002				X			
26	V45	Apr 27, 2020		Soil	M20-Ap40003				X			
27	V48	Apr 27, 2020		Soil	M20-Ap40004				X			
28	V50	Apr 27, 2020		Soil	M20-Ap40005				X			
29	V53	Apr 27, 2020		Soil	M20-Ap40006				X			
30	V35	Apr 27, 2020		Soil	M20-Ap40007				X			
31	V54	Apr 27, 2020		Soil	M20-Ap40008				X			
32	V58	Apr 27, 2020		Soil	M20-Ap40009				X			
33	V60	Apr 27, 2020		Soil	M20-Ap40010				X			
34	V36	Apr 27, 2020		Soil	M20-Ap40076		X					
Test Counts						11	7	2	14	16	16	16

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	83			70-130	Pass	
TRH C10-C14	%	115			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	83			70-130	Pass	
Toluene	%	122			70-130	Pass	
Ethylbenzene	%	117			70-130	Pass	
m&p-Xylenes	%	113			70-130	Pass	
Xylenes - Total*	%	116			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	119			70-130	Pass	
TRH C6-C10	%	89			70-130	Pass	
TRH >C10-C16	%	130			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	90			70-130	Pass	
4.4'-DDD	%	87			70-130	Pass	
4.4'-DDE	%	73			70-130	Pass	
4.4'-DDT	%	83			70-130	Pass	
a-BHC	%	104			70-130	Pass	
Aldrin	%	75			70-130	Pass	
b-BHC	%	104			70-130	Pass	
d-BHC	%	74			70-130	Pass	
Dieldrin	%	88			70-130	Pass	
Endosulfan I	%	99			70-130	Pass	
Endosulfan II	%	82			70-130	Pass	
Endosulfan sulphate	%	105			70-130	Pass	
Endrin	%	72			70-130	Pass	
Endrin aldehyde	%	88			70-130	Pass	
Endrin ketone	%	72			70-130	Pass	
g-BHC (Lindane)	%	93			70-130	Pass	
Heptachlor	%	91			70-130	Pass	
Heptachlor epoxide	%	92			70-130	Pass	
Hexachlorobenzene	%	101			70-130	Pass	
Methoxychlor	%	83			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	78			70-130	Pass	
Dimethoate	%	93			70-130	Pass	
Ethion	%	96			70-130	Pass	
Fenitrothion	%	84			70-130	Pass	
Methyl parathion	%	81			70-130	Pass	
Mevinphos	%	88			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	110			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	112			80-120	Pass	
Copper	%	113			80-120	Pass	
Lead	%	113			80-120	Pass	
Mercury	%	111			75-125	Pass	
Nickel	%	109			80-120	Pass	
Zinc	%	106			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap36676	NCP	%	119			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap36676	NCP	%	106			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap36526	NCP	%	81			70-130	Pass	
4.4'-DDD	M20-Ap36526	NCP	%	80			70-130	Pass	
4.4'-DDE	M20-Ap36526	NCP	%	112			70-130	Pass	
4.4'-DDT	M20-Ap36526	NCP	%	82			70-130	Pass	
a-BHC	M20-Ap36526	NCP	%	78			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aldrin	M20-Ap36526	NCP	%	112			70-130	Pass	
b-BHC	M20-Ap36526	NCP	%	75			70-130	Pass	
d-BHC	M20-Ap36526	NCP	%	92			70-130	Pass	
Dieldrin	M20-Ap36526	NCP	%	83			70-130	Pass	
Endosulfan I	M20-Ap36526	NCP	%	107			70-130	Pass	
Endosulfan II	M20-Ap36526	NCP	%	107			70-130	Pass	
Endosulfan sulphate	M20-Ap36526	NCP	%	85			70-130	Pass	
Endrin	M20-Ap36526	NCP	%	92			70-130	Pass	
Endrin aldehyde	M20-Ap36526	NCP	%	112			70-130	Pass	
Endrin ketone	M20-Ap36526	NCP	%	112			70-130	Pass	
g-BHC (Lindane)	M20-Ap36526	NCP	%	71			70-130	Pass	
Heptachlor	M20-Ap36526	NCP	%	76			70-130	Pass	
Heptachlor epoxide	M20-Ap36526	NCP	%	102			70-130	Pass	
Hexachlorobenzene	M20-Ap36526	NCP	%	96			70-130	Pass	
Methoxychlor	M20-Ap36526	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap39986	CP	%	80			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap39986	CP	%	76			70-130	Pass	
Toluene	M20-Ap39986	CP	%	111			70-130	Pass	
Ethylbenzene	M20-Ap39986	CP	%	123			70-130	Pass	
m&p-Xylenes	M20-Ap39986	CP	%	98			70-130	Pass	
o-Xylene	M20-Ap39986	CP	%	114			70-130	Pass	
Xylenes - Total*	M20-Ap39986	CP	%	103			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap39986	CP	%	105			70-130	Pass	
TRH C6-C10	M20-Ap39986	CP	%	85			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap39986	CP	%	118			75-125	Pass	
Cadmium	M20-Ap39986	CP	%	101			75-125	Pass	
Chromium	M20-Ap39986	CP	%	148			75-125	Fail	Q08
Copper	M20-Ap39986	CP	%	107			75-125	Pass	
Lead	M20-Ap39986	CP	%	106			75-125	Pass	
Mercury	M20-Ap39986	CP	%	109			70-130	Pass	
Nickel	M20-Ap39986	CP	%	101			75-125	Pass	
Zinc	M20-Ap39986	CP	%	89			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap36471	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap36471	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap36471	NCP	mg/kg	130	160	17	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap36471	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap36471	NCP	mg/kg	100	110	8.0	30%	Pass	
TRH >C34-C40	M20-Ap36471	NCP	mg/kg	< 100	110	24	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap37607	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap37607	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap37607	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap37607	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Tokuthion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39984	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39984	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39984	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39984	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39984	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39984	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39984	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39984	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39984	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39985	CP	%	3.1	3.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39986	CP	mg/kg	22	22	<1	30%	Pass	
Cadmium	M20-Ap39986	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39986	CP	mg/kg	190	190	3.0	30%	Pass	
Copper	M20-Ap39986	CP	mg/kg	11	11	<1	30%	Pass	
Lead	M20-Ap39986	CP	mg/kg	17	17	1.0	30%	Pass	
Mercury	M20-Ap39986	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39986	CP	mg/kg	15	15	<1	30%	Pass	
Zinc	M20-Ap39986	CP	mg/kg	24	25	2.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39989	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39989	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39989	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39989	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39989	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39989	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39989	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39989	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39995	CP	%	2.7	2.7	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39996	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39996	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39996	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	716056-AID
Project Name	JSS
Received Date	Apr 28, 2020
Date Reported	Apr 29, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name JSS
Project ID
Date Sampled Apr 27, 2020
Report 716056-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
ACM3	20-Ap39978	Apr 27, 2020	Approximate Sample 8g / 80x35x2mm Sample consisted of: Grey weathered fibre cement material	Chrysotile asbestos detected.
ACM4	20-Ap39979	Apr 27, 2020	Approximate Sample 13g / 55x40x3mm Sample consisted of: Grey fibrous plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
ACM5	20-Ap39980	Apr 27, 2020	Approximate Sample 799g Sample consisted of: Brown coarse-grained soil and rocks	ACM: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 13g Total estimated asbestos content in ACM = 1.3g* Total estimated asbestos concentration in ACM = 0.16% w/w* Organic fibre detected. No trace asbestos detected.
V34	20-Ap39981	Apr 27, 2020	Approximate Sample 225g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V38	20-Ap39982	Apr 27, 2020	Approximate Sample 216g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V41	20-Ap39983	Apr 27, 2020	Approximate Sample 594g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V42	20-Ap39984	Apr 27, 2020	Approximate Sample 363g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V44	20-Ap39985	Apr 27, 2020	Approximate Sample 568g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V46	20-Ap39986	Apr 27, 2020	Approximate Sample 696g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V47	20-Ap39987	Apr 27, 2020	Approximate Sample 229g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V49	20-Ap39988	Apr 27, 2020	Approximate Sample 194g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V51	20-Ap39989	Apr 27, 2020	Approximate Sample 633g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V52	20-Ap39990	Apr 27, 2020	Approximate Sample 413g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V55	20-Ap39991	Apr 27, 2020	Approximate Sample 414g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V56	20-Ap39992	Apr 27, 2020	Approximate Sample 575g Sample consisted of: Brown coarse-grained soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V57	20-Ap39993	Apr 27, 2020	Approximate Sample 250g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V59	20-Ap39994	Apr 27, 2020	Approximate Sample 490g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V61	20-Ap39995	Apr 27, 2020	Approximate Sample 738g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V62	20-Ap39996	Apr 27, 2020	Approximate Sample 333g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V36	20-Ap40076	Apr 27, 2020	Approximate Sample 517g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 28, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 28, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 28, 2020	Indefinite

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IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716056
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	ACM3	Apr 27, 2020		Building Materials	M20-Ap39978			X				
2	ACM4	Apr 27, 2020		Building Materials	M20-Ap39979			X				
3	ACM5	Apr 27, 2020		Soil	M20-Ap39980		X					
4	V34	Apr 27, 2020		Soil	M20-Ap39981	X				X	X	X
5	V38	Apr 27, 2020		Soil	M20-Ap39982	X				X	X	X
6	V41	Apr 27, 2020		Soil	M20-Ap39983		X			X	X	X
7	V42	Apr 27, 2020		Soil	M20-Ap39984	X				X	X	X
8	V44	Apr 27, 2020		Soil	M20-Ap39985	X				X	X	X
9	V46	Apr 27, 2020		Soil	M20-Ap39986		X			X	X	X

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Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
10	V47	Apr 27, 2020		Soil	M20-Ap39987	X				X	X	X
11	V49	Apr 27, 2020		Soil	M20-Ap39988	X				X	X	X
12	V51	Apr 27, 2020		Soil	M20-Ap39989		X			X	X	X
13	V52	Apr 27, 2020		Soil	M20-Ap39990	X				X	X	X
14	V55	Apr 27, 2020		Soil	M20-Ap39991	X				X	X	X
15	V56	Apr 27, 2020		Soil	M20-Ap39992		X			X	X	X
16	V57	Apr 27, 2020		Soil	M20-Ap39993	X				X	X	X
17	V59	Apr 27, 2020		Soil	M20-Ap39994	X				X	X	X
18	V61	Apr 27, 2020		Soil	M20-Ap39995		X			X	X	X
19	V62	Apr 27, 2020		Soil	M20-Ap39996	X				X	X	X
20	V33	Apr 27, 2020		Soil	M20-Ap39997				X			
21	V37-A	Apr 27, 2020		Soil	M20-Ap39998				X			
22	V37-B	Apr 27, 2020		Soil	M20-Ap39999				X			

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716056
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
23	V39	Apr 27, 2020		Soil	M20-Ap40000				X			
24	V40	Apr 27, 2020		Soil	M20-Ap40001				X			
25	V43	Apr 27, 2020		Soil	M20-Ap40002				X			
26	V45	Apr 27, 2020		Soil	M20-Ap40003				X			
27	V48	Apr 27, 2020		Soil	M20-Ap40004				X			
28	V50	Apr 27, 2020		Soil	M20-Ap40005				X			
29	V53	Apr 27, 2020		Soil	M20-Ap40006				X			
30	V35	Apr 27, 2020		Soil	M20-Ap40007				X			
31	V54	Apr 27, 2020		Soil	M20-Ap40008				X			
32	V58	Apr 27, 2020		Soil	M20-Ap40009				X			
33	V60	Apr 27, 2020		Soil	M20-Ap40010				X			
34	V36	Apr 27, 2020		Soil	M20-Ap40076		X					
Test Counts						11	7	2	14	16	16	16

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

| | | |

| | | |

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ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 29, 2020 8:45 AM
Eurofins reference:	**716332**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☑ Sample containers for volatile analysis received with zero headspace.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
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NT 0801

Project Name: JSS

Order No.:
Report #: 716332
Phone: +61 2 9428 8100
Fax:

Received: Apr 29, 2020 8:45 AM
Due: Apr 30, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	V63	Apr 27, 2020		Soil	M20-Ap42511	X			X	X	X
2	V65	Apr 27, 2020		Soil	M20-Ap42512	X			X	X	X
3	V66	Apr 27, 2020		Soil	M20-Ap42513		X		X	X	X
4	V68	Apr 27, 2020		Soil	M20-Ap42514	X			X	X	X
5	V70	Apr 27, 2020		Soil	M20-Ap42515	X			X	X	X
6	V71	Apr 27, 2020		Soil	M20-Ap42516		X		X	X	X
7	V74	Apr 27, 2020		Soil	M20-Ap42517	X			X	X	X
8	V76	Apr 27, 2020		Soil	M20-Ap42518		X		X	X	X
9	V77	Apr 27, 2020		Soil	M20-Ap42519	X			X	X	X
10	V79	Apr 27, 2020		Soil	M20-Ap42520	X			X	X	X
11	V81	Apr 27, 2020		Soil	M20-Ap42521		X		X	X	X

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Company Name: SLR Consulting (NT)
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NT 0801

Project Name: JSS

Order No.:
Report #: 716332
Phone: +61 2 9428 8100
Fax:

Received: Apr 29, 2020 8:45 AM
Due: Apr 30, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
12	V82	Apr 27, 2020		Soil	M20-Ap42522	X			X	X	X
13	V85	Apr 27, 2020		Soil	M20-Ap42523	X			X	X	X
14	V86	Apr 27, 2020		Soil	M20-Ap42524		X		X	X	X
15	V88	Apr 27, 2020		Soil	M20-Ap42525	X			X	X	X
16	V90	Apr 27, 2020		Soil	M20-Ap42526	X			X	X	X
17	V91	Apr 27, 2020		Soil	M20-Ap42527		X		X	X	X
18	V93	Apr 27, 2020		Soil	M20-Ap42528	X			X	X	X
19	V95	Apr 27, 2020		Soil	M20-Ap42529	X			X	X	X
20	V96	Apr 27, 2020		Soil	M20-Ap42530		X		X	X	X
21	V98	Apr 27, 2020		Soil	M20-Ap42531	X			X	X	X
22	V100	Apr 27, 2020		Soil	M20-Ap42532	X			X	X	X
23	V101	Apr 27, 2020		Soil	M20-Ap42533		X		X	X	X
24	V103	Apr 27, 2020		Soil	M20-Ap42534	X			X	X	X

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
25	V105	Apr 27, 2020		Soil	M20-Ap42535	X			X	X	X
26	V106	Apr 27, 2020		Soil	M20-Ap42536		X		X	X	X
27	V108	Apr 27, 2020		Soil	M20-Ap42537	X			X	X	X
28	R1	Apr 23, 2020		Water	M20-Ap42538				X		X
29	R2	Apr 24, 2020		Water	M20-Ap42539				X		X
30	R3	Apr 25, 2020		Water	M20-Ap42540				X		X
31	R4	Apr 27, 2020		Water	M20-Ap42541				X		X
32	V64	Apr 27, 2020		Soil	M20-Ap42542			X			
33	V67	Apr 27, 2020		Soil	M20-Ap42543			X			
34	V69	Apr 27, 2020		Soil	M20-Ap42544			X			
35	V72	Apr 27, 2020		Soil	M20-Ap42545			X			
36	V73	Apr 27, 2020		Soil	M20-Ap42546			X			
37	V75	Apr 27, 2020		Soil	M20-Ap42547			X			

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
38	V78	Apr 27, 2020		Soil	M20-Ap42548			X			
39	V80	Apr 27, 2020		Soil	M20-Ap42549			X			
40	V83	Apr 27, 2020		Soil	M20-Ap42550			X			
41	V84	Apr 27, 2020		Soil	M20-Ap42551			X			
42	V87	Apr 27, 2020		Soil	M20-Ap42552			X			
43	V89	Apr 27, 2020		Soil	M20-Ap42553			X			
44	V92	Apr 27, 2020		Soil	M20-Ap42554			X			
45	V94	Apr 27, 2020		Soil	M20-Ap42555			X			
46	V97	Apr 27, 2020		Soil	M20-Ap42556			X			
47	V99	Apr 27, 2020		Soil	M20-Ap42557			X			
48	V102	Apr 27, 2020		Soil	M20-Ap42558			X			
49	V104	Apr 27, 2020		Soil	M20-Ap42559			X			
50	V107	Apr 27, 2020		Soil	M20-Ap42560			X			
						18	9	19	31	27	31

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Project Name: JSS

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Fax:

Received: Apr 29, 2020 8:45 AM
Due: Apr 30, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271			X	X	X	X
Sydney Laboratory - NATA Site # 18217	X	X				
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
Test Counts	18	9	19	31	27	31

SLR Consulting (NT)
GPO Box 654
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Attention: **Sarah Doherty**

Report **716332-S**
Project name JSS
Received Date Apr 29, 2020

Client Sample ID			**V63**	**V65**	**V66**	**V68**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap42511**	**M20-Ap42512**	**M20-Ap42513**	**M20-Ap42514**
Date Sampled			**Apr 27, 2020**	**Apr 27, 2020**	**Apr 27, 2020**	**Apr 27, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	60	76	78	74
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	0.13	0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V63	V65	V66	V68
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42511	M20-Ap42512	M20-Ap42513	M20-Ap42514
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	0.13	0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.13	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	106	123	109	112
Tetrachloro-m-xylene (surr.)	1	%	82	98	80	85
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	93	115	101	99

Client Sample ID			V63	V65	V66	V68
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42511	M20-Ap42512	M20-Ap42513	M20-Ap42514
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	17	22	27	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	160	200	300	180
Copper	5	mg/kg	14	18	13	14
Lead	5	mg/kg	21	20	22	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	19	21	27	28
Zinc	5	mg/kg	48	23	16	17
% Moisture	1	%	8.9	3.3	13	6.5

Client Sample ID			V70	V71	V74	V76
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42515	M20-Ap42516	M20-Ap42517	M20-Ap42518
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	85	78	74	87
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V70	V71	V74	V76
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42515	M20-Ap42516	M20-Ap42517	M20-Ap42518
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	< 0.05	0.05	0.13	0.10
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.05	0.13	0.1
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.13	0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	115	111	119	100
Tetrachloro-m-xylene (surr.)	1	%	90	86	82	74
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V70	V71	V74	V76
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42515	M20-Ap42516	M20-Ap42517	M20-Ap42518
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	108	100	88	95
Heavy Metals						
Arsenic	2	mg/kg	15	16	19	32
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	110	150	190	280
Copper	5	mg/kg	14	12	12	12
Lead	5	mg/kg	19	17	19	27
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	24	20	23	24
Zinc	5	mg/kg	28	22	20	32
% Moisture	1	%	6.2	5.0	11	11

Client Sample ID			V77	V79	V81	V82
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42519	M20-Ap42520	M20-Ap42521	M20-Ap42522
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	78	91	51	98
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			V77	V79	V81	V82
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42519	M20-Ap42520	M20-Ap42521	M20-Ap42522
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	0.12	0.10
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	0.12	0.1
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.12	0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	110	109	117	124
Tetrachloro-m-xylene (surr.)	1	%	91	83	110	93
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V77	V79	V81	V82
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42519	M20-Ap42520	M20-Ap42521	M20-Ap42522
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	100	94	142	116
Heavy Metals						
Arsenic	2	mg/kg	20	32	25	19
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	190	290	260	180
Copper	5	mg/kg	13	11	12	14
Lead	5	mg/kg	21	26	21	20
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	20	18	21	23
Zinc	5	mg/kg	29	24	20	29
% Moisture	1	%	4.1	11	7.5	7.3

Client Sample ID			V85	V86	V88	V90
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42523	M20-Ap42524	M20-Ap42525	M20-Ap42526
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	52	59	83	52

Client Sample ID			V85	V86	V88	V90
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42523	M20-Ap42524	M20-Ap42525	M20-Ap42526
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.09
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.07	< 0.05	< 0.05	0.32
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.07	< 0.05	< 0.05	0.41
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.41
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	102	113	90	103
Tetrachloro-m-xylene (surr.)	1	%	89	95	76	95
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V85	V86	V88	V90
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42523	M20-Ap42524	M20-Ap42525	M20-Ap42526
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	104	112	85	87
Heavy Metals						
Arsenic	2	mg/kg	24	20	21	25
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	250	240	230	240
Copper	5	mg/kg	11	9.1	11	14
Lead	5	mg/kg	22	21	23	21
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	20	18	20	18
Zinc	5	mg/kg	17	15	35	26
% Moisture	1	%	8.1	14	1.9	4.0

Client Sample ID			V91	V93	V95	V96
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42527	M20-Ap42528	M20-Ap42529	M20-Ap42530
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			V91	V93	V95	V96
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42527	M20-Ap42528	M20-Ap42529	M20-Ap42530
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	125	63	66	77
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.19	0.09	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.46	0.49	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.65	0.58	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.65	0.58	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	121	95	130	114
Tetrachloro-m-xylene (surr.)	1	%	96	65	85	78
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V91	V93	V95	V96
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42527	M20-Ap42528	M20-Ap42529	M20-Ap42530
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	114	88	115	104
Heavy Metals						
Arsenic	2	mg/kg	27	13	19	26
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	230	88	180	220
Copper	5	mg/kg	12	16	12	14
Lead	5	mg/kg	22	16	23	26
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	19	18	18	18
Zinc	5	mg/kg	28	47	34	38
% Moisture	1	%	8.8	6.2	4.7	5.0

Client Sample ID			V98	V100	V101	V103
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42531	M20-Ap42532	M20-Ap42533	M20-Ap42534
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	82	82	87	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.17
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.17
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.17
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	111	90	107	89
Tetrachloro-m-xylene (surr.)	1	%	73	69	70	71

Client Sample ID			V98	V100	V101	V103
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42531	M20-Ap42532	M20-Ap42533	M20-Ap42534
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	99	84	85	77
Heavy Metals						
Arsenic	2	mg/kg	17	29	17	23
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	160	240	160	220
Copper	5	mg/kg	10	10	11	12
Lead	5	mg/kg	21	23	17	22
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	19	19	17
Zinc	5	mg/kg	29	17	20	33
% Moisture	1	%	4.1	12	22	2.6

Client Sample ID			V105	V106	V108
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42535	M20-Ap42536	M20-Ap42537
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50
BTEX					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	89	76	108
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	< 0.1	0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	0.20	0.34
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	0.75	0.75
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.95	1.09
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	1.05	1.09
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	86	95	91
Tetrachloro-m-xylene (surr.)	1	%	65	71	84

Client Sample ID			V105	V106	V108
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42535	M20-Ap42536	M20-Ap42537
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	148	86	83
Heavy Metals					
Arsenic	2	mg/kg	26	25	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	310	200	130
Copper	5	mg/kg	10.0	12	7.9
Lead	5	mg/kg	25	18	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	17	11	13
Zinc	5	mg/kg	15	39	20
% Moisture	1	%	7.7	5.5	6.5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 29, 2020	180 Days
- Method:			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
% Moisture	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	105			70-130	Pass	
TRH C10-C14	%	99			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	108			70-130	Pass	
Toluene	%	97			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
m&p-Xylenes	%	93			70-130	Pass	
Xylenes - Total*	%	95			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	125			70-130	Pass	
TRH C6-C10	%	101			70-130	Pass	
TRH >C10-C16	%	95			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	84			70-130	Pass	
4.4'-DDD	%	83			70-130	Pass	
4.4'-DDE	%	85			70-130	Pass	
4.4'-DDT	%	88			70-130	Pass	
a-BHC	%	80			70-130	Pass	
Aldrin	%	83			70-130	Pass	
b-BHC	%	82			70-130	Pass	
d-BHC	%	86			70-130	Pass	
Dieldrin	%	83			70-130	Pass	
Endosulfan I	%	79			70-130	Pass	
Endosulfan II	%	75			70-130	Pass	
Endosulfan sulphate	%	73			70-130	Pass	
Endrin	%	99			70-130	Pass	
Endrin aldehyde	%	81			70-130	Pass	
Endrin ketone	%	85			70-130	Pass	
g-BHC (Lindane)	%	96			70-130	Pass	
Heptachlor	%	99			70-130	Pass	
Heptachlor epoxide	%	74			70-130	Pass	
Hexachlorobenzene	%	82			70-130	Pass	
Methoxychlor	%	81			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	101			70-130	Pass	
Dimethoate	%	102			70-130	Pass	
Ethion	%	80			70-130	Pass	
Fenitrothion	%	86			70-130	Pass	
Methyl parathion	%	81			70-130	Pass	
Mevinphos	%	97			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	109			80-120	Pass	
Cadmium	%	116			80-120	Pass	
Chromium	%	115			80-120	Pass	
Copper	%	113			80-120	Pass	
Lead	%	112			80-120	Pass	
Mercury	%	115			75-125	Pass	
Nickel	%	110			80-120	Pass	
Zinc	%	109			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDT	M20-Ap40589	NCP	%	94			70-130	Pass	
Methoxychlor	M20-Ap40589	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap42512	CP	%	122			70-130	Pass	
Dimethoate	M20-Ap42512	CP	%	89			70-130	Pass	
Ethion	M20-Ap42512	CP	%	98			70-130	Pass	
Fenitrothion	M20-Ap42512	CP	%	97			70-130	Pass	
Methyl parathion	M20-Ap42512	CP	%	85			70-130	Pass	
Mevinphos	M20-Ap42512	CP	%	95			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heavy Metals				Result 1					
Arsenic	M20-Ap42515	CP	%	101			75-125	Pass	
Cadmium	M20-Ap42515	CP	%	108			75-125	Pass	
Copper	M20-Ap42515	CP	%	83			75-125	Pass	
Lead	M20-Ap42515	CP	%	97			75-125	Pass	
Mercury	M20-Ap42515	CP	%	124			70-130	Pass	
Nickel	M20-Ap42515	CP	%	83			75-125	Pass	
Zinc	M20-Ap42515	CP	%	75			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap42517	CP	%	88			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap42517	CP	%	79			70-130	Pass	
Toluene	M20-Ap42517	CP	%	82			70-130	Pass	
Ethylbenzene	M20-Ap42517	CP	%	85			70-130	Pass	
m&p-Xylenes	M20-Ap42517	CP	%	84			70-130	Pass	
o-Xylene	M20-Ap42517	CP	%	87			70-130	Pass	
Xylenes - Total*	M20-Ap42517	CP	%	85			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap42517	CP	%	105			70-130	Pass	
TRH C6-C10	M20-Ap42517	CP	%	86			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap42517	CP	%	78			70-130	Pass	
4.4'-DDD	M20-Ap42517	CP	%	104			70-130	Pass	
4.4'-DDE	M20-Ap42517	CP	%	79			70-130	Pass	
a-BHC	M20-Ap42517	CP	%	75			70-130	Pass	
Aldrin	M20-Ap42517	CP	%	72			70-130	Pass	
b-BHC	M20-Ap42517	CP	%	130			70-130	Pass	
d-BHC	M20-Ap42517	CP	%	72			70-130	Pass	
Dieldrin	M20-Ap42517	CP	%	102			70-130	Pass	
Endosulfan I	M20-Ap42517	CP	%	71			70-130	Pass	
Endosulfan II	M20-Ap42517	CP	%	79			70-130	Pass	
Endosulfan sulphate	M20-Ap42517	CP	%	74			70-130	Pass	
Endrin	M20-Ap42517	CP	%	78			70-130	Pass	
Endrin aldehyde	M20-Ap42517	CP	%	95			70-130	Pass	
Endrin ketone	M20-Ap42517	CP	%	81			70-130	Pass	
g-BHC (Lindane)	M20-Ap42517	CP	%	124			70-130	Pass	
Heptachlor epoxide	M20-Ap42517	CP	%	83			70-130	Pass	
Hexachlorobenzene	M20-Ap42517	CP	%	98			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap42522	CP	%	79			70-130	Pass	
Dimethoate	M20-Ap42522	CP	%	93			70-130	Pass	
Ethion	M20-Ap42522	CP	%	89			70-130	Pass	
Fenitrothion	M20-Ap42522	CP	%	101			70-130	Pass	
Methyl parathion	M20-Ap42522	CP	%	80			70-130	Pass	
Mevinphos	M20-Ap42522	CP	%	116			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap42525	CP	%	110			75-125	Pass	
Cadmium	M20-Ap42525	CP	%	113			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chromium	M20-Ap42525	CP	%	116			75-125	Pass	
Copper	M20-Ap42525	CP	%	115			75-125	Pass	
Lead	M20-Ap42525	CP	%	115			75-125	Pass	
Mercury	M20-Ap42525	CP	%	122			70-130	Pass	
Nickel	M20-Ap42525	CP	%	112			75-125	Pass	
Zinc	M20-Ap42525	CP	%	112			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap42527	CP	%	74			70-130	Pass	
TRH C10-C14	M20-Ap42527	CP	%	113			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap42527	CP	%	103			70-130	Pass	
Toluene	M20-Ap42527	CP	%	72			70-130	Pass	
Ethylbenzene	M20-Ap42527	CP	%	79			70-130	Pass	
m&p-Xylenes	M20-Ap42527	CP	%	71			70-130	Pass	
o-Xylene	M20-Ap42527	CP	%	87			70-130	Pass	
Xylenes - Total*	M20-Ap42527	CP	%	77			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap42527	CP	%	84			70-130	Pass	
TRH C6-C10	M20-Ap42527	CP	%	87			70-130	Pass	
TRH >C10-C16	M20-Ap42527	CP	%	109			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap42527	CP	%	100			70-130	Pass	
4.4'-DDD	M20-Ap42527	CP	%	105			70-130	Pass	
4.4'-DDE	M20-Ap42527	CP	%	101			70-130	Pass	
a-BHC	M20-Ap42527	CP	%	79			70-130	Pass	
Aldrin	M20-Ap42527	CP	%	97			70-130	Pass	
b-BHC	M20-Ap42527	CP	%	82			70-130	Pass	
d-BHC	M20-Ap42527	CP	%	81			70-130	Pass	
Dieldrin	M20-Ap42527	CP	%	98			70-130	Pass	
Endosulfan I	M20-Ap42527	CP	%	98			70-130	Pass	
Endosulfan II	M20-Ap42527	CP	%	74			70-130	Pass	
Endosulfan sulphate	M20-Ap42527	CP	%	87			70-130	Pass	
Endrin	M20-Ap42527	CP	%	74			70-130	Pass	
Endrin aldehyde	M20-Ap42527	CP	%	79			70-130	Pass	
Endrin ketone	M20-Ap42527	CP	%	105			70-130	Pass	
g-BHC (Lindane)	M20-Ap42527	CP	%	96			70-130	Pass	
Heptachlor	M20-Ap42527	CP	%	70			70-130	Pass	
Heptachlor epoxide	M20-Ap42527	CP	%	76			70-130	Pass	
Hexachlorobenzene	M20-Ap42527	CP	%	92			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap42511	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42511	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42511	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap42511	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42511	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42511	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42511	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42511	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42511	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42511	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Tokuthion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42514	CP	mg/kg	16	21	25	30%	Pass	
Cadmium	M20-Ap42514	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42514	CP	mg/kg	180	220	19	30%	Pass	
Copper	M20-Ap42514	CP	mg/kg	14	11	25	30%	Pass	
Lead	M20-Ap42514	CP	mg/kg	19	19	1.0	30%	Pass	
Mercury	M20-Ap42514	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42514	CP	mg/kg	28	22	21	30%	Pass	
Zinc	M20-Ap42514	CP	mg/kg	17	13	32	30%	Fail	Q15
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42515	CP	mg/kg	15	14	1.0	30%	Pass	
Cadmium	M20-Ap42515	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42515	CP	mg/kg	110	110	1.0	30%	Pass	
Copper	M20-Ap42515	CP	mg/kg	14	15	4.0	30%	Pass	
Lead	M20-Ap42515	CP	mg/kg	19	19	2.0	30%	Pass	
Mercury	M20-Ap42515	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42515	CP	mg/kg	24	24	1.0	30%	Pass	
Zinc	M20-Ap42515	CP	mg/kg	28	28	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42516	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap42516	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42516	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42516	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42516	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42516	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42516	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap42516	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42516	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42516	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42516	CP	mg/kg	0.05	0.06	20	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan I	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42516	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42516	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42516	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42517	CP	%	11	11	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap42521	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42521	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42521	CP	mg/kg	< 50	< 50	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap42521	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42521	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42521	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42521	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42521	CP	mg/kg	0.12	0.09	39	30%	Fail	Q15
Endosulfan I	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42521	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42521	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42521	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Pirimiphos-methyl	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42524	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42524	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42524	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42524	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42524	CP	mg/kg	20	22	10	30%	Pass	
Cadmium	M20-Ap42524	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42524	CP	mg/kg	240	220	8.0	30%	Pass	
Copper	M20-Ap42524	CP	mg/kg	9.1	11	21	30%	Pass	
Lead	M20-Ap42524	CP	mg/kg	21	23	8.0	30%	Pass	
Mercury	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42524	CP	mg/kg	18	24	25	30%	Pass	
Zinc	M20-Ap42524	CP	mg/kg	15	17	15	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42525	CP	mg/kg	21	22	8.0	30%	Pass	
Cadmium	M20-Ap42525	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42525	CP	mg/kg	230	250	9.0	30%	Pass	
Copper	M20-Ap42525	CP	mg/kg	11	12	9.0	30%	Pass	
Lead	M20-Ap42525	CP	mg/kg	23	26	10	30%	Pass	
Mercury	M20-Ap42525	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42525	CP	mg/kg	20	22	9.0	30%	Pass	
Zinc	M20-Ap42525	CP	mg/kg	35	38	8.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42526	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap42526	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42526	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42526	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
o-Xylene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42526	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42526	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42526	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap42526	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42526	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42526	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42526	CP	mg/kg	0.09	0.06	29	30%	Pass	
b-BHC	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42526	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Mevinphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42526	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42526	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42527	CP	%	8.8	8.6	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42534	CP	mg/kg	23	21	10	30%	Pass	
Cadmium	M20-Ap42534	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42534	CP	mg/kg	220	220	<1	30%	Pass	
Copper	M20-Ap42534	CP	mg/kg	12	12	<1	30%	Pass	
Lead	M20-Ap42534	CP	mg/kg	22	22	2.0	30%	Pass	
Mercury	M20-Ap42534	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42534	CP	mg/kg	17	18	5.0	30%	Pass	
Zinc	M20-Ap42534	CP	mg/kg	33	33	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42537	CP	%	6.5	6.5	1.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	716332-AID
Project Name	JSS
Received Date	Apr 29, 2020
Date Reported	Apr 30, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name JSS
Project ID
Date Sampled Apr 27, 2020
Report 716332-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V63	20-Ap42511	Apr 27, 2020	Approximate Sample 263g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V65	20-Ap42512	Apr 27, 2020	Approximate Sample 192g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V66	20-Ap42513	Apr 27, 2020	Approximate Sample 539g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V68	20-Ap42514	Apr 27, 2020	Approximate Sample 263g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V70	20-Ap42515	Apr 27, 2020	Approximate Sample 255g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V71	20-Ap42516	Apr 27, 2020	Approximate Sample 675g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V74	20-Ap42517	Apr 27, 2020	Approximate Sample 178g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V76	20-Ap42518	Apr 27, 2020	Approximate Sample 623g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V77	20-Ap42519	Apr 27, 2020	Approximate Sample 173g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V79	20-Ap42520	Apr 27, 2020	Approximate Sample 177g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V81	20-Ap42521	Apr 27, 2020	Approximate Sample 532g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V82	20-Ap42522	Apr 27, 2020	Approximate Sample 110g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V85	20-Ap42523	Apr 27, 2020	Approximate Sample 155g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V86	20-Ap42524	Apr 27, 2020	Approximate Sample 503g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V88	20-Ap42525	Apr 27, 2020	Approximate Sample 312g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V90	20-Ap42526	Apr 27, 2020	Approximate Sample 391g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V91	20-Ap42527	Apr 27, 2020	Approximate Sample 574g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V93	20-Ap42528	Apr 27, 2020	Approximate Sample 374g Sample consisted of: Red brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V95	20-Ap42529	Apr 27, 2020	Approximate Sample 347g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V96	20-Ap42530	Apr 27, 2020	Approximate Sample 656g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V98	20-Ap42531	Apr 27, 2020	Approximate Sample 405g Sample consisted of: Red brown coarse-grained soil, cement, plaster and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

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Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V100	20-Ap42532	Apr 27, 2020	Approximate Sample 268g Sample consisted of: Red brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V101	20-Ap42533	Apr 27, 2020	Approximate Sample 705g Sample consisted of: Red brown fine-grained clayey soil, cement, plaster and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V103	20-Ap42534	Apr 27, 2020	Approximate Sample 332g Sample consisted of: Red brown coarse-grained soil, fragments of ceramic tile, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V105	20-Ap42535	Apr 27, 2020	Approximate Sample 415g Sample consisted of: Red brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V106	20-Ap42536	Apr 27, 2020	Approximate Sample 658g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V108	20-Ap42537	Apr 27, 2020	Approximate Sample 388g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 29, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 29, 2020	Indefinite

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **716332-W**
Project name JSS
Received Date Apr 29, 2020

Client Sample ID			**R1**	**R2**	**R3**	**R4**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M20-Ap42538**	**M20-Ap42539**	**M20-Ap42540**	**M20-Ap42541**
Date Sampled			**Apr 23, 2020**	**Apr 24, 2020**	**Apr 25, 2020**	**Apr 27, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	112	98	116	80
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Organochlorine Pesticides						
Chlordanes - Total	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4.4'-DDD	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDE	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDT	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
a-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Aldrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
b-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
d-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dieldrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan I	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan II	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan sulphate	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Client Sample ID			R1	R2	R3	R4
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M20-Ap42538	M20-Ap42539	M20-Ap42540	M20-Ap42541
Date Sampled			Apr 23, 2020	Apr 24, 2020	Apr 25, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin ketone	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor epoxide	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Methoxychlor	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Toxaphene	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibutylchlorendate (surr.)	1	%	97	128	64	98
Tetrachloro-m-xylene (surr.)	1	%	93	83	89	107
Organophosphorus Pesticides						
Azinphos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Bolstar	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorfenvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorpyrifos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Coumaphos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-S	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-O	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Diazinon	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dichlorvos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dimethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Disulfoton	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
EPN	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethoprop	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenitrothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fensulfothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Malathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Merphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Mevinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Monocrotophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Naled	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Omethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Phorate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Pyrazophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ronnel	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Terbufos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tokuthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Trichloronate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Triphenylphosphate (surr.)	1	%	96	128	75	66

Client Sample ID			R1	R2	R3	R4
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M20-Ap42538	M20-Ap42539	M20-Ap42540	M20-Ap42541
Date Sampled			Apr 23, 2020	Apr 24, 2020	Apr 25, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Zinc	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 29, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/L	< 0.02			0.02	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	106			70-130	Pass	
TRH C10-C14	%	102			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	113			70-130	Pass	
Toluene	%	110			70-130	Pass	
Ethylbenzene	%	112			70-130	Pass	
m&p-Xylenes	%	110			70-130	Pass	
Xylenes - Total*	%	111			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	109			70-130	Pass	
TRH C6-C10	%	104			70-130	Pass	
TRH >C10-C16	%	97			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	94			70-130	Pass	
4.4'-DDD	%	85			70-130	Pass	
4.4'-DDE	%	96			70-130	Pass	
4.4'-DDT	%	83			70-130	Pass	
a-BHC	%	93			70-130	Pass	
Aldrin	%	86			70-130	Pass	
b-BHC	%	100			70-130	Pass	
d-BHC	%	92			70-130	Pass	
Dieldrin	%	78			70-130	Pass	
Endosulfan I	%	101			70-130	Pass	
Endosulfan II	%	82			70-130	Pass	
Endosulfan sulphate	%	80			70-130	Pass	
Endrin	%	81			70-130	Pass	
Endrin aldehyde	%	101			70-130	Pass	
Endrin ketone	%	98			70-130	Pass	
g-BHC (Lindane)	%	111			70-130	Pass	
Heptachlor	%	89			70-130	Pass	
Heptachlor epoxide	%	93			70-130	Pass	
Hexachlorobenzene	%	113			70-130	Pass	
Methoxychlor	%	76			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	110			70-130	Pass	
Dimethoate	%	84			70-130	Pass	
Ethion	%	101			70-130	Pass	
Fenitrothion	%	89			70-130	Pass	
Methyl parathion	%	93			70-130	Pass	
Mevinphos	%	73			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	94			80-120	Pass	
Copper	%	95			80-120	Pass	
Lead	%	98			80-120	Pass	
Mercury	%	93			75-125	Pass	
Nickel	%	95			80-120	Pass	
Zinc	%	98			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap21090	NCP	%	93			70-130	Pass	
Dimethoate	M20-Ap21090	NCP	%	72			70-130	Pass	
Ethion	M20-Ap21090	NCP	%	71			70-130	Pass	
Fenitrothion	M20-Ap21090	NCP	%	79			70-130	Pass	
Methyl parathion	M20-Ap21090	NCP	%	101			70-130	Pass	
Mevinphos	M20-Ap21090	NCP	%	79			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap41210	NCP	%	90			75-125	Pass	
Cadmium	M20-Ap41210	NCP	%	96			75-125	Pass	
Chromium	M20-Ap41210	NCP	%	95			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper	M20-Ap41210	NCP	%	92			75-125	Pass	
Lead	M20-Ap41210	NCP	%	93			75-125	Pass	
Mercury	M20-Ap41210	NCP	%	88			70-130	Pass	
Nickel	M20-Ap41210	NCP	%	93			75-125	Pass	
Zinc	M20-Ap41210	NCP	%	89			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39822	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M20-Ap35295	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M20-Ap35295	NCP	mg/L	0.5	0.6	16	30%	Pass	
TRH C29-C36	M20-Ap35295	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M20-Ap39822	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M20-Ap39822	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39822	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M20-Ap39822	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M20-Ap35295	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M20-Ap35295	NCP	mg/L	0.5	0.6	20	30%	Pass	
TRH >C34-C40	M20-Ap35295	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap21089	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4.4'-DDD	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDE	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDT	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
a-BHC	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Aldrin	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
b-BHC	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
d-BHC	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Dieldrin	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan I	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan II	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan sulphate	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin aldehyde	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin ketone	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor epoxide	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Hexachlorobenzene	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Methoxychlor	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Bolstar	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorfenvinphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorpyrifos	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Coumaphos	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-S	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-O	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Diazinon	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dichlorvos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dimethoate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Disulfoton	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
EPN	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethoprop	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethyl parathion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenitrothion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fensulfothion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenthion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Malathion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Merphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methyl parathion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Mevinphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Monocrotophos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Naled	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Omethoate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Phorate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Pyrazophos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ronnel	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbufos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tokuthion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Trichloronate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap41210	NCP	mg/L	0.10	0.10	1.0	30%	Pass	
Cadmium	M20-Ap41210	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M20-Ap41210	NCP	mg/L	0.002	0.002	1.0	30%	Pass	
Copper	M20-Ap41210	NCP	mg/L	0.005	0.005	<1	30%	Pass	
Lead	M20-Ap41210	NCP	mg/L	0.014	0.014	<1	30%	Pass	
Mercury	M20-Ap41210	NCP	mg/L	0.0003	< 0.0001	110	30%	Fail	Q15
Nickel	M20-Ap41210	NCP	mg/L	0.003	0.004	3.0	30%	Pass	
Zinc	M20-Ap41210	NCP	mg/L	0.039	0.039	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

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eurofins | Environment Testing

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NATA # 1261 Site # 20794

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Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 29, 2020 8:45 AM
Eurofins reference:	**716332**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☑ Sample containers for volatile analysis received with zero headspace.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

eurofins | Environment Testing

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NATA # 1261 Site # 18217

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NATA # 1261 Site # 20794

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Site # 23736

New Zealand

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Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716332
Phone: +61 2 9428 8100
Fax:

Received: Apr 29, 2020 8:45 AM
Due: Apr 30, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	V63	Apr 27, 2020		Soil	M20-Ap42511	X			X	X	X
2	V65	Apr 27, 2020		Soil	M20-Ap42512	X			X	X	X
3	V66	Apr 27, 2020		Soil	M20-Ap42513		X		X	X	X
4	V68	Apr 27, 2020		Soil	M20-Ap42514	X			X	X	X
5	V70	Apr 27, 2020		Soil	M20-Ap42515	X			X	X	X
6	V71	Apr 27, 2020		Soil	M20-Ap42516		X		X	X	X
7	V74	Apr 27, 2020		Soil	M20-Ap42517	X			X	X	X
8	V76	Apr 27, 2020		Soil	M20-Ap42518		X		X	X	X
9	V77	Apr 27, 2020		Soil	M20-Ap42519	X			X	X	X
10	V79	Apr 27, 2020		Soil	M20-Ap42520	X			X	X	X
11	V81	Apr 27, 2020		Soil	M20-Ap42521		X		X	X	X

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Project Name: JSS

Order No.:
Report #: 716332
Phone: +61 2 9428 8100
Fax:

Received: Apr 29, 2020 8:45 AM
Due: Apr 30, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
12	V82	Apr 27, 2020		Soil	M20-Ap42522	X			X	X	X
13	V85	Apr 27, 2020		Soil	M20-Ap42523	X			X	X	X
14	V86	Apr 27, 2020		Soil	M20-Ap42524		X		X	X	X
15	V88	Apr 27, 2020		Soil	M20-Ap42525	X			X	X	X
16	V90	Apr 27, 2020		Soil	M20-Ap42526	X			X	X	X
17	V91	Apr 27, 2020		Soil	M20-Ap42527		X		X	X	X
18	V93	Apr 27, 2020		Soil	M20-Ap42528	X			X	X	X
19	V95	Apr 27, 2020		Soil	M20-Ap42529	X			X	X	X
20	V96	Apr 27, 2020		Soil	M20-Ap42530		X		X	X	X
21	V98	Apr 27, 2020		Soil	M20-Ap42531	X			X	X	X
22	V100	Apr 27, 2020		Soil	M20-Ap42532	X			X	X	X
23	V101	Apr 27, 2020		Soil	M20-Ap42533		X		X	X	X
24	V103	Apr 27, 2020		Soil	M20-Ap42534	X			X	X	X

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
25	V105	Apr 27, 2020		Soil	M20-Ap42535	X			X	X	X
26	V106	Apr 27, 2020		Soil	M20-Ap42536		X		X	X	X
27	V108	Apr 27, 2020		Soil	M20-Ap42537	X			X	X	X
28	R1	Apr 23, 2020		Water	M20-Ap42538				X		X
29	R2	Apr 24, 2020		Water	M20-Ap42539				X		X
30	R3	Apr 25, 2020		Water	M20-Ap42540				X		X
31	R4	Apr 27, 2020		Water	M20-Ap42541				X		X
32	V64	Apr 27, 2020		Soil	M20-Ap42542			X			
33	V67	Apr 27, 2020		Soil	M20-Ap42543			X			
34	V69	Apr 27, 2020		Soil	M20-Ap42544			X			
35	V72	Apr 27, 2020		Soil	M20-Ap42545			X			
36	V73	Apr 27, 2020		Soil	M20-Ap42546			X			
37	V75	Apr 27, 2020		Soil	M20-Ap42547			X			

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
38	V78	Apr 27, 2020		Soil	M20-Ap42548			X			
39	V80	Apr 27, 2020		Soil	M20-Ap42549			X			
40	V83	Apr 27, 2020		Soil	M20-Ap42550			X			
41	V84	Apr 27, 2020		Soil	M20-Ap42551			X			
42	V87	Apr 27, 2020		Soil	M20-Ap42552			X			
43	V89	Apr 27, 2020		Soil	M20-Ap42553			X			
44	V92	Apr 27, 2020		Soil	M20-Ap42554			X			
45	V94	Apr 27, 2020		Soil	M20-Ap42555			X			
46	V97	Apr 27, 2020		Soil	M20-Ap42556			X			
47	V99	Apr 27, 2020		Soil	M20-Ap42557			X			
48	V102	Apr 27, 2020		Soil	M20-Ap42558			X			
49	V104	Apr 27, 2020		Soil	M20-Ap42559			X			
50	V107	Apr 27, 2020		Soil	M20-Ap42560			X			
						18	9	19	31	27	31

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Received: Apr 29, 2020 8:45 AM
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Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271			X	X	X	X
Sydney Laboratory - NATA Site # 18217	X	X				
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
Test Counts	18	9	19	31	27	31

SLR Consulting (NT)
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Attention: **Sarah Doherty**

Report **716332-S**
Project name JSS
Received Date Apr 29, 2020

Client Sample ID			**V63**	**V65**	**V66**	**V68**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap42511**	**M20-Ap42512**	**M20-Ap42513**	**M20-Ap42514**
Date Sampled			**Apr 27, 2020**	**Apr 27, 2020**	**Apr 27, 2020**	**Apr 27, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	60	76	78	74
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	0.13	0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V63	V65	V66	V68
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42511	M20-Ap42512	M20-Ap42513	M20-Ap42514
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	0.13	0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.13	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	106	123	109	112
Tetrachloro-m-xylene (surr.)	1	%	82	98	80	85
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	93	115	101	99

Client Sample ID			V63	V65	V66	V68
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42511	M20-Ap42512	M20-Ap42513	M20-Ap42514
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	17	22	27	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	160	200	300	180
Copper	5	mg/kg	14	18	13	14
Lead	5	mg/kg	21	20	22	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	19	21	27	28
Zinc	5	mg/kg	48	23	16	17
% Moisture	1	%	8.9	3.3	13	6.5

Client Sample ID			V70	V71	V74	V76
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42515	M20-Ap42516	M20-Ap42517	M20-Ap42518
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	85	78	74	87
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V70	V71	V74	V76
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42515	M20-Ap42516	M20-Ap42517	M20-Ap42518
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	< 0.05	0.05	0.13	0.10
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.05	0.13	0.1
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.13	0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	115	111	119	100
Tetrachloro-m-xylene (surr.)	1	%	90	86	82	74
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V70	V71	V74	V76
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42515	M20-Ap42516	M20-Ap42517	M20-Ap42518
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	108	100	88	95
Heavy Metals						
Arsenic	2	mg/kg	15	16	19	32
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	110	150	190	280
Copper	5	mg/kg	14	12	12	12
Lead	5	mg/kg	19	17	19	27
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	24	20	23	24
Zinc	5	mg/kg	28	22	20	32
% Moisture	1	%	6.2	5.0	11	11

Client Sample ID			V77	V79	V81	V82
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42519	M20-Ap42520	M20-Ap42521	M20-Ap42522
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	78	91	51	98
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			V77	V79	V81	V82
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42519	M20-Ap42520	M20-Ap42521	M20-Ap42522
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	0.12	0.10
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	0.12	0.1
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.12	0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	110	109	117	124
Tetrachloro-m-xylene (surr.)	1	%	91	83	110	93
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V77	V79	V81	V82
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42519	M20-Ap42520	M20-Ap42521	M20-Ap42522
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	100	94	142	116
Heavy Metals						
Arsenic	2	mg/kg	20	32	25	19
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	190	290	260	180
Copper	5	mg/kg	13	11	12	14
Lead	5	mg/kg	21	26	21	20
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	20	18	21	23
Zinc	5	mg/kg	29	24	20	29
% Moisture	1	%	4.1	11	7.5	7.3

Client Sample ID			V85	V86	V88	V90
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42523	M20-Ap42524	M20-Ap42525	M20-Ap42526
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	52	59	83	52

Client Sample ID			V85	V86	V88	V90
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42523	M20-Ap42524	M20-Ap42525	M20-Ap42526
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.09
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.07	< 0.05	< 0.05	0.32
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.07	< 0.05	< 0.05	0.41
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.41
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	102	113	90	103
Tetrachloro-m-xylene (surr.)	1	%	89	95	76	95
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V85	V86	V88	V90
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42523	M20-Ap42524	M20-Ap42525	M20-Ap42526
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	104	112	85	87
Heavy Metals						
Arsenic	2	mg/kg	24	20	21	25
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	250	240	230	240
Copper	5	mg/kg	11	9.1	11	14
Lead	5	mg/kg	22	21	23	21
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	20	18	20	18
Zinc	5	mg/kg	17	15	35	26
% Moisture	1	%	8.1	14	1.9	4.0

Client Sample ID			V91	V93	V95	V96
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42527	M20-Ap42528	M20-Ap42529	M20-Ap42530
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			V91	V93	V95	V96
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42527	M20-Ap42528	M20-Ap42529	M20-Ap42530
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	125	63	66	77
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.19	0.09	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.46	0.49	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.65	0.58	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.65	0.58	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	121	95	130	114
Tetrachloro-m-xylene (surr.)	1	%	96	65	85	78
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V91	V93	V95	V96
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42527	M20-Ap42528	M20-Ap42529	M20-Ap42530
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	114	88	115	104
Heavy Metals						
Arsenic	2	mg/kg	27	13	19	26
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	230	88	180	220
Copper	5	mg/kg	12	16	12	14
Lead	5	mg/kg	22	16	23	26
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	19	18	18	18
Zinc	5	mg/kg	28	47	34	38
% Moisture	1	%	8.8	6.2	4.7	5.0

Client Sample ID			V98	V100	V101	V103
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42531	M20-Ap42532	M20-Ap42533	M20-Ap42534
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	82	82	87	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.17
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.17
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.17
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	111	90	107	89
Tetrachloro-m-xylene (surr.)	1	%	73	69	70	71

Client Sample ID			V98	V100	V101	V103
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42531	M20-Ap42532	M20-Ap42533	M20-Ap42534
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	99	84	85	77
Heavy Metals						
Arsenic	2	mg/kg	17	29	17	23
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	160	240	160	220
Copper	5	mg/kg	10	10	11	12
Lead	5	mg/kg	21	23	17	22
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	19	19	17
Zinc	5	mg/kg	29	17	20	33
% Moisture	1	%	4.1	12	22	2.6

Client Sample ID			V105	V106	V108
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42535	M20-Ap42536	M20-Ap42537
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50
BTEX					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	89	76	108
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	< 0.1	0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	0.20	0.34
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	0.75	0.75
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.95	1.09
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	1.05	1.09
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	86	95	91
Tetrachloro-m-xylene (surr.)	1	%	65	71	84

Client Sample ID			V105	V106	V108
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42535	M20-Ap42536	M20-Ap42537
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	148	86	83
Heavy Metals					
Arsenic	2	mg/kg	26	25	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	310	200	130
Copper	5	mg/kg	10.0	12	7.9
Lead	5	mg/kg	25	18	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	17	11	13
Zinc	5	mg/kg	15	39	20
% Moisture	1	%	7.7	5.5	6.5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 29, 2020	180 Days
- Method:			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
% Moisture	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	105			70-130	Pass	
TRH C10-C14	%	99			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	108			70-130	Pass	
Toluene	%	97			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
m&p-Xylenes	%	93			70-130	Pass	
Xylenes - Total*	%	95			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	125			70-130	Pass	
TRH C6-C10	%	101			70-130	Pass	
TRH >C10-C16	%	95			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	84			70-130	Pass	
4.4'-DDD	%	83			70-130	Pass	
4.4'-DDE	%	85			70-130	Pass	
4.4'-DDT	%	88			70-130	Pass	
a-BHC	%	80			70-130	Pass	
Aldrin	%	83			70-130	Pass	
b-BHC	%	82			70-130	Pass	
d-BHC	%	86			70-130	Pass	
Dieldrin	%	83			70-130	Pass	
Endosulfan I	%	79			70-130	Pass	
Endosulfan II	%	75			70-130	Pass	
Endosulfan sulphate	%	73			70-130	Pass	
Endrin	%	99			70-130	Pass	
Endrin aldehyde	%	81			70-130	Pass	
Endrin ketone	%	85			70-130	Pass	
g-BHC (Lindane)	%	96			70-130	Pass	
Heptachlor	%	99			70-130	Pass	
Heptachlor epoxide	%	74			70-130	Pass	
Hexachlorobenzene	%	82			70-130	Pass	
Methoxychlor	%	81			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	101			70-130	Pass	
Dimethoate	%	102			70-130	Pass	
Ethion	%	80			70-130	Pass	
Fenitrothion	%	86			70-130	Pass	
Methyl parathion	%	81			70-130	Pass	
Mevinphos	%	97			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	109			80-120	Pass	
Cadmium	%	116			80-120	Pass	
Chromium	%	115			80-120	Pass	
Copper	%	113			80-120	Pass	
Lead	%	112			80-120	Pass	
Mercury	%	115			75-125	Pass	
Nickel	%	110			80-120	Pass	
Zinc	%	109			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDT	M20-Ap40589	NCP	%	94			70-130	Pass	
Methoxychlor	M20-Ap40589	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap42512	CP	%	122			70-130	Pass	
Dimethoate	M20-Ap42512	CP	%	89			70-130	Pass	
Ethion	M20-Ap42512	CP	%	98			70-130	Pass	
Fenitrothion	M20-Ap42512	CP	%	97			70-130	Pass	
Methyl parathion	M20-Ap42512	CP	%	85			70-130	Pass	
Mevinphos	M20-Ap42512	CP	%	95			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heavy Metals				Result 1					
Arsenic	M20-Ap42515	CP	%	101			75-125	Pass	
Cadmium	M20-Ap42515	CP	%	108			75-125	Pass	
Copper	M20-Ap42515	CP	%	83			75-125	Pass	
Lead	M20-Ap42515	CP	%	97			75-125	Pass	
Mercury	M20-Ap42515	CP	%	124			70-130	Pass	
Nickel	M20-Ap42515	CP	%	83			75-125	Pass	
Zinc	M20-Ap42515	CP	%	75			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap42517	CP	%	88			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap42517	CP	%	79			70-130	Pass	
Toluene	M20-Ap42517	CP	%	82			70-130	Pass	
Ethylbenzene	M20-Ap42517	CP	%	85			70-130	Pass	
m&p-Xylenes	M20-Ap42517	CP	%	84			70-130	Pass	
o-Xylene	M20-Ap42517	CP	%	87			70-130	Pass	
Xylenes - Total*	M20-Ap42517	CP	%	85			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap42517	CP	%	105			70-130	Pass	
TRH C6-C10	M20-Ap42517	CP	%	86			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap42517	CP	%	78			70-130	Pass	
4.4'-DDD	M20-Ap42517	CP	%	104			70-130	Pass	
4.4'-DDE	M20-Ap42517	CP	%	79			70-130	Pass	
a-BHC	M20-Ap42517	CP	%	75			70-130	Pass	
Aldrin	M20-Ap42517	CP	%	72			70-130	Pass	
b-BHC	M20-Ap42517	CP	%	130			70-130	Pass	
d-BHC	M20-Ap42517	CP	%	72			70-130	Pass	
Dieldrin	M20-Ap42517	CP	%	102			70-130	Pass	
Endosulfan I	M20-Ap42517	CP	%	71			70-130	Pass	
Endosulfan II	M20-Ap42517	CP	%	79			70-130	Pass	
Endosulfan sulphate	M20-Ap42517	CP	%	74			70-130	Pass	
Endrin	M20-Ap42517	CP	%	78			70-130	Pass	
Endrin aldehyde	M20-Ap42517	CP	%	95			70-130	Pass	
Endrin ketone	M20-Ap42517	CP	%	81			70-130	Pass	
g-BHC (Lindane)	M20-Ap42517	CP	%	124			70-130	Pass	
Heptachlor epoxide	M20-Ap42517	CP	%	83			70-130	Pass	
Hexachlorobenzene	M20-Ap42517	CP	%	98			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap42522	CP	%	79			70-130	Pass	
Dimethoate	M20-Ap42522	CP	%	93			70-130	Pass	
Ethion	M20-Ap42522	CP	%	89			70-130	Pass	
Fenitrothion	M20-Ap42522	CP	%	101			70-130	Pass	
Methyl parathion	M20-Ap42522	CP	%	80			70-130	Pass	
Mevinphos	M20-Ap42522	CP	%	116			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap42525	CP	%	110			75-125	Pass	
Cadmium	M20-Ap42525	CP	%	113			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chromium	M20-Ap42525	CP	%	116			75-125	Pass	
Copper	M20-Ap42525	CP	%	115			75-125	Pass	
Lead	M20-Ap42525	CP	%	115			75-125	Pass	
Mercury	M20-Ap42525	CP	%	122			70-130	Pass	
Nickel	M20-Ap42525	CP	%	112			75-125	Pass	
Zinc	M20-Ap42525	CP	%	112			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap42527	CP	%	74			70-130	Pass	
TRH C10-C14	M20-Ap42527	CP	%	113			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap42527	CP	%	103			70-130	Pass	
Toluene	M20-Ap42527	CP	%	72			70-130	Pass	
Ethylbenzene	M20-Ap42527	CP	%	79			70-130	Pass	
m&p-Xylenes	M20-Ap42527	CP	%	71			70-130	Pass	
o-Xylene	M20-Ap42527	CP	%	87			70-130	Pass	
Xylenes - Total*	M20-Ap42527	CP	%	77			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap42527	CP	%	84			70-130	Pass	
TRH C6-C10	M20-Ap42527	CP	%	87			70-130	Pass	
TRH >C10-C16	M20-Ap42527	CP	%	109			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap42527	CP	%	100			70-130	Pass	
4.4'-DDD	M20-Ap42527	CP	%	105			70-130	Pass	
4.4'-DDE	M20-Ap42527	CP	%	101			70-130	Pass	
a-BHC	M20-Ap42527	CP	%	79			70-130	Pass	
Aldrin	M20-Ap42527	CP	%	97			70-130	Pass	
b-BHC	M20-Ap42527	CP	%	82			70-130	Pass	
d-BHC	M20-Ap42527	CP	%	81			70-130	Pass	
Dieldrin	M20-Ap42527	CP	%	98			70-130	Pass	
Endosulfan I	M20-Ap42527	CP	%	98			70-130	Pass	
Endosulfan II	M20-Ap42527	CP	%	74			70-130	Pass	
Endosulfan sulphate	M20-Ap42527	CP	%	87			70-130	Pass	
Endrin	M20-Ap42527	CP	%	74			70-130	Pass	
Endrin aldehyde	M20-Ap42527	CP	%	79			70-130	Pass	
Endrin ketone	M20-Ap42527	CP	%	105			70-130	Pass	
g-BHC (Lindane)	M20-Ap42527	CP	%	96			70-130	Pass	
Heptachlor	M20-Ap42527	CP	%	70			70-130	Pass	
Heptachlor epoxide	M20-Ap42527	CP	%	76			70-130	Pass	
Hexachlorobenzene	M20-Ap42527	CP	%	92			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap42511	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42511	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42511	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap42511	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42511	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42511	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42511	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42511	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42511	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42511	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Tokuthion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42514	CP	mg/kg	16	21	25	30%	Pass	
Cadmium	M20-Ap42514	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42514	CP	mg/kg	180	220	19	30%	Pass	
Copper	M20-Ap42514	CP	mg/kg	14	11	25	30%	Pass	
Lead	M20-Ap42514	CP	mg/kg	19	19	1.0	30%	Pass	
Mercury	M20-Ap42514	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42514	CP	mg/kg	28	22	21	30%	Pass	
Zinc	M20-Ap42514	CP	mg/kg	17	13	32	30%	Fail	Q15
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42515	CP	mg/kg	15	14	1.0	30%	Pass	
Cadmium	M20-Ap42515	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42515	CP	mg/kg	110	110	1.0	30%	Pass	
Copper	M20-Ap42515	CP	mg/kg	14	15	4.0	30%	Pass	
Lead	M20-Ap42515	CP	mg/kg	19	19	2.0	30%	Pass	
Mercury	M20-Ap42515	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42515	CP	mg/kg	24	24	1.0	30%	Pass	
Zinc	M20-Ap42515	CP	mg/kg	28	28	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42516	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap42516	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42516	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42516	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42516	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42516	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42516	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap42516	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42516	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42516	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42516	CP	mg/kg	0.05	0.06	20	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan I	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42516	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42516	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42516	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42517	CP	%	11	11	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap42521	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42521	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42521	CP	mg/kg	< 50	< 50	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap42521	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42521	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42521	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42521	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42521	CP	mg/kg	0.12	0.09	39	30%	Fail	Q15
Endosulfan I	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42521	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42521	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42521	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Pirimiphos-methyl	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42524	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42524	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42524	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42524	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42524	CP	mg/kg	20	22	10	30%	Pass	
Cadmium	M20-Ap42524	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42524	CP	mg/kg	240	220	8.0	30%	Pass	
Copper	M20-Ap42524	CP	mg/kg	9.1	11	21	30%	Pass	
Lead	M20-Ap42524	CP	mg/kg	21	23	8.0	30%	Pass	
Mercury	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42524	CP	mg/kg	18	24	25	30%	Pass	
Zinc	M20-Ap42524	CP	mg/kg	15	17	15	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42525	CP	mg/kg	21	22	8.0	30%	Pass	
Cadmium	M20-Ap42525	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42525	CP	mg/kg	230	250	9.0	30%	Pass	
Copper	M20-Ap42525	CP	mg/kg	11	12	9.0	30%	Pass	
Lead	M20-Ap42525	CP	mg/kg	23	26	10	30%	Pass	
Mercury	M20-Ap42525	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42525	CP	mg/kg	20	22	9.0	30%	Pass	
Zinc	M20-Ap42525	CP	mg/kg	35	38	8.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42526	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap42526	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42526	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42526	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
o-Xylene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42526	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42526	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42526	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap42526	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42526	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42526	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42526	CP	mg/kg	0.09	0.06	29	30%	Pass	
b-BHC	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42526	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Mevinphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42526	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42526	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42527	CP	%	8.8	8.6	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42534	CP	mg/kg	23	21	10	30%	Pass	
Cadmium	M20-Ap42534	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42534	CP	mg/kg	220	220	<1	30%	Pass	
Copper	M20-Ap42534	CP	mg/kg	12	12	<1	30%	Pass	
Lead	M20-Ap42534	CP	mg/kg	22	22	2.0	30%	Pass	
Mercury	M20-Ap42534	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42534	CP	mg/kg	17	18	5.0	30%	Pass	
Zinc	M20-Ap42534	CP	mg/kg	33	33	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42537	CP	%	6.5	6.5	1.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	716332-AID
Project Name	JSS
Received Date	Apr 29, 2020
Date Reported	Apr 30, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name JSS
Project ID
Date Sampled Apr 27, 2020
Report 716332-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V63	20-Ap42511	Apr 27, 2020	Approximate Sample 263g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V65	20-Ap42512	Apr 27, 2020	Approximate Sample 192g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V66	20-Ap42513	Apr 27, 2020	Approximate Sample 539g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V68	20-Ap42514	Apr 27, 2020	Approximate Sample 263g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V70	20-Ap42515	Apr 27, 2020	Approximate Sample 255g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V71	20-Ap42516	Apr 27, 2020	Approximate Sample 675g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V74	20-Ap42517	Apr 27, 2020	Approximate Sample 178g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V76	20-Ap42518	Apr 27, 2020	Approximate Sample 623g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V77	20-Ap42519	Apr 27, 2020	Approximate Sample 173g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V79	20-Ap42520	Apr 27, 2020	Approximate Sample 177g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V81	20-Ap42521	Apr 27, 2020	Approximate Sample 532g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V82	20-Ap42522	Apr 27, 2020	Approximate Sample 110g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V85	20-Ap42523	Apr 27, 2020	Approximate Sample 155g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V86	20-Ap42524	Apr 27, 2020	Approximate Sample 503g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V88	20-Ap42525	Apr 27, 2020	Approximate Sample 312g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V90	20-Ap42526	Apr 27, 2020	Approximate Sample 391g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V91	20-Ap42527	Apr 27, 2020	Approximate Sample 574g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V93	20-Ap42528	Apr 27, 2020	Approximate Sample 374g Sample consisted of: Red brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V95	20-Ap42529	Apr 27, 2020	Approximate Sample 347g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V96	20-Ap42530	Apr 27, 2020	Approximate Sample 656g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V98	20-Ap42531	Apr 27, 2020	Approximate Sample 405g Sample consisted of: Red brown coarse-grained soil, cement, plaster and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

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The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V100	20-Ap42532	Apr 27, 2020	Approximate Sample 268g Sample consisted of: Red brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V101	20-Ap42533	Apr 27, 2020	Approximate Sample 705g Sample consisted of: Red brown fine-grained clayey soil, cement, plaster and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V103	20-Ap42534	Apr 27, 2020	Approximate Sample 332g Sample consisted of: Red brown coarse-grained soil, fragments of ceramic tile, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V105	20-Ap42535	Apr 27, 2020	Approximate Sample 415g Sample consisted of: Red brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V106	20-Ap42536	Apr 27, 2020	Approximate Sample 658g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V108	20-Ap42537	Apr 27, 2020	Approximate Sample 388g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 29, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 29, 2020	Indefinite

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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SLR Consulting (NT)
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Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **716332-W**
Project name JSS
Received Date Apr 29, 2020

Client Sample ID			**R1**	**R2**	**R3**	**R4**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M20-Ap42538**	**M20-Ap42539**	**M20-Ap42540**	**M20-Ap42541**
Date Sampled			**Apr 23, 2020**	**Apr 24, 2020**	**Apr 25, 2020**	**Apr 27, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	112	98	116	80
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Organochlorine Pesticides						
Chlordanes - Total	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4.4'-DDD	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDE	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDT	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
a-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Aldrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
b-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
d-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dieldrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan I	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan II	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan sulphate	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Client Sample ID			R1	R2	R3	R4
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M20-Ap42538	M20-Ap42539	M20-Ap42540	M20-Ap42541
Date Sampled			Apr 23, 2020	Apr 24, 2020	Apr 25, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin ketone	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor epoxide	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Methoxychlor	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Toxaphene	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibutylchlorendate (surr.)	1	%	97	128	64	98
Tetrachloro-m-xylene (surr.)	1	%	93	83	89	107
Organophosphorus Pesticides						
Azinphos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Bolstar	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorfenvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorpyrifos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Coumaphos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-S	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-O	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Diazinon	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dichlorvos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dimethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Disulfoton	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
EPN	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethoprop	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenitrothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fensulfothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Malathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Merphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Mevinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Monocrotophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Naled	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Omethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Phorate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Pyrazophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ronnel	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Terbufos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tokuthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Trichloronate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Triphenylphosphate (surr.)	1	%	96	128	75	66

Client Sample ID			R1	R2	R3	R4
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M20-Ap42538	M20-Ap42539	M20-Ap42540	M20-Ap42541
Date Sampled			Apr 23, 2020	Apr 24, 2020	Apr 25, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Zinc	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 29, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/L	< 0.02			0.02	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	106			70-130	Pass	
TRH C10-C14	%	102			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	113			70-130	Pass	
Toluene	%	110			70-130	Pass	
Ethylbenzene	%	112			70-130	Pass	
m&p-Xylenes	%	110			70-130	Pass	
Xylenes - Total*	%	111			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	109			70-130	Pass	
TRH C6-C10	%	104			70-130	Pass	
TRH >C10-C16	%	97			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	94			70-130	Pass	
4.4'-DDD	%	85			70-130	Pass	
4.4'-DDE	%	96			70-130	Pass	
4.4'-DDT	%	83			70-130	Pass	
a-BHC	%	93			70-130	Pass	
Aldrin	%	86			70-130	Pass	
b-BHC	%	100			70-130	Pass	
d-BHC	%	92			70-130	Pass	
Dieldrin	%	78			70-130	Pass	
Endosulfan I	%	101			70-130	Pass	
Endosulfan II	%	82			70-130	Pass	
Endosulfan sulphate	%	80			70-130	Pass	
Endrin	%	81			70-130	Pass	
Endrin aldehyde	%	101			70-130	Pass	
Endrin ketone	%	98			70-130	Pass	
g-BHC (Lindane)	%	111			70-130	Pass	
Heptachlor	%	89			70-130	Pass	
Heptachlor epoxide	%	93			70-130	Pass	
Hexachlorobenzene	%	113			70-130	Pass	
Methoxychlor	%	76			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	110			70-130	Pass	
Dimethoate	%	84			70-130	Pass	
Ethion	%	101			70-130	Pass	
Fenitrothion	%	89			70-130	Pass	
Methyl parathion	%	93			70-130	Pass	
Mevinphos	%	73			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	94			80-120	Pass	
Copper	%	95			80-120	Pass	
Lead	%	98			80-120	Pass	
Mercury	%	93			75-125	Pass	
Nickel	%	95			80-120	Pass	
Zinc	%	98			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap21090	NCP	%	93			70-130	Pass	
Dimethoate	M20-Ap21090	NCP	%	72			70-130	Pass	
Ethion	M20-Ap21090	NCP	%	71			70-130	Pass	
Fenitrothion	M20-Ap21090	NCP	%	79			70-130	Pass	
Methyl parathion	M20-Ap21090	NCP	%	101			70-130	Pass	
Mevinphos	M20-Ap21090	NCP	%	79			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap41210	NCP	%	90			75-125	Pass	
Cadmium	M20-Ap41210	NCP	%	96			75-125	Pass	
Chromium	M20-Ap41210	NCP	%	95			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper	M20-Ap41210	NCP	%	92			75-125	Pass	
Lead	M20-Ap41210	NCP	%	93			75-125	Pass	
Mercury	M20-Ap41210	NCP	%	88			70-130	Pass	
Nickel	M20-Ap41210	NCP	%	93			75-125	Pass	
Zinc	M20-Ap41210	NCP	%	89			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39822	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M20-Ap35295	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M20-Ap35295	NCP	mg/L	0.5	0.6	16	30%	Pass	
TRH C29-C36	M20-Ap35295	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M20-Ap39822	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M20-Ap39822	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39822	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M20-Ap39822	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M20-Ap35295	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M20-Ap35295	NCP	mg/L	0.5	0.6	20	30%	Pass	
TRH >C34-C40	M20-Ap35295	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap21089	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4.4'-DDD	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDE	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDT	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
a-BHC	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Aldrin	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
b-BHC	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
d-BHC	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Dieldrin	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan I	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan II	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan sulphate	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin aldehyde	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin ketone	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor epoxide	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Hexachlorobenzene	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Methoxychlor	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Bolstar	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorfenvinphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorpyrifos	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Coumaphos	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-S	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-O	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Diazinon	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dichlorvos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dimethoate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Disulfoton	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
EPN	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethoprop	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethyl parathion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenitrothion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fensulfothion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenthion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Malathion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Merphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methyl parathion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Mevinphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Monocrotophos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Naled	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Omethoate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Phorate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Pyrazophos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ronnel	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbufos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tokuthion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Trichloronate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap41210	NCP	mg/L	0.10	0.10	1.0	30%	Pass	
Cadmium	M20-Ap41210	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M20-Ap41210	NCP	mg/L	0.002	0.002	1.0	30%	Pass	
Copper	M20-Ap41210	NCP	mg/L	0.005	0.005	<1	30%	Pass	
Lead	M20-Ap41210	NCP	mg/L	0.014	0.014	<1	30%	Pass	
Mercury	M20-Ap41210	NCP	mg/L	0.0003	< 0.0001	110	30%	Fail	Q15
Nickel	M20-Ap41210	NCP	mg/L	0.003	0.004	3.0	30%	Pass	
Zinc	M20-Ap41210	NCP	mg/L	0.039	0.039	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ **Sydney Laboratory** Unit F3 Bld F 16 Mars Road Lane Cove West NSW 2066 02 9900 8400 EnviroSampleNSW@eurofins.com

☐ **Brisbane Laboratory** Unit 1 21 Smallwood Place Murarrie QLD 4172 07 3902 4600 EnviroSampleQLD@eurofins.com

☐ **Perth Laboratory** Unit 2 91 Leach Highway Kewdale WA 6105 08 9251 9600 EnviroSampleWA@eurofins.com

☐ **Melbourne Laboratory** 6 Monterey Road Dandenong South VIC 3175 03 8564 5000 EnviroSampleVic@eurofins.com

Company	SLR Consulting (NT)	Project №		Project Manager	Sarah Doherty
Address	5/21 Parap Rd Parap NT 0820	Project Name	JSS	EDD Format ESdat, EQuIS etc	Esdat & csv
Contact Name	Sarah Doherty				
Phone №	417647498				
Special Directions	Jars go to Melbourne, ACM goes to Sydney				
Purchase Order					
Quote ID №	200422SLRNT				

Sampler(s)	Sarah Doherty
Handed over by	
Email for Results	gsheridan@slrconsulting.com; pturyn@slrconsulting.com; sdoherty@slrconsulting.com

Analyses Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing

Containers Change container type & size if necessary.

Required Turnaround Time (TAT) Default will be 5 days if not ticked.

♦Surcharge will apply

☐ Overnight (reporting by 9am)♦
☑ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3 days♦
☐ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil charterisation	Hold	Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar charterisation	Rinsate bottles	Sample Comments / Dangerous Goods Hazard Warning
1	V109	28/04/20	S														
2	V110	28/04/20	S														
3	V111	28/04/20	S	X	X		X				1	1					
4	V112	28/04/20	S	X	X	X											
5	V113	28/04/20	S	X	X	X											
6	V114	28/04/20	S	X	X	X											
7	V115	28/04/20	S	X	X	X											
8	V116	28/04/20	S	X	X		X				1	1					
9	V117	28/04/20	S														
10	V118	28/04/20	S														
11	V119	28/04/20	S														
12	V120	28/04/20	S														
13	V121	28/04/20	S	X	X		X				1	1					
14	V122	28/04/20	S														

| | | |

40	QC8	28/04/20	S	X	X		X														1	1									
41	QC9	28/04/20	S	X	X	X																									
42	QC10	28/04/20	S	X	X	X																									
43	Val_A	28/04/20	S				X															1									
44	QC12	28/04/20	S	X	X	X																									
45	Char_Val	28/04/20	S						X																1						
46	Rin5	28/04/20	w	X	X																					4					
47	STP4_N	28/04/20	S	X	X		X														1	1									
48	STP4_E	28/04/20	S	X	X		X														1	1									
49	STP4_S	28/04/20	S	X	X		X														1	1									
50	STP4_W	28/04/20	S	X	X		X														1	1									
Add new rows			Total Counts	25	25	12	13		1												12	13			1	4					

Method of Shipment	Courier (#)	Hand Delivered	Postal	Name		Signature	Date	Time
Eurofins | mgt Laboratory Use Only	Received By	Jake	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 27/4	Time 2 00	Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	Time	Report № 716374

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request

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NATA # 1261 Site # 20794

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NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 29, 2020
Eurofins reference:	**716374**

Sample information

- ☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☑ All samples have been received as described on the above COC.
- ☑ COC has been completed correctly.
- ☑ Attempt to chill was evident.
- ☑ Appropriately preserved sample containers have been used.
- ☑ All samples were received in good condition.
- ☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☑ Appropriate sample containers have been used.
- ☑ Sample containers for volatile analysis received with zero headspace.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Extra sample QC11, Rin5 not received in Melb.

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

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Accreditation Number 1261
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Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **716374-S-V2**
Project name JSS
Received Date Apr 29, 2020

Client Sample ID			**V111**	**V112**	**V113**	**V114**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap42963**	**M20-Ap42964**	**M20-Ap42965**	**M20-Ap42966**
Date Sampled			**Apr 28, 2020**	**Apr 28, 2020**	**Apr 28, 2020**	**Apr 28, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	142	89	91	96
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.50	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	1.6	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V111	V112	V113	V114
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42963	M20-Ap42964	M20-Ap42965	M20-Ap42966
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	2.1	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	2.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	80	69	77	66
Tetrachloro-m-xylene (surr.)	1	%	86	81	85	81
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	79	69	70	61

Client Sample ID			V111	V112	V113	V114
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42963	M20-Ap42964	M20-Ap42965	M20-Ap42966
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
% Moisture	1	%	4.6	6.2	4.6	3.8
Heavy Metals						
Arsenic	2	mg/kg	13	18	22	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	140	220	230	180
Copper	5	mg/kg	5.6	7.8	9.9	8.6
Lead	5	mg/kg	14	19	23	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	6.3	13	16	12
Zinc	5	mg/kg	11	28	33	15

Client Sample ID			V115	V116	V121	V126
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42967	M20-Ap42968	M20-Ap42969	M20-Ap42970
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	57	54	61	99
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	0.30	< 0.05	0.07
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V115	V116	V121	V126
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42967	M20-Ap42968	M20-Ap42969	M20-Ap42970
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	0.16	2.4	< 0.05	0.43
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.16	2.7	< 0.05	0.5
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.16	2.7	< 0.1	0.5
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	94	69	91	75
Tetrachloro-m-xylene (surr.)	1	%	86	84	84	84
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V115	V116	V121	V126
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42967	M20-Ap42968	M20-Ap42969	M20-Ap42970
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	85	64	83	70
% Moisture	1	%	2.2	6.3	6.7	5.9
Heavy Metals						
Arsenic	2	mg/kg	20	13	10	23
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	220	160	87	250
Copper	5	mg/kg	7.0	6.3	5.8	11
Lead	5	mg/kg	18	14	8.4	23
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	11	10	8.4	16
Zinc	5	mg/kg	11	14	17	140

Client Sample ID			V129	V130	V131	V136
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42971	M20-Ap42972	M20-Ap42973	M20-Ap42974
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	57	90	105	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			V129	V130	V131	V136
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42971	M20-Ap42972	M20-Ap42973	M20-Ap42974
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	76	98	99	98
Tetrachloro-m-xylene (surr.)	1	%	85	66	72	70
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V129	V130	V131	V136
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42971	M20-Ap42972	M20-Ap42973	M20-Ap42974
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	71	79	88	83
% Moisture	1	%	4.3	2.4	6.3	8.7
Heavy Metals						
Arsenic	2	mg/kg	23	17	24	31
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	230	200	240	320
Copper	5	mg/kg	8.0	11	11	9.4
Lead	5	mg/kg	19	19	22	32
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	17	17	16
Zinc	5	mg/kg	22	23	22	26

Client Sample ID			V141	QC5	QC6	QC7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42975	M20-Ap42976	M20-Ap42977	M20-Ap42978
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	83	76	97	84

Client Sample ID			V141	QC5	QC6	QC7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42975	M20-Ap42976	M20-Ap42977	M20-Ap42978
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.07	0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.08	0.44	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.15	0.49	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.15	0.49	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	99	114	103	107
Tetrachloro-m-xylene (surr.)	1	%	67	68	65	67
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V141	QC5	QC6	QC7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42975	M20-Ap42976	M20-Ap42977	M20-Ap42978
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	78	90	90	88
% Moisture	1	%	9.0	2.6	3.9	3.7
Heavy Metals						
Arsenic	2	mg/kg	19	15	16	23
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	200	130	170	240
Copper	5	mg/kg	18	11	9.3	10
Lead	5	mg/kg	21	14	15	23
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	17	17	14	17
Zinc	5	mg/kg	29	29	21	26

Client Sample ID			QC8	QC9	QC10	QC12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42979	M20-Ap42980	M20-Ap42981	M20-Ap42983
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			QC8	QC9	QC10	QC12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42979	M20-Ap42980	M20-Ap42981	M20-Ap42983
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	92	107	89	82
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	98	106	106	79
Tetrachloro-m-xylene (surr.)	1	%	65	68	69	84
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			QC8	QC9	QC10	QC12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42979	M20-Ap42980	M20-Ap42981	M20-Ap42983
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	80	85	87	70
% Moisture	1	%	4.3	2.5	4.9	5.2
Heavy Metals						
Arsenic	2	mg/kg	30	25	22	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	320	240	230	220
Copper	5	mg/kg	9.4	11	11	8.4
Lead	5	mg/kg	26	22	23	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	14	15	17	14
Zinc	5	mg/kg	21	22	29	27

Client Sample ID			Char_Val	STP4_N	STP4_E	STP4_S
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42984	M20-Ap42986	M20-Ap42987	M20-Ap42988
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	-	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	-	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	83	99	84
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	0.37	0.16	0.16
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	-	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	0.37	0.16	0.16
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	0.37	0.16	0.16
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	78	84	82
Tetrachloro-m-xylene (surr.)	1	%	-	81	83	84

Client Sample ID			Char_Val	STP4_N	STP4_E	STP4_S
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42984	M20-Ap42986	M20-Ap42987	M20-Ap42988
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	< 2	< 2	< 2
Naled	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	-	< 2	< 2	< 2
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	76	77	80
% Clay	1	%	14	-	-	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	60	-	-	-
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	6.5	-	-	-
Total Organic Carbon	0.1	%	1.7	-	-	-
% Moisture	1	%	6.0	13	9.0	11
Heavy Metals						
Arsenic	2	mg/kg	-	20	20	21
Cadmium	0.4	mg/kg	-	< 0.4	0.7	< 0.4
Chromium	5	mg/kg	-	180	170	240
Copper	5	mg/kg	-	13	14	12
Iron	20	mg/kg	74000	-	-	-
Lead	5	mg/kg	-	19	19	18
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1

Client Sample ID			Char_Val	STP4_N	STP4_E	STP4_S
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42984	M20-Ap42986	M20-Ap42987	M20-Ap42988
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Nickel	5	mg/kg	-	19	17	16
Zinc	5	mg/kg	-	25	29	27
Heavy Metals						
Iron (%)	0.01	%	7.4	-	-	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	3.7	-	-	-

Client Sample ID			STP4_W
Sample Matrix			Soil
Eurofins Sample No.			M20-Ap42989
Date Sampled			Apr 28, 2020
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	0.06
b-BHC	0.05	mg/kg	< 0.05
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	0.48
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05

Client Sample ID			STP4_W
Sample Matrix			Soil
Eurofins Sample No.			M20-Ap42989
Date Sampled			Apr 28, 2020
Test/Reference	LOR	Unit	
Organochlorine Pesticides			
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	1	mg/kg	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.54
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.54
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	81
Tetrachloro-m-xylene (surr.)	1	%	84
Organophosphorus Pesticides			
Azinphos-methyl	0.2	mg/kg	< 0.2
Bolstar	0.2	mg/kg	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2
Coumaphos	2	mg/kg	< 2
Demeton-S	0.2	mg/kg	< 0.2
Demeton-O	0.2	mg/kg	< 0.2
Diazinon	0.2	mg/kg	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2
Dimethoate	0.2	mg/kg	< 0.2
Disulfoton	0.2	mg/kg	< 0.2
EPN	0.2	mg/kg	< 0.2
Ethion	0.2	mg/kg	< 0.2
Ethoprop	0.2	mg/kg	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2
Fenthion	0.2	mg/kg	< 0.2
Malathion	0.2	mg/kg	< 0.2
Merphos	0.2	mg/kg	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2
Mevinphos	0.2	mg/kg	< 0.2
Monocrotophos	2	mg/kg	< 2
Naled	0.2	mg/kg	< 0.2
Omethoate	2	mg/kg	< 2
Phorate	0.2	mg/kg	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2
Ronnel	0.2	mg/kg	< 0.2
Terbufos	0.2	mg/kg	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2

Client Sample ID			STP4_W
Sample Matrix			**Soil**
Eurofins Sample No.			**M20-Ap42989**
Date Sampled			**Apr 28, 2020**
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Tokuthion	0.2	mg/kg	< 0.2
Trichloronate	0.2	mg/kg	< 0.2
Triphenylphosphate (surr.)	1	%	77
% Moisture	1	%	12
Heavy Metals			
Arsenic	2	mg/kg	23
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	160
Copper	5	mg/kg	13
Lead	5	mg/kg	21
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	14
Zinc	5	mg/kg	23

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 29, 2020	180 Days
- Method:			
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
NEPM Screen for Soil Classification			
% Clay	Brisbane	May 05, 2020	0 Days
- Method: LTM-GEN-7040			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-INO-4030 Conductivity			
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Total Organic Carbon	Melbourne	Apr 30, 2020	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Heavy Metals	Melbourne	Apr 29, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Cation Exchange Capacity	Melbourne	Apr 30, 2020	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
% Moisture	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Conductivity (1:5 aqueous extract at 25°C as rec.)	uS/cm	< 10			10	Pass	
Total Organic Carbon	%	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Iron	mg/kg	< 20			20	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Cation Exchange Capacity							
Cation Exchange Capacity	meq/100g	< 0.05			0.05	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	125			70-130	Pass	
TRH C10-C14	%	122			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	108			70-130	Pass	
Toluene	%	106			70-130	Pass	
Ethylbenzene	%	111			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	110			70-130	Pass	
Xylenes - Total*	%	112			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	104			70-130	Pass	
TRH C6-C10	%	120			70-130	Pass	
TRH >C10-C16	%	109			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	78			70-130	Pass	
4.4'-DDD	%	75			70-130	Pass	
4.4'-DDE	%	85			70-130	Pass	
4.4'-DDT	%	79			70-130	Pass	
a-BHC	%	74			70-130	Pass	
Aldrin	%	74			70-130	Pass	
b-BHC	%	73			70-130	Pass	
d-BHC	%	71			70-130	Pass	
Dieldrin	%	70			70-130	Pass	
Endosulfan I	%	86			70-130	Pass	
Endosulfan II	%	75			70-130	Pass	
Endosulfan sulphate	%	76			70-130	Pass	
Endrin	%	83			70-130	Pass	
Endrin aldehyde	%	82			70-130	Pass	
Endrin ketone	%	86			70-130	Pass	
g-BHC (Lindane)	%	77			70-130	Pass	
Heptachlor	%	70			70-130	Pass	
Heptachlor epoxide	%	71			70-130	Pass	
Hexachlorobenzene	%	75			70-130	Pass	
Methoxychlor	%	70			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	91			70-130	Pass	
Dimethoate	%	87			70-130	Pass	
Ethion	%	70			70-130	Pass	
Fenitrothion	%	78			70-130	Pass	
Methyl parathion	%	86			70-130	Pass	
Mevinphos	%	77			70-130	Pass	
LCS - % Recovery							
% Clay	%	113			70-130	Pass	
Total Organic Carbon	%	103			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	103			80-120	Pass	
Cadmium	%	102			80-120	Pass	
Chromium	%	107			80-120	Pass	
Copper	%	106			80-120	Pass	
Iron	%	113			80-120	Pass	
Lead	%	104			80-120	Pass	
Mercury	%	109			75-125	Pass	
Nickel	%	104			80-120	Pass	
Zinc	%	101			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDT	M20-Ap36618	NCP	%	75			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap42967	CP	%	106			70-130	Pass	
Dimethoate	M20-Ap42967	CP	%	80			70-130	Pass	
Ethion	M20-Ap42967	CP	%	83			70-130	Pass	
Fenitrothion	M20-Ap42967	CP	%	78			70-130	Pass	
Methyl parathion	M20-Ap42967	CP	%	83			70-130	Pass	
Mevinphos	M20-Ap42967	CP	%	74			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap42970	CP	%	62			75-125	Fail	Q08
Cadmium	M20-Ap42970	CP	%	100			75-125	Pass	
Copper	M20-Ap42970	CP	%	76			75-125	Pass	
Lead	M20-Ap42970	CP	%	91			75-125	Pass	
Mercury	M20-Ap42970	CP	%	115			70-130	Pass	
Nickel	M20-Ap42970	CP	%	77			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap42971	CP	%	111			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap42971	CP	%	125			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap42972	CP	%	117			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap42972	CP	%	116			70-130	Pass	
Toluene	M20-Ap42972	CP	%	111			70-130	Pass	
Ethylbenzene	M20-Ap42972	CP	%	109			70-130	Pass	
m&p-Xylenes	M20-Ap42972	CP	%	107			70-130	Pass	
o-Xylene	M20-Ap42972	CP	%	111			70-130	Pass	
Xylenes - Total*	M20-Ap42972	CP	%	108			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap42972	CP	%	112			70-130	Pass	
TRH C6-C10	M20-Ap42972	CP	%	113			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap42972	CP	%	84			70-130	Pass	
4.4'-DDD	M20-Ap42972	CP	%	101			70-130	Pass	
4.4'-DDE	M20-Ap42972	CP	%	74			70-130	Pass	
a-BHC	M20-Ap42972	CP	%	76			70-130	Pass	
Aldrin	M20-Ap42972	CP	%	79			70-130	Pass	
b-BHC	M20-Ap42972	CP	%	129			70-130	Pass	
d-BHC	M20-Ap42972	CP	%	85			70-130	Pass	
Dieldrin	M20-Ap42972	CP	%	81			70-130	Pass	
Endosulfan I	M20-Ap42972	CP	%	73			70-130	Pass	
Endosulfan II	M20-Ap42972	CP	%	82			70-130	Pass	
Endosulfan sulphate	M20-Ap42972	CP	%	73			70-130	Pass	
Endrin	M20-Ap42972	CP	%	92			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	M20-Ap42972	CP	%	92			70-130	Pass	
Endrin ketone	M20-Ap42972	CP	%	94			70-130	Pass	
g-BHC (Lindane)	M20-Ap42972	CP	%	108			70-130	Pass	
Heptachlor	M20-Ap42972	CP	%	76			70-130	Pass	
Heptachlor epoxide	M20-Ap42972	CP	%	71			70-130	Pass	
Hexachlorobenzene	M20-Ap42972	CP	%	94			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap42977	CP	%	105			70-130	Pass	
Dimethoate	M20-Ap42977	CP	%	76			70-130	Pass	
Ethion	M20-Ap42977	CP	%	85			70-130	Pass	
Fenitrothion	M20-Ap42977	CP	%	84			70-130	Pass	
Methyl parathion	M20-Ap42977	CP	%	92			70-130	Pass	
Mevinphos	M20-Ap42977	CP	%	73			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap42980	CP	%	93			75-125	Pass	
Cadmium	M20-Ap42980	CP	%	110			75-125	Pass	
Chromium	M20-Ap42980	CP	%	75			75-125	Pass	
Copper	M20-Ap42980	CP	%	96			75-125	Pass	
Lead	M20-Ap42980	CP	%	92			75-125	Pass	
Mercury	M20-Ap42980	CP	%	110			70-130	Pass	
Nickel	M20-Ap42980	CP	%	99			75-125	Pass	
Zinc	M20-Ap42980	CP	%	86			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap42981	CP	%	97			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap42981	CP	%	93			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap42983	CP	%	81			70-130	Pass	
4.4'-DDD	M20-Ap42983	CP	%	71			70-130	Pass	
4.4'-DDE	M20-Ap42983	CP	%	88			70-130	Pass	
a-BHC	M20-Ap42983	CP	%	77			70-130	Pass	
Aldrin	M20-Ap42983	CP	%	73			70-130	Pass	
b-BHC	M20-Ap42983	CP	%	75			70-130	Pass	
d-BHC	M20-Ap42983	CP	%	82			70-130	Pass	
Dieldrin	M20-Ap42983	CP	%	91			70-130	Pass	
Endosulfan I	M20-Ap42983	CP	%	94			70-130	Pass	
Endosulfan II	M20-Ap42983	CP	%	96			70-130	Pass	
Endosulfan sulphate	M20-Ap42983	CP	%	85			70-130	Pass	
Endrin	M20-Ap42983	CP	%	92			70-130	Pass	
Endrin aldehyde	M20-Ap42983	CP	%	72			70-130	Pass	
Endrin ketone	M20-Ap42983	CP	%	80			70-130	Pass	
g-BHC (Lindane)	M20-Ap42983	CP	%	76			70-130	Pass	
Heptachlor	M20-Ap42983	CP	%	94			70-130	Pass	
Heptachlor epoxide	M20-Ap42983	CP	%	96			70-130	Pass	
Hexachlorobenzene	M20-Ap42983	CP	%	100			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42966	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42966	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42966	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42966	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Terbufos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42969	CP	mg/kg	10	13	24	30%	Pass	
Cadmium	M20-Ap42969	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42969	CP	mg/kg	87	110	26	30%	Pass	
Copper	M20-Ap42969	CP	mg/kg	5.8	6.8	16	30%	Pass	
Mercury	M20-Ap42969	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42969	CP	mg/kg	8.4	11	24	30%	Pass	
Zinc	M20-Ap42969	CP	mg/kg	17	11	39	30%	Fail	Q15
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42970	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap42970	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42970	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42970	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42970	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42970	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42970	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42970	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap42970	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42970	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42970	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42970	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap42970	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42970	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42970	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42970	CP	mg/kg	23	24	2.0	30%	Pass	
Cadmium	M20-Ap42970	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42970	CP	mg/kg	250	260	2.0	30%	Pass	
Copper	M20-Ap42970	CP	mg/kg	11	11	1.0	30%	Pass	
Lead	M20-Ap42970	CP	mg/kg	23	23	<1	30%	Pass	
Mercury	M20-Ap42970	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42970	CP	mg/kg	16	17	3.0	30%	Pass	
Zinc	M20-Ap42970	CP	mg/kg	140	150	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42971	CP	%	4.3	3.6	17	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42979	CP	mg/kg	30	29	2.0	30%	Pass	
Cadmium	M20-Ap42979	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42979	CP	mg/kg	320	350	10	30%	Pass	
Copper	M20-Ap42979	CP	mg/kg	9.4	11	13	30%	Pass	
Lead	M20-Ap42979	CP	mg/kg	26	24	5.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	M20-Ap42979	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42979	CP	mg/kg	14	17	22	30%	Pass	
Zinc	M20-Ap42979	CP	mg/kg	21	20	8.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap42980	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42980	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42980	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap42980	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42980	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42980	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42980	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42980	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Fensulfothion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42980	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42980	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42980	CP	mg/kg	25	24	2.0	30%	Pass	
Cadmium	M20-Ap42980	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42980	CP	mg/kg	240	250	2.0	30%	Pass	
Copper	M20-Ap42980	CP	mg/kg	11	11	<1	30%	Pass	
Lead	M20-Ap42980	CP	mg/kg	22	22	2.0	30%	Pass	
Mercury	M20-Ap42980	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42980	CP	mg/kg	15	15	<1	30%	Pass	
Zinc	M20-Ap42980	CP	mg/kg	22	22	1.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42981	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42981	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42981	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42981	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42981	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap42981	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42981	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42981	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42981	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42981	CP	%	4.9	3.7	28	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42983	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42983	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
o-Xylene	M20-Ap42983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42983	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42983	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25°C as rec.)	M20-Ap42984	CP	uS/cm	60	91	40	30%	Fail	Q15
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	M20-Ap42984	CP	pH Units	6.5	6.4	pass	30%	Pass	
Total Organic Carbon	S20-Ma27434	NCP	%	0.8	1.0	16	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Iron	M20-Ap41367	NCP	mg/kg	35000	35000	1.0	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42989	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42989	CP	mg/kg	0.06	< 0.05	120	30%	Fail	Q15
b-BHC	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42989	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Fenitrothion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42989	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42989	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Comments

V2: This report has been amended to include % clay results.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Jonathon Angell	Senior Analyst-Inorganic (QLD)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	716374-V5-AID
Project Name	JSS
Received Date	Apr 29, 2020
Date Reported	May 05, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name JSS
Project ID
Date Sampled Apr 28, 2020
Report 716374-V5-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V111	20-Ap42963	Apr 28, 2020	Approximate Sample 1000g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V112	20-Ap42964	Apr 28, 2020	Approximate Sample 201g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V113	20-Ap42965	Apr 28, 2020	Approximate Sample 211g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V114	20-Ap42966	Apr 28, 2020	Approximate Sample 308g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V115	20-Ap42967	Apr 28, 2020	Approximate Sample 424g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V116	20-Ap42968	Apr 28, 2020	Approximate Sample 829g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V121	20-Ap42969	Apr 28, 2020	Approximate Sample 791g Sample consisted of: Brown coarse-grained soil, rocks, cement fragments and plaster-like material	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V126	20-Ap42970	Apr 28, 2020	Approximate Sample 895g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V129	20-Ap42971	Apr 28, 2020	Approximate Sample 354g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V130	20-Ap42972	Apr 28, 2020	Approximate Sample 359g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V131	20-Ap42973	Apr 28, 2020	Approximate Sample 856g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V136	20-Ap42974	Apr 28, 2020	Approximate Sample 839g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V141	20-Ap42975	Apr 28, 2020	Approximate Sample 808g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC5	20-Ap42976	Apr 28, 2020	Approximate Sample 322g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
QC6	20-Ap42977	Apr 28, 2020	Approximate Sample 319g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
QC7	20-Ap42978	Apr 28, 2020	Approximate Sample 283g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
QC8	20-Ap42979	Apr 28, 2020	Approximate Sample 924g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC9	20-Ap42980	Apr 28, 2020	Approximate Sample 337g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
QC10	20-Ap42981	Apr 28, 2020	Approximate Sample 179g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
Val_A	20-Ap42982	Apr 28, 2020	Approximate Sample 561g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC12	20-Ap42983	Apr 28, 2020	Approximate Sample 234g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP4_N	20-Ap42986	Apr 28, 2020	Approximate Sample 851g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP4_E	20-Ap42987	Apr 28, 2020	Approximate Sample 941g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP4_S	20-Ap42988	Apr 28, 2020	Approximate Sample 697g Sample consisted of: Brown coarse-grained soil and rocks	AF: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of AF = 0.056g Estimated asbestos content in AF = 0.0056g* Total estimated asbestos concentration in AF = 0.00080% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP4_W	20-Ap42989	Apr 28, 2020	Approximate Sample 933g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 29, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 29, 2020	Indefinite

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Authorised by:

Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716374
Phone: +61 2 9428 8100
Fax:

Received: Apr 29, 2020 12:00 AM
Due: Apr 30, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X						
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	V111	Apr 28, 2020		Soil	M20-Ap42963		X			X	X		X
2	V112	Apr 28, 2020		Soil	M20-Ap42964	X				X	X		X
3	V113	Apr 28, 2020		Soil	M20-Ap42965	X				X	X		X
4	V114	Apr 28, 2020		Soil	M20-Ap42966	X				X	X		X
5	V115	Apr 28, 2020		Soil	M20-Ap42967	X				X	X		X
6	V116	Apr 28, 2020		Soil	M20-Ap42968		X			X	X		X
7	V121	Apr 28, 2020		Soil	M20-Ap42969		X			X	X		X
8	V126	Apr 28, 2020		Soil	M20-Ap42970		X			X	X		X
9	V129	Apr 28, 2020		Soil	M20-Ap42971	X				X	X		X
10	V130	Apr 28, 2020		Soil	M20-Ap42972	X				X	X		X
11	V131	Apr 28, 2020		Soil	M20-Ap42973		X			X	X		X

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Sydney Laboratory - NATA Site # 18217						X	X						
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
12	V136	Apr 28, 2020		Soil	M20-Ap42974		X			X	X		X
13	V141	Apr 28, 2020		Soil	M20-Ap42975		X			X	X		X
14	QC5	Apr 28, 2020		Soil	M20-Ap42976	X				X	X		X
15	QC6	Apr 28, 2020		Soil	M20-Ap42977	X				X	X		X
16	QC7	Apr 28, 2020		Soil	M20-Ap42978	X				X	X		X
17	QC8	Apr 28, 2020		Soil	M20-Ap42979		X			X	X		X
18	QC9	Apr 28, 2020		Soil	M20-Ap42980	X				X	X		X
19	QC10	Apr 28, 2020		Soil	M20-Ap42981	X				X	X		X
20	Val_A	Apr 28, 2020		Soil	M20-Ap42982		X						
21	QC12	Apr 28, 2020		Soil	M20-Ap42983	X				X	X		X
22	Char_Val	Apr 28, 2020		Soil	M20-Ap42984						X	X	
23	Rin5	Apr 28, 2020		Water	M20-Ap42985			X					
24	STP4_N	Apr 28, 2020		Soil	M20-Ap42986		X			X	X		X

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X						
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
25	STP4_E	Apr 28, 2020		Soil	M20-Ap42987		X			X	X		X
26	STP4_S	Apr 28, 2020		Soil	M20-Ap42988		X			X	X		X
27	STP4_W	Apr 28, 2020		Soil	M20-Ap42989		X			X	X		X
28	V109	Apr 28, 2020		Soil	M20-Ap42990				X				
29	V110	Apr 28, 2020		Soil	M20-Ap42991				X				
30	V117	Apr 28, 2020		Soil	M20-Ap42992				X				
31	V118	Apr 28, 2020		Soil	M20-Ap42993				X				
32	V119	Apr 28, 2020		Soil	M20-Ap42994				X				
33	V120	Apr 28, 2020		Soil	M20-Ap42995				X				
34	V122	Apr 28, 2020		Soil	M20-Ap42996				X				
35	V123	Apr 28, 2020		Soil	M20-Ap42997				X				
36	V124	Apr 28, 2020		Soil	M20-Ap42998				X				
37	V125	Apr 28, 2020		Soil	M20-Ap42999				X				

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X						
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
38	V127	Apr 28, 2020		Soil	M20-Ap43000				X				
39	V128	Apr 28, 2020		Soil	M20-Ap43001				X				
40	V132	Apr 28, 2020		Soil	M20-Ap43002				X				
41	V133	Apr 28, 2020		Soil	M20-Ap43003				X				
42	V134	Apr 28, 2020		Soil	M20-Ap43004				X				
43	V135	Apr 28, 2020		Soil	M20-Ap43005				X				
44	V137	Apr 28, 2020		Soil	M20-Ap43006				X				
45	V138	Apr 28, 2020		Soil	M20-Ap43007				X				
46	V139	Apr 28, 2020		Soil	M20-Ap43008				X				
47	V140	Apr 28, 2020		Soil	M20-Ap43009				X				
48	V142	Apr 28, 2020		Soil	M20-Ap43010				X				
49	V143	Apr 28, 2020		Soil	M20-Ap43011				X				
50	V144	Apr 28, 2020		Soil	M20-Ap43012				X				

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X						
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
51	QC11	Apr 28, 2020		Soil	M20-Ap43080				X				
Test Counts						12	13	1	24	24	25	1	24

Company	SLR Consulting (NT)	Project №		Project Manager	Sarah Doherty	Sampler(s)	Gemma Sheridan
Address	5/21 Parap Rd Parap NT 0820	Project Name	JSS	EDD Format ESdat, EQuIS etc	Esdat & csv	Handed over by	Gemma Sheridan
Contact Name	Sarah Doherty					Email for Results	gsheridan@slrconsulting.com; pturyn@slrconsulting.com; sdoherty@slrconsulting.com
Phone №	417647498						
Special Directions							
Purchase Order							
Quote ID №	200422SLRNT						

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	Analyses: B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil characterisation	Hold	Containers: Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar characterisation	Rinsate bottles	Sample Comments / Dangerous Goods Hazard Warning
1	STP5_1	29/04/20	S	X	X		X				1	1					
2	STP5_2	29/04/20	S	X	X		X				1	1		1			
3	STP5_3	29/04/20	S	X	X		X				1	1		1			
4	STP5_4	29/04/20	S	X	X		X				1	1					
5	STP5_5	29/04/20	S	X	X		X				1	1					
6	STP5_6	29/04/20	S	X	X		X				1	1					
7	STP5_7	29/04/20	S	X	X		X				1	1					
8	STP5_6B	29/04/20	S					X						1			
9	STP6_1B	29/04/20	S					X						1			
10	STP6_1	29/04/20	S	X	X		X				1	1					
11	STP6_2	29/04/20	S	X	X		X				1	1					
12	STP6_3	29/04/20	S	X	X		X				1	1					
13	STP6_4	29/04/20	S	X	X		X				1	1					
14	STP6_5	29/04/20	S	X	X		X				1	1					
15	STP6_6	29/04/20	S	X	X		X				1	1		1			
16	STP6_7	29/04/20	S	X	X		X				1	1					
17	STP7_1	29/04/20	S	X	X		X				1	1					
18	STP7_2	29/04/20	S	X	X		X				1	1					
19	STP7_3	29/04/20	S	X	X		X				1	1					
20	STP7_4	29/04/20	S	X	X		X				1	1					
21	STP7_5	29/04/20	S	X	X		X				1	1					
22	STP7_6	29/04/20	S	X	X		X				1	1					
23	RIN5	29/04/20	W	X	X											4	
24	RIN6	29/04/20	W	X	X											4	
Add new rows		Total Counts		22	22		20	2			20	20		5		8	

Surcharge will apply: ☐ Overnight (reporting by 9am) ☐ 1 day ☑ Same day ☐ 2 days ☐ 3 days ☐ 5 days (Standard) ☐ Other( )

Required Turnaround Time (TAT) — Default will be 5 days if not ticked.

Method of Shipment	Courier №	)	Hand Delivered	Postal	Name	Signature	Date	Time
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW		Signature	Date	Time	Temperature
	Received By	[illegible]	SYD | BNE | MEL | PER | ADL | NTL | DRW		Signature	Date 30/4	Time 8:40	Report №

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request

Page 1 of 1

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Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 30, 2020 8:40 AM
Eurofins reference:	**716544**

Sample information

- ☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☑ All samples have been received as described on the above COC.
- ☑ COC has been completed correctly.
- ☑ Attempt to chill was evident.
- ☑ Appropriately preserved sample containers have been used.
- ☑ All samples were received in good condition.
- ☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☑ Appropriate sample containers have been used.
- ☑ Sample containers for volatile analysis received with zero headspace.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

STP4_1 & STP4-2 RECEIVED EXTRA AND PLACED ON HOLD. NO SAMPLES FOR STP5_6B & STP6_1B RECEIVED IN SYDNEY & WE CAN'T ANALYSE THOSE SAMPLES.

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **716544-S**
Project name JSS
Received Date Apr 30, 2020

Client Sample ID			**STP5_1**	**STP5_2**	**STP5_3**	**STP5_4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap44397**	**M20-Ap44398**	**M20-Ap44399**	**M20-Ap44400**
Date Sampled			**Apr 29, 2020**	**Apr 29, 2020**	**Apr 29, 2020**	**Apr 29, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	80	79	84	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.07	0.09	< 0.05	0.10
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.57	0.42	0.26	0.26
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			STP5_1	STP5_2	STP5_3	STP5_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44397	M20-Ap44398	M20-Ap44399	M20-Ap44400
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.64	0.51	0.26	0.36
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.64	0.51	0.26	0.36
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	95	106	94	93
Tetrachloro-m-xylene (surr.)	1	%	59	68	68	68
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	65	60	55	58

Client Sample ID			STP5_1	STP5_2	STP5_3	STP5_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44397	M20-Ap44398	M20-Ap44399	M20-Ap44400
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	27	16	16	19
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	230	140	130	170
Copper	5	mg/kg	11	11	12	9.2
Lead	5	mg/kg	20	16	16	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	19	16	17	12
Zinc	5	mg/kg	30	42	56	26
% Moisture	1	%	11	10	11	10

Client Sample ID			STP5_5	STP5_6	STP5_7	STP6_1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44401	M20-Ap44402	M20-Ap44403	M20-Ap44406
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	102	130	95	110
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.06
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			STP5_5	STP5_6	STP5_7	STP6_1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44401	M20-Ap44402	M20-Ap44403	M20-Ap44406
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	0.34	0.14	0.30	0.27
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.34	0.14	0.3	0.33
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.34	0.14	0.3	0.33
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	105	89	143	119
Tetrachloro-m-xylene (surr.)	1	%	63	64	83	76
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP5_5	STP5_6	STP5_7	STP6_1
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44401	M20-Ap44402	M20-Ap44403	M20-Ap44406
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	69	86	84	77
Heavy Metals						
Arsenic	2	mg/kg	17	17	23	21
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	130	180	200	220
Copper	5	mg/kg	12	12	11	10
Lead	5	mg/kg	16	16	18	18
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	17	20	14
Zinc	5	mg/kg	35	29	38	37
% Moisture	1	%	11	16	11	10

Client Sample ID			STP6_2	STP6_3	STP6_4	STP6_5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44407	M20-Ap44408	M20-Ap44409	M20-Ap44410
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	105	99	94	90
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			STP6_2	STP6_3	STP6_4	STP6_5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44407	M20-Ap44408	M20-Ap44409	M20-Ap44410
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	0.06	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.38	0.29	0.31	0.22
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.38	0.29	0.37	0.22
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.38	0.29	0.37	0.22
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	135	84	97	123
Tetrachloro-m-xylene (surr.)	1	%	81	50	135	74
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP6_2	STP6_3	STP6_4	STP6_5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44407	M20-Ap44408	M20-Ap44409	M20-Ap44410
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	89	96	127	87
Heavy Metals						
Arsenic	2	mg/kg	20	19	23	22
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	190	190	190	210
Copper	5	mg/kg	12	9.9	11	12
Lead	5	mg/kg	19	17	17	22
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	17	20	18	20
Zinc	5	mg/kg	39	41	21	24
% Moisture	1	%	11	11	11	12

Client Sample ID			STP6_6	STP6_7	STP7_1	STP7_2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44411	M20-Ap44412	M20-Ap44413	M20-Ap44414
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	89	88	74	95

Client Sample ID			STP6_6	STP6_7	STP7_1	STP7_2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44411	M20-Ap44412	M20-Ap44413	M20-Ap44414
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.10	0.09	0.08	0.14
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.32	0.58	0.38	0.36
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.42	0.67	0.46	0.5
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.42	0.67	0.46	0.5
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	87	84	104	140
Tetrachloro-m-xylene (surr.)	1	%	128	102	73	95
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP6_6	STP6_7	STP7_1	STP7_2
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44411	M20-Ap44412	M20-Ap44413	M20-Ap44414
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	114	150	86	108
Heavy Metals						
Arsenic	2	mg/kg	20	17	17	18
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	150	160	130	170
Copper	5	mg/kg	11	11	12	12
Lead	5	mg/kg	17	16	16	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	17	15	17	16
Zinc	5	mg/kg	41	38	42	37
% Moisture	1	%	10	10	10	10

Client Sample ID			STP7_3	STP7_4	STP7_5	STP7_6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44415	M20-Ap44416	M20-Ap44417	M20-Ap44418
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			STP7_3	STP7_4	STP7_5	STP7_6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44415	M20-Ap44416	M20-Ap44417	M20-Ap44418
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	111	114	111	58
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.10	0.13	0.12	0.19
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.29	0.29	0.28	0.33
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.39	0.42	0.4	0.52
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.39	0.42	0.4	0.52
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	107	112	97	117
Tetrachloro-m-xylene (surr.)	1	%	71	70	64	73
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP7_3	STP7_4	STP7_5	STP7_6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap44415	M20-Ap44416	M20-Ap44417	M20-Ap44418
Date Sampled			Apr 29, 2020	Apr 29, 2020	Apr 29, 2020	Apr 29, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	90	80	65	79
Heavy Metals						
Arsenic	2	mg/kg	22	19	19	17
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	190	140	130	130
Copper	5	mg/kg	12	11	11	11
Lead	5	mg/kg	20	17	17	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	18	15	16	15
Zinc	5	mg/kg	30	28	35	38
% Moisture	1	%	11	11	11	9.5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 30, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 30, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 30, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 30, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 30, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 30, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 30, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
% Moisture	Melbourne	Apr 30, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

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NATA # 1261 Site # 18217

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NATA # 1261 Site # 20794

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Site # 23736

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716544
Phone: +61 2 9428 8100
Fax:

Received: Apr 30, 2020 8:40 AM
Due: May 1, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	STP5_1	Apr 29, 2020		Soil	M20-Ap44397	X			X	X	X
2	STP5_2	Apr 29, 2020		Soil	M20-Ap44398	X			X	X	X
3	STP5_3	Apr 29, 2020		Soil	M20-Ap44399	X			X	X	X
4	STP5_4	Apr 29, 2020		Soil	M20-Ap44400	X			X	X	X
5	STP5_5	Apr 29, 2020		Soil	M20-Ap44401	X			X	X	X
6	STP5_6	Apr 29, 2020		Soil	M20-Ap44402	X			X	X	X
7	STP5_7	Apr 29, 2020		Soil	M20-Ap44403	X			X	X	X
8	STP5_6B	Apr 29, 2020		Soil	M20-Ap44404		X				
9	STP6_1B	Apr 29, 2020		Soil	M20-Ap44405		X				
10	STP6_1	Apr 29, 2020		Soil	M20-Ap44406	X			X	X	X
11	STP6_2	Apr 29, 2020		Soil	M20-Ap44407	X			X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
12	STP6_3	Apr 29, 2020		Soil	M20-Ap44408	X			X	X	X
13	STP6_4	Apr 29, 2020		Soil	M20-Ap44409	X			X	X	X
14	STP6_5	Apr 29, 2020		Soil	M20-Ap44410	X			X	X	X
15	STP6_6	Apr 29, 2020		Soil	M20-Ap44411	X			X	X	X
16	STP6_7	Apr 29, 2020		Soil	M20-Ap44412	X			X	X	X
17	STP7_1	Apr 29, 2020		Soil	M20-Ap44413	X			X	X	X
18	STP7_2	Apr 29, 2020		Soil	M20-Ap44414	X			X	X	X
19	STP7_3	Apr 29, 2020		Soil	M20-Ap44415	X			X	X	X
20	STP7_4	Apr 29, 2020		Soil	M20-Ap44416	X			X	X	X
21	STP7_5	Apr 29, 2020		Soil	M20-Ap44417	X			X	X	X
22	STP7_6	Apr 29, 2020		Soil	M20-Ap44418	X			X	X	X
23	RIN5	Apr 28, 2020		Water	M20-Ap44419				X		X
24	RIN6	Apr 29, 2020		Water	M20-Ap44420				X		X

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Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
25	STP4_1	Apr 29, 2020		Soil	M20-Ap44421			X			
26	STP4_2	Apr 29, 2020		Soil	M20-Ap44422			X			
Test Counts						20	2	2	22	20	22

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	102			70-130	Pass	
TRH C10-C14	%	97			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	112			70-130	Pass	
Toluene	%	106			70-130	Pass	
Ethylbenzene	%	125			70-130	Pass	
m&p-Xylenes	%	122			70-130	Pass	
Xylenes - Total*	%	117			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	107			70-130	Pass	
TRH C6-C10	%	99			70-130	Pass	
TRH >C10-C16	%	97			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	108			70-130	Pass	
4.4'-DDD	%	106			70-130	Pass	
4.4'-DDE	%	124			70-130	Pass	
4.4'-DDT	%	93			70-130	Pass	
a-BHC	%	116			70-130	Pass	
Aldrin	%	109			70-130	Pass	
b-BHC	%	89			70-130	Pass	
d-BHC	%	111			70-130	Pass	
Dieldrin	%	128			70-130	Pass	
Endosulfan I	%	111			70-130	Pass	
Endosulfan II	%	100			70-130	Pass	
Endosulfan sulphate	%	94			70-130	Pass	
Endrin	%	104			70-130	Pass	
Endrin aldehyde	%	72			70-130	Pass	
Endrin ketone	%	106			70-130	Pass	
g-BHC (Lindane)	%	127			70-130	Pass	
Heptachlor	%	110			70-130	Pass	
Heptachlor epoxide	%	102			70-130	Pass	
Hexachlorobenzene	%	122			70-130	Pass	
Methoxychlor	%	78			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	96			70-130	Pass	
Dimethoate	%	74			70-130	Pass	
Ethion	%	80			70-130	Pass	
Fenitrothion	%	91			70-130	Pass	
Methyl parathion	%	82			70-130	Pass	
Mevinphos	%	73			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	88			80-120	Pass	
Cadmium	%	103			80-120	Pass	
Chromium	%	92			80-120	Pass	
Copper	%	93			80-120	Pass	
Lead	%	90			80-120	Pass	
Mercury	%	112			75-125	Pass	
Nickel	%	89			80-120	Pass	
Zinc	%	88			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap44398	CP	%	89			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap44398	CP	%	89			70-130	Pass	
Toluene	M20-Ap44398	CP	%	90			70-130	Pass	
Ethylbenzene	M20-Ap44398	CP	%	90			70-130	Pass	
m&p-Xylenes	M20-Ap44398	CP	%	90			70-130	Pass	
o-Xylene	M20-Ap44398	CP	%	94			70-130	Pass	
Xylenes - Total*	M20-Ap44398	CP	%	91			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	M20-Ap44398	CP	%	89			70-130	Pass	
TRH C6-C10	M20-Ap44398	CP	%	87			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap44398	CP	%	118			70-130	Pass	
4.4'-DDD	M20-Ap44398	CP	%	90			70-130	Pass	
4.4'-DDE	M20-Ap44398	CP	%	130			70-130	Pass	
4.4'-DDT	M20-Ap44398	CP	%	71			70-130	Pass	
a-BHC	M20-Ap44398	CP	%	122			70-130	Pass	
Aldrin	M20-Ap44398	CP	%	129			70-130	Pass	
b-BHC	M20-Ap44398	CP	%	109			70-130	Pass	
d-BHC	M20-Ap44398	CP	%	78			70-130	Pass	
Endosulfan I	M20-Ap44398	CP	%	102			70-130	Pass	
Endosulfan II	M20-Ap44398	CP	%	102			70-130	Pass	
Endosulfan sulphate	M20-Ap44398	CP	%	93			70-130	Pass	
Endrin	M20-Ap44398	CP	%	92			70-130	Pass	
Endrin aldehyde	M20-Ap44398	CP	%	97			70-130	Pass	
Endrin ketone	M20-Ap44398	CP	%	113			70-130	Pass	
g-BHC (Lindane)	M20-Ap44398	CP	%	97			70-130	Pass	
Heptachlor	M20-Ap44398	CP	%	100			70-130	Pass	
Heptachlor epoxide	M20-Ap44398	CP	%	119			70-130	Pass	
Hexachlorobenzene	M20-Ap44398	CP	%	117			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap44398	CP	%	91			75-125	Pass	
Cadmium	M20-Ap44398	CP	%	101			75-125	Pass	
Chromium	M20-Ap44398	CP	%	138			75-125	Fail	Q08
Copper	M20-Ap44398	CP	%	84			75-125	Pass	
Lead	M20-Ap44398	CP	%	89			75-125	Pass	
Mercury	M20-Ap44398	CP	%	72			70-130	Pass	
Nickel	M20-Ap44398	CP	%	84			75-125	Pass	
Zinc	M20-Ap44398	CP	%	87			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap44410	CP	%	115			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap44410	CP	%	112			70-130	Pass	
Toluene	M20-Ap44410	CP	%	116			70-130	Pass	
Ethylbenzene	M20-Ap44410	CP	%	122			70-130	Pass	
m&p-Xylenes	M20-Ap44410	CP	%	121			70-130	Pass	
o-Xylene	M20-Ap44410	CP	%	126			70-130	Pass	
Xylenes - Total*	M20-Ap44410	CP	%	123			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap44410	CP	%	125			70-130	Pass	
TRH C6-C10	M20-Ap44410	CP	%	112			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap44410	CP	%	114			75-125	Pass	
Cadmium	M20-Ap44410	CP	%	104			75-125	Pass	
Copper	M20-Ap44410	CP	%	106			75-125	Pass	
Lead	M20-Ap44410	CP	%	104			75-125	Pass	
Mercury	M20-Ap44410	CP	%	108			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Nickel	M20-Ap44410	CP	%	104			75-125	Pass	
Zinc	M20-Ap44410	CP	%	99			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap44397	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap44397	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap44397	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap44397	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap44397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap44397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap44397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap44397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap44397	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap44397	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap44397	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap44397	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap44397	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap44397	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap44397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap44397	CP	mg/kg	0.57	0.25	79	30%	Fail	Q15
Endosulfan I	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap44397	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap44397	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Demeton-O	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap44397	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap44397	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap44397	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap44397	CP	mg/kg	27	19	31	30%	Fail	Q15
Cadmium	M20-Ap44397	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap44397	CP	mg/kg	230	190	18	30%	Pass	
Copper	M20-Ap44397	CP	mg/kg	11	12	7.0	30%	Pass	
Lead	M20-Ap44397	CP	mg/kg	20	17	17	30%	Pass	
Mercury	M20-Ap44397	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap44397	CP	mg/kg	19	19	2.0	30%	Pass	
Zinc	M20-Ap44397	CP	mg/kg	30	25	16	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap44397	CP	%	11	12	5.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap44398	CP	mg/kg	16	17	4.0	30%	Pass	
Cadmium	M20-Ap44398	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap44398	CP	mg/kg	140	140	<1	30%	Pass	
Copper	M20-Ap44398	CP	mg/kg	11	12	5.0	30%	Pass	
Lead	M20-Ap44398	CP	mg/kg	16	17	4.0	30%	Pass	
Mercury	M20-Ap44398	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap44398	CP	mg/kg	16	17	6.0	30%	Pass	
Zinc	M20-Ap44398	CP	mg/kg	42	44	5.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap44409	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap44409	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap44409	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap44409	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap44409	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap44409	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap44409	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap44409	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap44409	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap44409	CP	mg/kg	23	18	26	30%	Pass	
Cadmium	M20-Ap44409	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap44409	CP	mg/kg	190	140	30	30%	Pass	
Copper	M20-Ap44409	CP	mg/kg	11	12	11	30%	Pass	
Lead	M20-Ap44409	CP	mg/kg	17	17	1.0	30%	Pass	
Mercury	M20-Ap44409	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap44409	CP	mg/kg	18	17	7.0	30%	Pass	
Zinc	M20-Ap44409	CP	mg/kg	21	21	1.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap44409	CP	%	11	11	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap44410	CP	mg/kg	22	22	2.0	30%	Pass	
Cadmium	M20-Ap44410	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap44410	CP	mg/kg	210	200	3.0	30%	Pass	
Copper	M20-Ap44410	CP	mg/kg	12	13	2.0	30%	Pass	
Lead	M20-Ap44410	CP	mg/kg	22	22	1.0	30%	Pass	
Mercury	M20-Ap44410	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap44410	CP	mg/kg	20	20	2.0	30%	Pass	
Zinc	M20-Ap44410	CP	mg/kg	24	25	2.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	716544-AID
Project Name	JSS
Received Date	Apr 30, 2020
Date Reported	May 01, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name JSS
Project ID
Date Sampled Apr 29, 2020
Report 716544-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP5_1	20-Ap44397	Apr 29, 2020	Approximate Sample 847g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP5_2	20-Ap44398	Apr 29, 2020	Approximate Sample 865g Sample consisted of: Brown coarse-grained soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP5_3	20-Ap44399	Apr 29, 2020	Approximate Sample 916g Sample consisted of: Brown coarse-grained soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP5_4	20-Ap44400	Apr 29, 2020	Approximate Sample 866g Sample consisted of: Brown coarse-grained soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP5_5	20-Ap44401	Apr 29, 2020	Approximate Sample 893g Sample consisted of: Brown coarse-grained soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP5_6	20-Ap44402	Apr 29, 2020	Approximate Sample 955g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP5_7	20-Ap44403	Apr 29, 2020	Approximate Sample 984g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP6_1	20-Ap44406	Apr 29, 2020	Approximate Sample 894g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP6_2	20-Ap44407	Apr 29, 2020	Approximate Sample 831g Sample consisted of: Brown coarse-grained soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP6_3	20-Ap44408	Apr 29, 2020	Approximate Sample 677g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP6_4	20-Ap44409	Apr 29, 2020	Approximate Sample 755g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP6_5	20-Ap44410	Apr 29, 2020	Approximate Sample 593g Sample consisted of: Brown coarse-grained soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP6_6	20-Ap44411	Apr 29, 2020	Approximate Sample 764g Sample consisted of: Brown coarse-grained soil, plaster, cement, wood chips and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP6_7	20-Ap44412	Apr 29, 2020	Approximate Sample 831g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP7_1	20-Ap44413	Apr 29, 2020	Approximate Sample 800g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP7_2	20-Ap44414	Apr 29, 2020	Approximate Sample 879g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP7_3	20-Ap44415	Apr 29, 2020	Approximate Sample 888g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP7_4	20-Ap44416	Apr 29, 2020	Approximate Sample 890g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP7_5	20-Ap44417	Apr 29, 2020	Approximate Sample 868g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP7_6	20-Ap44418	Apr 29, 2020	Approximate Sample 796g Sample consisted of: Brown coarse-grained soil, cement and rocks	FA: Chrysotile asbestos detected in weathered fibre cement fragments. Approximate raw weight of FA = 0.011g Estimated asbestos content in FA = 0.0032g* Total estimated asbestos concentration in FA = 0.00040% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 30, 2020	Indefinite

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Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

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NATA # 1261 Site # 20794

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IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716544
Phone: +61 2 9428 8100
Fax:

Received: Apr 30, 2020 8:40 AM
Due: May 1, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	STP5_1	Apr 29, 2020		Soil	M20-Ap44397	X			X	X	X
2	STP5_2	Apr 29, 2020		Soil	M20-Ap44398	X			X	X	X
3	STP5_3	Apr 29, 2020		Soil	M20-Ap44399	X			X	X	X
4	STP5_4	Apr 29, 2020		Soil	M20-Ap44400	X			X	X	X
5	STP5_5	Apr 29, 2020		Soil	M20-Ap44401	X			X	X	X
6	STP5_6	Apr 29, 2020		Soil	M20-Ap44402	X			X	X	X
7	STP5_7	Apr 29, 2020		Soil	M20-Ap44403	X			X	X	X
8	STP5_6B	Apr 29, 2020		Soil	M20-Ap44404		X				
9	STP6_1B	Apr 29, 2020		Soil	M20-Ap44405		X				
10	STP6_1	Apr 29, 2020		Soil	M20-Ap44406	X			X	X	X
11	STP6_2	Apr 29, 2020		Soil	M20-Ap44407	X			X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
12	STP6_3	Apr 29, 2020		Soil	M20-Ap44408	X			X	X	X
13	STP6_4	Apr 29, 2020		Soil	M20-Ap44409	X			X	X	X
14	STP6_5	Apr 29, 2020		Soil	M20-Ap44410	X			X	X	X
15	STP6_6	Apr 29, 2020		Soil	M20-Ap44411	X			X	X	X
16	STP6_7	Apr 29, 2020		Soil	M20-Ap44412	X			X	X	X
17	STP7_1	Apr 29, 2020		Soil	M20-Ap44413	X			X	X	X
18	STP7_2	Apr 29, 2020		Soil	M20-Ap44414	X			X	X	X
19	STP7_3	Apr 29, 2020		Soil	M20-Ap44415	X			X	X	X
20	STP7_4	Apr 29, 2020		Soil	M20-Ap44416	X			X	X	X
21	STP7_5	Apr 29, 2020		Soil	M20-Ap44417	X			X	X	X
22	STP7_6	Apr 29, 2020		Soil	M20-Ap44418	X			X	X	X
23	RIN5	Apr 28, 2020		Water	M20-Ap44419				X		X
24	RIN6	Apr 29, 2020		Water	M20-Ap44420				X		X

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Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
25	STP4_1	Apr 29, 2020		Soil	M20-Ap44421			X			
26	STP4_2	Apr 29, 2020		Soil	M20-Ap44422			X			
Test Counts						20	2	2	22	20	22

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

SLR Consulting (NT)
GPO Box 654
Darwin
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NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **716544-W**
Project name JSS
Received Date Apr 30, 2020

Client Sample ID			**RIN5**	**RIN6**
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**M20-Ap44419**	**M20-Ap44420**
Date Sampled			**Apr 28, 2020**	**Apr 29, 2020**
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1
BTEX				
Benzene	0.001	mg/L	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	94	112
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1
Organochlorine Pesticides				
Chlordanes - Total	0.001	mg/L	< 0.001	< 0.001
4.4'-DDD	0.0001	mg/L	< 0.0001	< 0.0001
4.4'-DDE	0.0001	mg/L	< 0.0001	< 0.0001
4.4'-DDT	0.0001	mg/L	< 0.0001	< 0.0001
a-BHC	0.0001	mg/L	< 0.0001	< 0.0001
Aldrin	0.0001	mg/L	< 0.0001	< 0.0001
b-BHC	0.0001	mg/L	< 0.0001	< 0.0001
d-BHC	0.0001	mg/L	< 0.0001	< 0.0001
Dieldrin	0.0001	mg/L	< 0.0001	< 0.0001
Endosulfan I	0.0001	mg/L	< 0.0001	< 0.0001
Endosulfan II	0.0001	mg/L	< 0.0001	< 0.0001
Endosulfan sulphate	0.0001	mg/L	< 0.0001	< 0.0001
Endrin	0.0001	mg/L	< 0.0001	< 0.0001

Client Sample ID			RIN5	RIN6
Sample Matrix			Water	Water
Eurofins Sample No.			M20-Ap44419	M20-Ap44420
Date Sampled			Apr 28, 2020	Apr 29, 2020
Test/Reference	LOR	Unit		
Organochlorine Pesticides				
Endrin aldehyde	0.0001	mg/L	< 0.0001	< 0.0001
Endrin ketone	0.0001	mg/L	< 0.0001	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	< 0.0001
Heptachlor	0.0001	mg/L	< 0.0001	< 0.0001
Heptachlor epoxide	0.0001	mg/L	< 0.0001	< 0.0001
Hexachlorobenzene	0.0001	mg/L	< 0.0001	< 0.0001
Methoxychlor	0.0001	mg/L	< 0.0001	< 0.0001
Toxaphene	0.01	mg/L	< 0.01	< 0.01
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001	< 0.0001
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	< 0.0001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	< 0.001
Dibutylchlorendate (surr.)	1	%	66	74
Tetrachloro-m-xylene (surr.)	1	%	68	52
Organophosphorus Pesticides				
Azinphos-methyl	0.002	mg/L	< 0.002	< 0.002
Bolstar	0.002	mg/L	< 0.002	< 0.002
Chlorfenvinphos	0.002	mg/L	< 0.002	< 0.002
Chlorpyrifos	0.02	mg/L	< 0.02	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	< 0.002	< 0.002
Coumaphos	0.02	mg/L	< 0.02	< 0.02
Demeton-S	0.02	mg/L	< 0.02	< 0.02
Demeton-O	0.002	mg/L	< 0.002	< 0.002
Diazinon	0.002	mg/L	< 0.002	< 0.002
Dichlorvos	0.002	mg/L	< 0.002	< 0.002
Dimethoate	0.002	mg/L	< 0.002	< 0.002
Disulfoton	0.002	mg/L	< 0.002	< 0.002
EPN	0.002	mg/L	< 0.002	< 0.002
Ethion	0.002	mg/L	< 0.002	< 0.002
Ethoprop	0.002	mg/L	< 0.002	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002	< 0.002
Fenitrothion	0.002	mg/L	< 0.002	< 0.002
Fensulfothion	0.002	mg/L	< 0.002	< 0.002
Fenthion	0.002	mg/L	< 0.002	< 0.002
Malathion	0.002	mg/L	< 0.002	< 0.002
Merphos	0.002	mg/L	< 0.002	< 0.002
Methyl parathion	0.002	mg/L	< 0.002	< 0.002
Mevinphos	0.002	mg/L	< 0.002	< 0.002
Monocrotophos	0.002	mg/L	< 0.002	< 0.002
Naled	0.002	mg/L	< 0.002	< 0.002
Omethoate	0.002	mg/L	< 0.002	< 0.002
Phorate	0.002	mg/L	< 0.002	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02	< 0.02
Pyrazophos	0.002	mg/L	< 0.002	< 0.002
Ronnel	0.002	mg/L	< 0.002	< 0.002
Terbufos	0.002	mg/L	< 0.002	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002	< 0.002
Tokuthion	0.002	mg/L	< 0.002	< 0.002
Trichloronate	0.002	mg/L	< 0.002	< 0.002
Triphenylphosphate (surr.)	1	%	63	73

Client Sample ID			RIN5	RIN6
Sample Matrix			**Water**	**Water**
Eurofins Sample No.			**M20-Ap44419**	**M20-Ap44420**
Date Sampled			**Apr 28, 2020**	**Apr 29, 2020**
Test/Reference	LOR	Unit		
Heavy Metals				
Arsenic	0.001	mg/L	< 0.001	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002
Chromium	0.001	mg/L	< 0.001	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001
Lead	0.001	mg/L	< 0.001	< 0.001
Mercury	0.0001	mg/L	< 0.0001	< 0.0001
Nickel	0.001	mg/L	< 0.001	< 0.001
Zinc	0.005	mg/L	< 0.005	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 30, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 30, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 30, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 30, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 30, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 30, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 30, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			

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Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	CANCELLED	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	STP5_1	Apr 29, 2020		Soil	M20-Ap44397	X			X	X	X
2	STP5_2	Apr 29, 2020		Soil	M20-Ap44398	X			X	X	X
3	STP5_3	Apr 29, 2020		Soil	M20-Ap44399	X			X	X	X
4	STP5_4	Apr 29, 2020		Soil	M20-Ap44400	X			X	X	X
5	STP5_5	Apr 29, 2020		Soil	M20-Ap44401	X			X	X	X
6	STP5_6	Apr 29, 2020		Soil	M20-Ap44402	X			X	X	X
7	STP5_7	Apr 29, 2020		Soil	M20-Ap44403	X			X	X	X
8	STP5_6B	Apr 29, 2020		Soil	M20-Ap44404		X				
9	STP6_1B	Apr 29, 2020		Soil	M20-Ap44405		X				
10	STP6_1	Apr 29, 2020		Soil	M20-Ap44406	X			X	X	X
11	STP6_2	Apr 29, 2020		Soil	M20-Ap44407	X			X	X	X

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716544
Phone: +61 2 9428 8100
Fax:

Received: Apr 30, 2020 8:40 AM
Due: May 1, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

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Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
12	STP6_3	Apr 29, 2020		Soil	M20-Ap44408	X			X	X	X
13	STP6_4	Apr 29, 2020		Soil	M20-Ap44409	X			X	X	X
14	STP6_5	Apr 29, 2020		Soil	M20-Ap44410	X			X	X	X
15	STP6_6	Apr 29, 2020		Soil	M20-Ap44411	X			X	X	X
16	STP6_7	Apr 29, 2020		Soil	M20-Ap44412	X			X	X	X
17	STP7_1	Apr 29, 2020		Soil	M20-Ap44413	X			X	X	X
18	STP7_2	Apr 29, 2020		Soil	M20-Ap44414	X			X	X	X
19	STP7_3	Apr 29, 2020		Soil	M20-Ap44415	X			X	X	X
20	STP7_4	Apr 29, 2020		Soil	M20-Ap44416	X			X	X	X
21	STP7_5	Apr 29, 2020		Soil	M20-Ap44417	X			X	X	X
22	STP7_6	Apr 29, 2020		Soil	M20-Ap44418	X			X	X	X
23	RIN5	Apr 28, 2020		Water	M20-Ap44419				X		X
24	RIN6	Apr 29, 2020		Water	M20-Ap44420				X		X

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Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
25	STP4_1	Apr 29, 2020		Soil	M20-Ap44421			X			
26	STP4_2	Apr 29, 2020		Soil	M20-Ap44422			X			
Test Counts						20	2	2	22	20	22

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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4	STP5_4	Apr 29, 2020		Soil	M20-Ap44400	X			X	X	X
5	STP5_5	Apr 29, 2020		Soil	M20-Ap44401	X			X	X	X
6	STP5_6	Apr 29, 2020		Soil	M20-Ap44402	X			X	X	X
7	STP5_7	Apr 29, 2020		Soil	M20-Ap44403	X			X	X	X
8	STP5_6B	Apr 29, 2020		Soil	M20-Ap44404		X				
9	STP6_1B	Apr 29, 2020		Soil	M20-Ap44405		X				
10	STP6_1	Apr 29, 2020		Soil	M20-Ap44406	X			X	X	X
11	STP6_2	Apr 29, 2020		Soil	M20-Ap44407	X			X	X	X

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12	STP6_3	Apr 29, 2020		Soil	M20-Ap44408	X			X	X	X
13	STP6_4	Apr 29, 2020		Soil	M20-Ap44409	X			X	X	X
14	STP6_5	Apr 29, 2020		Soil	M20-Ap44410	X			X	X	X
15	STP6_6	Apr 29, 2020		Soil	M20-Ap44411	X			X	X	X
16	STP6_7	Apr 29, 2020		Soil	M20-Ap44412	X			X	X	X
17	STP7_1	Apr 29, 2020		Soil	M20-Ap44413	X			X	X	X
18	STP7_2	Apr 29, 2020		Soil	M20-Ap44414	X			X	X	X
19	STP7_3	Apr 29, 2020		Soil	M20-Ap44415	X			X	X	X
20	STP7_4	Apr 29, 2020		Soil	M20-Ap44416	X			X	X	X
21	STP7_5	Apr 29, 2020		Soil	M20-Ap44417	X			X	X	X
22	STP7_6	Apr 29, 2020		Soil	M20-Ap44418	X			X	X	X
23	RIN5	Apr 28, 2020		Water	M20-Ap44419				X		X
24	RIN6	Apr 29, 2020		Water	M20-Ap44420				X		X

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26	STP4_2	Apr 29, 2020		Soil	M20-Ap44422			X			
Test Counts						20	2	2	22	20	22

Company	SLR Consulting (NT)	Project №		Project Manager	Sarah Doherty
Address	5/21 Parap Rd Parap NT 0820	Project Name	JSS	EDD Format (ESdat, EQuIS etc)	Esdat & csv
Contact Name	Sarah Doherty				
Phone №	417647498				
Special Directions					
Purchase Order					
Quote ID №	200422SLRNT				

Sampler(s)	Gemma Sheridan
Handed over by	Gemma Sheridan
Email for Results	gsheridan@slrconsulting.com; pturyn@slrconsulting.com; sdoherty@slrconsulting.com

Analyses — Where metals are requested, please specify "Total" or "Filtered". SUITE codes must be used to ensure SUITE pricing

Containers — Change container type & size if necessary.

Required Turnaround Time (TAT) — Default will be 5 days if not ticked

*Surcharge will apply
- ☐ Overnight (reporting by 9am)*
- ☑ Same day*
- ☐ 1 day*
- ☐ 2 days*
- ☐ 3 days*
- ☐ 5 days (Standard)
- ☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil characterisation	Hold	Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar characterisation	Rinsate bottles	Sample Comments / Dangerous Goods Hazard Warning
1	STP8_1	30/04/20	S	X	X		X				1	1					
2	STP8_2	30/04/20	S	X	X		X				1	1					
3	STP8_3	30/04/20	S	X	X		X				1	1		1			
4	STP8_4	30/04/20	S	X	X		X				1	1					
5	STP8_5	30/04/20	S	X	X		X				1	1					
6	STP8_6	30/04/20	S	X	X		X				1	1					
7	STP8_7	30/04/20	S	X	X		X				1	1					
8	STP8_8	30/04/20	S	X	X		X				1	1					
9	STP8_9	30/04/20	S	X	X		X				1	1					
10	STP8_10	30/04/20	S	X	X		X				1	1					
11	STP9_1	30/04/20	S	X	X		X				1	1					
12	STP9_2	30/04/20	S	X	X		X				1	1					
13	STP9_3	30/04/20	S	X	X		X				1	1					
14	STP9_4	30/04/20	S	X	X		X				1	1					
15	STP9_5	30/04/20	S	X	X		X				1	1					
16	STP5_8	30/04/20	S	X	X		X				1	1					
17	STP5_9	30/04/20	S	X	X		X				1	1					
18	STP5_10	30/04/20	S	X	X		X				1	1					
19	STP6_8	30/04/20	S	X	X		X				1	1					
20	STP6_9	30/04/20	S	X	X		X				1	1		1			
21	STP6_10	30/04/20	S	X	X		X				1	1					
22	STP6_11	30/04/20	S	X	X		X				1	1					
23	STP7_7	30/04/20	S	X	X		X				1	1					
24	STP7_8	30/04/20	S	X	X		X				1	1					
25	STP7_9	30/04/20	S	X	X		X				1	1					
26	STP7_10	30/04/20	S	X	X		X				1	1					
27	STP7_11	30/04/20	S	X	X		X				1	1					
28	STP7_11B	30/04/20	S						X						1		
29	STP7_8B	30/04/20	S						X						1		
30	QC13	30/04/20	S	X	X		X				1	1					
31	RIN7	30/04/20	W	X	X											5	
	Add new rows		Total Counts	29	29		28	2			28	28		4		5	

Method of Shipment	Courier (#)	Hand Delivered	Postal	Name	Signature	Date	Time
Eurofins | mgt Laboratory Use Only	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW		Signature	Date 1/5	Time 8:40a Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW		Signature	Date	Time Report №

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request

716762

| | | |

#AU_CAU001_EnviroSampleVic

From: Gemma Sheridan <gsheridan@slrconsulting.com>
Sent: Friday, 1 May 2020 9:42 AM
To: #AU_CAU001_EnviroSampleVic; Sarah Doherty
Cc: Paul Turyn
Subject: RE: Eurofins Sample Receipt Advice - Report 716762 : Site JSS
Attachments: ECOC - Eurofins copy 20200430.xlsm

Hi Catherine,

Please see updated COC attached.

Sample DUP is listed as QC13 on the COC. Could this sample please be reported as QC13 in the reports.

Have also included the extra samples (STPW_5, 6, 7, 8 , 9, 10) on the attached COC.

Thanks,
Gemma

SLR

Gemma Sheridan
Project Consultant - Occupational Hygiene & Hazardous Materials

Please note in response to the COVID-19 Pandemic and physical distancing recommendations from the Australian Government,
SLR is encouraging staff to work remotely and implement flexible working hours if necessary.
If you have received this email outside of regular office hours, it is not expected that you will respond until your own working hours commence.

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From: EnviroSampleVic@eurofins.com <EnviroSampleVic@eurofins.com>
Sent: Friday, 1 May 2020 9:08 AM
To: Sarah Doherty <sdoherty@slrconsulting.com>
Cc: Gemma Sheridan <gsheridan@slrconsulting.com>; Paul Turyn <pturyn@slrconsulting.com>
Subject: Eurofins Sample Receipt Advice - Report 716762 : Site JSS

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ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	Same day
Date/Time received:	May 1, 2020 8:40 AM
Eurofins reference:	**716762**

Sample information

- ☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☑ All samples have been received as described on the above COC.
- ☑ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☑ Appropriately preserved sample containers have been used.
- ☑ All samples were received in good condition.
- ☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☑ Appropriate sample containers have been used.
- ☑ Sample containers for volatile analysis received with zero headspace.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

SAMPLE STP8_8 RECEIVED BROKEN & ANALYSIS WAS CANCELLED. QC13 NOT RECEIVED. EXTRA SAMPLES STPW_5, 6, 7, 8 , 9, 10 & DUP RECEIVED AND PLACED ON HOLD

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **716762-S**
Project name JSS
Received Date Apr 30, 2020

Client Sample ID			**STP8_1**	**STP8_2**	**STP8_3**	**STP8_4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap45951**	**M20-Ap45952**	**M20-Ap45953**	**M20-Ap45954**
Date Sampled			**Apr 30, 2020**	**Apr 30, 2020**	**Apr 30, 2020**	**Apr 30, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	135	133	140	134
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.06
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.23	0.12	0.09	0.30
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			STP8_1	STP8_2	STP8_3	STP8_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45951	M20-Ap45952	M20-Ap45953	M20-Ap45954
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.23	0.12	0.09	0.36
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.23	0.12	< 0.1	0.36
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	113	135	91	141
Tetrachloro-m-xylene (surr.)	1	%	83	84	77	61
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	103	146	95	80

Client Sample ID			STP8_1	STP8_2	STP8_3	STP8_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45951	M20-Ap45952	M20-Ap45953	M20-Ap45954
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	35	18	28	17
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	190	150	230	130
Copper	5	mg/kg	10	12	12	13
Lead	5	mg/kg	18	14	19	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	15	20	16
Zinc	5	mg/kg	20	23	27	32
% Moisture	1	%	10	9.9	11	11

Client Sample ID			STP8_5	STP8_6	STP8_7	STP8_9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45955	M20-Ap45956	M20-Ap45957	M20-Ap45959
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	123	118	142	136
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			STP8_5	STP8_6	STP8_7	STP8_9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45955	M20-Ap45956	M20-Ap45957	M20-Ap45959
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	0.09	0.13	0.15	0.11
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.09	0.13	0.15	0.11
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	0.13	0.15	0.11
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	97	132	121	101
Tetrachloro-m-xylene (surr.)	1	%	84	82	73	90
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP8_5	STP8_6	STP8_7	STP8_9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45955	M20-Ap45956	M20-Ap45957	M20-Ap45959
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	102	125	103	90
Heavy Metals						
Arsenic	2	mg/kg	24	27	24	20
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	200	230	190	190
Copper	5	mg/kg	11	12	12	12
Lead	5	mg/kg	18	22	19	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	18	20	19	18
Zinc	5	mg/kg	23	21	22	21
% Moisture	1	%	8.3	9.5	11	10

Client Sample ID			STP8_10	STP9_1	STP9_2	STP9_3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45960	M20-Ap45961	M20-Ap45962	M20-Ap45963
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	128	135	54	60
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			STP8_10	STP9_1	STP9_2	STP9_3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45960	M20-Ap45961	M20-Ap45962	M20-Ap45963
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.29	0.15	0.15	0.22
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.29	0.15	0.15	0.22
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.29	0.15	0.15	0.22
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	105	110	139	80
Tetrachloro-m-xylene (surr.)	1	%	78	85	72	87
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP8_10	STP9_1	STP9_2	STP9_3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45960	M20-Ap45961	M20-Ap45962	M20-Ap45963
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	98	108	142	85
Heavy Metals						
Arsenic	2	mg/kg	21	23	18	28
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	210	140	130	180
Copper	5	mg/kg	12	13	11	13
Lead	5	mg/kg	18	16	15	18
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	24	15	15	21
Zinc	5	mg/kg	25	27	22	35
% Moisture	1	%	9.9	12	12	10

Client Sample ID			STP9_4	STP9_5	STP5_8	STP5_9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45964	M20-Ap45965	M20-Ap45966	M20-Ap45967
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	63	51	74	74

Client Sample ID			STP9_4	STP9_5	STP5_8	STP5_9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45964	M20-Ap45965	M20-Ap45966	M20-Ap45967
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	0.09	0.11
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.10	0.07	0.36	0.37
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.1	0.07	0.45	0.48
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.1	< 0.1	0.45	0.48
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	76	79	82	79
Tetrachloro-m-xylene (surr.)	1	%	82	77	78	58
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP9_4	STP9_5	STP5_8	STP5_9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45964	M20-Ap45965	M20-Ap45966	M20-Ap45967
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	78	83	94	79
Heavy Metals						
Arsenic	2	mg/kg	22	33	21	24
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	180	200	190	230
Copper	5	mg/kg	12	11	12	11
Lead	5	mg/kg	20	18	19	18
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	19	16	18	17
Zinc	5	mg/kg	22	18	28	27
% Moisture	1	%	11	9.9	10	9.3

Client Sample ID			STP5_10	STP6_8	STP6_9	STP6_10
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45968	M20-Ap45969	M20-Ap45970	M20-Ap45971
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	96
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	96

Client Sample ID			STP5_10	STP6_8	STP6_9	STP6_10
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45968	M20-Ap45969	M20-Ap45970	M20-Ap45971
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	73	69	75	76
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	110
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	110
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.06	0.12	0.21	0.17
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.19	0.74	0.82	0.64
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.25	0.86	1.03	0.81
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.25	0.86	1.03	0.81
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	146	146	109	116
Tetrachloro-m-xylene (surr.)	1	%	57	52	57	55
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP5_10	STP6_8	STP6_9	STP6_10
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45968	M20-Ap45969	M20-Ap45970	M20-Ap45971
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	55	81	111	102
Heavy Metals						
Arsenic	2	mg/kg	26	20	19	22
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	170	160	160	180
Copper	5	mg/kg	11	13	9.9	12
Lead	5	mg/kg	17	16	15	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	18	15	16
Zinc	5	mg/kg	28	31	29	49
% Moisture	1	%	12	10	10	9.9

Client Sample ID			STP6_11	STP7_7	STP7_8	STP7_9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45972	M20-Ap45973	M20-Ap45974	M20-Ap45975
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	96	93	110	105
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.08	0.33	1.0	1.5
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.42	1.5	3.6	1.2
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.5	1.83	4.6	2.7
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.5	1.83	4.6	2.7
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	78	115	145	81
Tetrachloro-m-xylene (surr.)	1	%	63	58	55	55

Client Sample ID			STP6_11	STP7_7	STP7_8	STP7_9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45972	M20-Ap45973	M20-Ap45974	M20-Ap45975
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	110	105	135	78
Heavy Metals						
Arsenic	2	mg/kg	21	17	23	21
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	150	140	200	190
Copper	5	mg/kg	13	10	10	11
Lead	5	mg/kg	19	14	19	18
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	17	15	17	18
Zinc	5	mg/kg	35	30	29	29
% Moisture	1	%	10	< 1	10	10

Client Sample ID			STP7_10	STP7_11	QC13	STPW_5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45976	M20-Ap45977	M20-Ap45980	M20-My00118
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	106	113	103	97
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.58	0.33	< 0.05	0.07
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	1.2	0.62	0.38	0.52
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	1.78	0.95	0.38	0.59
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	1.78	1.05	0.38	0.59
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	86	112	80	81
Tetrachloro-m-xylene (surr.)	1	%	96	95	54	124

Client Sample ID			STP7_10	STP7_11	QC13	STPW_5
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap45976	M20-Ap45977	M20-Ap45980	M20-My00118
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	95	103	85	82
Heavy Metals						
Arsenic	2	mg/kg	26	15	23	23
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	220	130	200	220
Copper	5	mg/kg	11	13	13	13
Lead	5	mg/kg	21	15	24	21
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	16	18	21	17
Zinc	5	mg/kg	35	33	39	35
% Moisture	1	%	11	11	12	3.2

Client Sample ID			STPW_6	STPW_7	STPW_8	STPW_9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-My00119	M20-My00120	M20-My00121	M20-My00122
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	116	106	109	103
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.31	< 0.05	0.06	0.10
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.27	0.19	0.36	0.47
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.58	0.19	0.42	0.57
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.58	0.19	0.42	0.57
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	109	87	95	93
Tetrachloro-m-xylene (surr.)	1	%	82	70	53	64

Client Sample ID			STPW_6	STPW_7	STPW_8	STPW_9
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-My00119	M20-My00120	M20-My00121	M20-My00122
Date Sampled			Apr 30, 2020	Apr 30, 2020	Apr 30, 2020	Apr 30, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	119	96	114	138
Heavy Metals						
Arsenic	2	mg/kg	17	17	18	22
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	120	150	160	180
Copper	5	mg/kg	11	13	13	13
Lead	5	mg/kg	17	17	17	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	18	18	16
Zinc	5	mg/kg	33	33	32	29
% Moisture	1	%	2.3	3.8	4.5	3.1

Client Sample ID			STPW_10
Sample Matrix			Soil
Eurofins Sample No.			M20-My00123
Date Sampled			Apr 30, 2020
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	103
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	< 0.05
b-BHC	0.05	mg/kg	< 0.05
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	0.36
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	1	mg/kg	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.36
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.36
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	95
Tetrachloro-m-xylene (surr.)	1	%	62

Client Sample ID			STPW_10
Sample Matrix			**Soil**
Eurofins Sample No.			**M20-My00123**
Date Sampled			**Apr 30, 2020**
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Azinphos-methyl	0.2	mg/kg	< 0.2
Bolstar	0.2	mg/kg	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2
Coumaphos	2	mg/kg	< 2
Demeton-S	0.2	mg/kg	< 0.2
Demeton-O	0.2	mg/kg	< 0.2
Diazinon	0.2	mg/kg	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2
Dimethoate	0.2	mg/kg	< 0.2
Disulfoton	0.2	mg/kg	< 0.2
EPN	0.2	mg/kg	< 0.2
Ethion	0.2	mg/kg	< 0.2
Ethoprop	0.2	mg/kg	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2
Fenthion	0.2	mg/kg	< 0.2
Malathion	0.2	mg/kg	< 0.2
Merphos	0.2	mg/kg	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2
Mevinphos	0.2	mg/kg	< 0.2
Monocrotophos	2	mg/kg	< 2
Naled	0.2	mg/kg	< 0.2
Omethoate	2	mg/kg	< 2
Phorate	0.2	mg/kg	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2
Ronnel	0.2	mg/kg	< 0.2
Terbufos	0.2	mg/kg	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2
Tokuthion	0.2	mg/kg	< 0.2
Trichloronate	0.2	mg/kg	< 0.2
Triphenylphosphate (surr.)	1	%	112
Heavy Metals			
Arsenic	2	mg/kg	20
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	160
Copper	5	mg/kg	12
Lead	5	mg/kg	17
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	19
Zinc	5	mg/kg	50
% Moisture	1	%	5.1

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	May 01, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	May 01, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	May 01, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	May 01, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	May 01, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	May 01, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	May 01, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
% Moisture	Melbourne	May 01, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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Address: GPO Box 654
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NT 0801

Project Name: JSS

Order No.:
Report #: 716762
Phone: +61 2 9428 8100
Fax:

Received: May 1, 2020 8:40 AM
Due: May 1, 2020
Priority: Same day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	STP8_1	Apr 30, 2020		Soil	M20-Ap45951		X			X	X	X
2	STP8_2	Apr 30, 2020		Soil	M20-Ap45952		X			X	X	X
3	STP8_3	Apr 30, 2020		Soil	M20-Ap45953		X			X	X	X
4	STP8_4	Apr 30, 2020		Soil	M20-Ap45954		X			X	X	X
5	STP8_5	Apr 30, 2020		Soil	M20-Ap45955		X			X	X	X
6	STP8_6	Apr 30, 2020		Soil	M20-Ap45956		X			X	X	X
7	STP8_7	Apr 30, 2020		Soil	M20-Ap45957		X			X	X	X
8	STP8_8	Apr 30, 2020		Soil	M20-Ap45958		X					
9	STP8_9	Apr 30, 2020		Soil	M20-Ap45959		X			X	X	X
10	STP8_10	Apr 30, 2020		Soil	M20-Ap45960		X			X	X	X
11	STP9_1	Apr 30, 2020		Soil	M20-Ap45961		X			X	X	X

eurofins | Environment Testing

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716762
Phone: +61 2 9428 8100
Fax:

Received: May 1, 2020 8:40 AM
Due: May 1, 2020
Priority: Same day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
12	STP9_2	Apr 30, 2020		Soil	M20-Ap45962		X			X	X	X
13	STP9_3	Apr 30, 2020		Soil	M20-Ap45963		X			X	X	X
14	STP9_4	Apr 30, 2020		Soil	M20-Ap45964		X			X	X	X
15	STP9_5	Apr 30, 2020		Soil	M20-Ap45965		X			X	X	X
16	STP5_8	Apr 30, 2020		Soil	M20-Ap45966		X			X	X	X
17	STP5_9	Apr 30, 2020		Soil	M20-Ap45967		X			X	X	X
18	STP5_10	Apr 30, 2020		Soil	M20-Ap45968		X			X	X	X
19	STP6_8	Apr 30, 2020		Soil	M20-Ap45969		X			X	X	X
20	STP6_9	Apr 30, 2020		Soil	M20-Ap45970		X			X	X	X
21	STP6_10	Apr 30, 2020		Soil	M20-Ap45971		X			X	X	X
22	STP6_11	Apr 30, 2020		Soil	M20-Ap45972		X			X	X	X
23	STP7_7	Apr 30, 2020		Soil	M20-Ap45973		X			X	X	X
24	STP7_8	Apr 30, 2020		Soil	M20-Ap45974		X			X	X	X

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716762
Phone: +61 2 9428 8100
Fax:

Received: May 1, 2020 8:40 AM
Due: May 1, 2020
Priority: Same day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
25	STP7_9	Apr 30, 2020		Soil	M20-Ap45975		X			X	X	X
26	STP7_10	Apr 30, 2020		Soil	M20-Ap45976		X			X	X	X
27	STP7_11	Apr 30, 2020		Soil	M20-Ap45977		X			X	X	X
28	STP7_11B	Apr 30, 2020		Soil	M20-Ap45978			X				
29	STP7_8B	Apr 30, 2020		Soil	M20-Ap45979			X				
30	QC13	Apr 30, 2020		Soil	M20-Ap45980		X			X	X	X
31	RIN7	Apr 30, 2020		Water	M20-Ap45981					X		X
32	STPW_5	Apr 30, 2020		Soil	M20-My00118	X				X	X	X
33	STPW_6	Apr 30, 2020		Soil	M20-My00119	X				X	X	X
34	STPW_7	Apr 30, 2020		Soil	M20-My00120	X				X	X	X
35	STPW_8	Apr 30, 2020		Soil	M20-My00121	X				X	X	X
36	STPW_9	Apr 30, 2020		Soil	M20-My00122	X				X	X	X
37	STPW_10	Apr 30, 2020		Soil	M20-My00123	X				X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
38	DUP	Apr 30, 2020		Soil	M20-My00124				X			
Test Counts						6	28	2	1	34	33	34

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	120			70-130	Pass	
TRH C10-C14	%	111			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	103			70-130	Pass	
Toluene	%	124			70-130	Pass	
Ethylbenzene	%	109			70-130	Pass	
m&p-Xylenes	%	109			70-130	Pass	
Xylenes - Total*	%	111			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	125			70-130	Pass	
TRH C6-C10	%	111			70-130	Pass	
TRH >C10-C16	%	111			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	83			70-130	Pass	
4.4'-DDD	%	116			70-130	Pass	
4.4'-DDE	%	98			70-130	Pass	
4.4'-DDT	%	86			70-130	Pass	
a-BHC	%	88			70-130	Pass	
Aldrin	%	94			70-130	Pass	
b-BHC	%	81			70-130	Pass	
d-BHC	%	84			70-130	Pass	
Dieldrin	%	94			70-130	Pass	
Endosulfan I	%	81			70-130	Pass	
Endosulfan II	%	93			70-130	Pass	
Endosulfan sulphate	%	78			70-130	Pass	
Endrin	%	85			70-130	Pass	
Endrin aldehyde	%	76			70-130	Pass	
Endrin ketone	%	84			70-130	Pass	
g-BHC (Lindane)	%	108			70-130	Pass	
Heptachlor	%	81			70-130	Pass	
Heptachlor epoxide	%	84			70-130	Pass	
Hexachlorobenzene	%	88			70-130	Pass	
Methoxychlor	%	76			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	95			70-130	Pass	
Dimethoate	%	112			70-130	Pass	
Ethion	%	88			70-130	Pass	
Fenitrothion	%	82			70-130	Pass	
Methyl parathion	%	74			70-130	Pass	
Mevinphos	%	74			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	101			80-120	Pass	
Cadmium	%	108			80-120	Pass	
Chromium	%	100			80-120	Pass	
Copper	%	101			80-120	Pass	
Lead	%	99			80-120	Pass	
Mercury	%	94			75-125	Pass	
Nickel	%	97			80-120	Pass	
Zinc	%	101			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap45952	CP	%	126			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap45952	CP	%	114			70-130	Pass	
Toluene	M20-Ap45952	CP	%	121			70-130	Pass	
Ethylbenzene	M20-Ap45952	CP	%	114			70-130	Pass	
m&p-Xylenes	M20-Ap45952	CP	%	107			70-130	Pass	
o-Xylene	M20-Ap45952	CP	%	124			70-130	Pass	
Xylenes - Total*	M20-Ap45952	CP	%	113			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Naphthalene	M20-Ap45952	CP	%	124			70-130	Pass	
TRH C6-C10	M20-Ap45952	CP	%	124			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap45952	CP	%	122			70-130	Pass	
4.4'-DDD	M20-Ap45952	CP	%	78			70-130	Pass	
4.4'-DDE	M20-Ap45952	CP	%	111			70-130	Pass	
4.4'-DDT	M20-Ap45952	CP	%	78			70-130	Pass	
a-BHC	M20-Ap45952	CP	%	115			70-130	Pass	
Aldrin	M20-Ap45952	CP	%	121			70-130	Pass	
b-BHC	M20-Ap45952	CP	%	112			70-130	Pass	
d-BHC	M20-Ap45952	CP	%	84			70-130	Pass	
Dieldrin	M20-Ap45952	CP	%	122			70-130	Pass	
Endosulfan I	M20-Ap45952	CP	%	115			70-130	Pass	
Endosulfan II	M20-Ap45952	CP	%	127			70-130	Pass	
Endosulfan sulphate	M20-Ap45952	CP	%	76			70-130	Pass	
Endrin	M20-Ap45952	CP	%	117			70-130	Pass	
Endrin aldehyde	M20-Ap45952	CP	%	100			70-130	Pass	
Endrin ketone	M20-Ap45952	CP	%	87			70-130	Pass	
g-BHC (Lindane)	M20-Ap45952	CP	%	110			70-130	Pass	
Heptachlor	M20-Ap45952	CP	%	95			70-130	Pass	
Heptachlor epoxide	M20-Ap45952	CP	%	123			70-130	Pass	
Hexachlorobenzene	M20-Ap45952	CP	%	116			70-130	Pass	
Methoxychlor	M20-Ap45952	CP	%	93			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap45952	CP	%	101			75-125	Pass	
Cadmium	M20-Ap45952	CP	%	106			75-125	Pass	
Chromium	M20-Ap45952	CP	%	143			75-125	Fail	Q08
Copper	M20-Ap45952	CP	%	79			75-125	Pass	Q08
Lead	M20-Ap45952	CP	%	80			75-125	Pass	
Mercury	M20-Ap45952	CP	%	95			70-130	Pass	
Nickel	M20-Ap45952	CP	%	86			75-125	Pass	
Zinc	M20-Ap45952	CP	%	74			75-125	Fail	Q08
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap42977	NCP	%	105			70-130	Pass	
Dimethoate	M20-Ap42977	NCP	%	76			70-130	Pass	
Ethion	M20-Ap42977	NCP	%	85			70-130	Pass	
Fenitrothion	M20-Ap42977	NCP	%	84			70-130	Pass	
Methyl parathion	M20-Ap42977	NCP	%	92			70-130	Pass	
Mevinphos	M20-Ap42977	NCP	%	73			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap45973	CP	%	116			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap45973	CP	%	115			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap45973	CP	%	117			75-125	Pass	
Cadmium	M20-Ap45973	CP	%	110			75-125	Pass	
Chromium	M20-Ap45973	CP	%	145			75-125	Fail	Q08
Copper	M20-Ap45973	CP	%	112			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Lead	M20-Ap45973	CP	%	111			75-125	Pass	
Mercury	M20-Ap45973	CP	%	101			70-130	Pass	
Nickel	M20-Ap45973	CP	%	111			75-125	Pass	
Zinc	M20-Ap45973	CP	%	112			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap45951	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap45951	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap45951	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap45951	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap45951	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap45951	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap45951	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap45951	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap45951	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap45951	CP	mg/kg	< 0.05	0.06	23	30%	Pass	
b-BHC	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap45951	CP	mg/kg	0.23	0.23	1.0	30%	Pass	
Endosulfan I	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap45951	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap45951	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Dimethoate	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap45951	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap45951	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap45951	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap45951	CP	mg/kg	35	21	50	30%	Fail	Q15
Cadmium	M20-Ap45951	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap45951	CP	mg/kg	190	160	20	30%	Pass	
Copper	M20-Ap45951	CP	mg/kg	10	12	12	30%	Pass	
Lead	M20-Ap45951	CP	mg/kg	18	17	8.0	30%	Pass	
Mercury	M20-Ap45951	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap45951	CP	mg/kg	15	17	11	30%	Pass	
Zinc	M20-Ap45951	CP	mg/kg	20	25	21	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap45951	CP	%	10	10	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap45952	CP	mg/kg	18	18	3.0	30%	Pass	
Cadmium	M20-Ap45952	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap45952	CP	mg/kg	150	140	1.0	30%	Pass	
Copper	M20-Ap45952	CP	mg/kg	12	12	<1	30%	Pass	
Lead	M20-Ap45952	CP	mg/kg	14	14	1.0	30%	Pass	
Mercury	M20-Ap45952	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap45952	CP	mg/kg	15	15	<1	30%	Pass	
Zinc	M20-Ap45952	CP	mg/kg	23	23	2.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap45962	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap45962	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap45962	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap45962	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap45962	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap45962	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap45962	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap45962	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap45962	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap45962	CP	%	12	12	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap45972	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap45972	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap45972	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap45972	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap45972	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap45972	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap45972	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap45972	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap45972	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Dichlorvos	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap45972	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap45972	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap45972	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap45972	CP	mg/kg	21	24	14	30%	Pass	
Cadmium	M20-Ap45972	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap45972	CP	mg/kg	150	180	15	30%	Pass	
Copper	M20-Ap45972	CP	mg/kg	13	13	3.0	30%	Pass	
Lead	M20-Ap45972	CP	mg/kg	19	18	4.0	30%	Pass	
Mercury	M20-Ap45972	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap45972	CP	mg/kg	17	17	3.0	30%	Pass	
Zinc	M20-Ap45972	CP	mg/kg	35	32	10	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap45972	CP	%	10	10	4.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap45973	CP	mg/kg	17	17	<1	30%	Pass	
Cadmium	M20-Ap45973	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap45973	CP	mg/kg	140	140	1.0	30%	Pass	
Copper	M20-Ap45973	CP	mg/kg	10	10	2.0	30%	Pass	
Lead	M20-Ap45973	CP	mg/kg	14	14	1.0	30%	Pass	
Mercury	M20-Ap45973	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap45973	CP	mg/kg	15	15	2.0	30%	Pass	
Zinc	M20-Ap45973	CP	mg/kg	30	30	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-My00121	CP	mg/kg	18	23	24	30%	Pass	
Cadmium	M20-My00121	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-My00121	CP	mg/kg	160	160	<1	30%	Pass	
Copper	M20-My00121	CP	mg/kg	13	12	7.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Lead	M20-My00121	CP	mg/kg	17	19	10	30%	Pass	
Mercury	M20-My00121	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-My00121	CP	mg/kg	18	17	2.0	30%	Pass	
Zinc	M20-My00121	CP	mg/kg	32	37	16	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-My00121	CP	%	4.5	4.5	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	716762-AID
Project Name	JSS
Received Date	Apr 30, 2020
Date Reported	May 04, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name JSS
Project ID
Date Sampled Apr 30, 2020
Report 716762-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP8_1	20-Ap45951	Apr 30, 2020	Approximate Sample 870g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP8_2	20-Ap45952	Apr 30, 2020	Approximate Sample 842g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP8_3	20-Ap45953	Apr 30, 2020	Approximate Sample 850g Sample consisted of: Brown coarse-grained clayey soil, rocks, cement and wood chips	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP8_4	20-Ap45954	Apr 30, 2020	Approximate Sample 800g Sample consisted of: Brown coarse-grained clayey soil, rocks, plaster and cement	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP8_5	20-Ap45955	Apr 30, 2020	Approximate Sample 977g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP8_6	20-Ap45956	Apr 30, 2020	Approximate Sample 896g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP8_7	20-Ap45957	Apr 30, 2020	Approximate Sample 786g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP8_8	20-Ap45958	Apr 30, 2020	Approximate Sample 820g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP8_9	20-Ap45959	Apr 30, 2020	Approximate Sample 875g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP8_10	20-Ap45960	Apr 30, 2020	Approximate Sample 805g Sample consisted of: Brown coarse-grained clayey soil and rocks	AF: Chrysotile and amosite asbestos detected in fibre cement fragments. Approximate raw weight of AF = 0.0031g* Estimated asbestos content in AF = 0.00031g* Total estimated asbestos concentration in AF = 0.000038% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP9_1	20-Ap45961	Apr 30, 2020	Approximate Sample 856g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP9_2	20-Ap45962	Apr 30, 2020	Approximate Sample 821g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP9_3	20-Ap45963	Apr 30, 2020	Approximate Sample 767g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP9_4	20-Ap45964	Apr 30, 2020	Approximate Sample 842g Sample consisted of: Brown coarse-grained clayey soil, rocks, cement and plaster	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP9_5	20-Ap45965	Apr 30, 2020	Approximate Sample 902g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP5_8	20-Ap45966	Apr 30, 2020	Approximate Sample 1037g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement fragments	AF: Chrysotile asbestos detected in the form of loose fibre bundles. Approximate raw weight of AF = 0.00020g* Estimated asbestos content in AF = 0.00018g* Total estimated asbestos concentration in AF = 0.000017% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP5_9	20-Ap45967	Apr 30, 2020	Approximate Sample 878g Sample consisted of: Brown coarse-grained clayey soil, rocks, cement and wood chips	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP5_10	20-Ap45968	Apr 30, 2020	Approximate Sample 872g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP6_8	20-Ap45969	Apr 30, 2020	Approximate Sample 886g Sample consisted of: Brown coarse-grained clayey soil, rocks, cement and wood chips	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP6_9	20-Ap45970	Apr 30, 2020	Approximate Sample 974g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP6_10	20-Ap45971	Apr 30, 2020	Approximate Sample 901g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP6_11	20-Ap45972	Apr 30, 2020	Approximate Sample 920g Sample consisted of: Brown coarse-grained clayey soil, rocks, cement and plaster	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP7_7	20-Ap45973	Apr 30, 2020	Approximate Sample 863g Sample consisted of: Brown coarse-grained clayey soil, rocks, cement and plaster	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP7_8	20-Ap45974	Apr 30, 2020	Approximate Sample 913g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP7_9	20-Ap45975	Apr 30, 2020	Approximate Sample 941g Sample consisted of: Brown coarse-grained clayey soil, rocks, plaster, cement and wood chips	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP7_10	20-Ap45976	Apr 30, 2020	Approximate Sample 906g Sample consisted of: Brown coarse-grained clayey soil, rocks, cement and plaster	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP7_11	20-Ap45977	Apr 30, 2020	Approximate Sample 956g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP7_11B	20-Ap45978	Apr 30, 2020	Approximate Sample 4g / 40x20x5mm Sample consisted of: Briwb fibrous plaster cement fragment	Chrysotile asbestos detected.
STP7_8B	20-Ap45979	Apr 30, 2020	Approximate Sample 13g / 40x25x5mm Sample consisted of: White plaster material fragments	No asbestos detected. No trace asbestos detected.
QC13	20-Ap45980	Apr 30, 2020	Approximate Sample 1025g Sample consisted of: Brown coarse-grained clayey soil, rocks, cement and plaster	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STPW_5	20-My00118	Apr 30, 2020	Approximate Sample 219g Sample consisted of: Brown coarse-grained clayey soil, rocks, cement and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STPW_6	20-My00119	Apr 30, 2020	Approximate Sample 200g Sample consisted of: Brown coarse-grained clayey soil, rocks, cement fragments and organic debris	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
STPW_7	20-My00120	Apr 30, 2020	Approximate Sample 151g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
STPW_8	20-My00121	Apr 30, 2020	Approximate Sample 157g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
STPW_9	20-My00122	Apr 30, 2020	Approximate Sample 163g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
STPW_10	20-My00123	Apr 30, 2020	Approximate Sample 190g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	May 01, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	May 01, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	May 01, 2020	Indefinite

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Company Name: SLR Consulting (NT)
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NT 0801

Project Name: JSS

Order No.:
Report #: 716762
Phone: +61 2 9428 8100
Fax:

Received: May 1, 2020 8:40 AM
Due: May 4, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	STP8_1	Apr 30, 2020		Soil	M20-Ap45951		X			X	X	X
2	STP8_2	Apr 30, 2020		Soil	M20-Ap45952		X			X	X	X
3	STP8_3	Apr 30, 2020		Soil	M20-Ap45953		X			X	X	X
4	STP8_4	Apr 30, 2020		Soil	M20-Ap45954		X			X	X	X
5	STP8_5	Apr 30, 2020		Soil	M20-Ap45955		X			X	X	X
6	STP8_6	Apr 30, 2020		Soil	M20-Ap45956		X			X	X	X
7	STP8_7	Apr 30, 2020		Soil	M20-Ap45957		X			X	X	X
8	STP8_8	Apr 30, 2020		Soil	M20-Ap45958		X					
9	STP8_9	Apr 30, 2020		Soil	M20-Ap45959		X			X	X	X
10	STP8_10	Apr 30, 2020		Soil	M20-Ap45960		X			X	X	X
11	STP9_1	Apr 30, 2020		Soil	M20-Ap45961		X			X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
12	STP9_2	Apr 30, 2020		Soil	M20-Ap45962		X			X	X	X
13	STP9_3	Apr 30, 2020		Soil	M20-Ap45963		X			X	X	X
14	STP9_4	Apr 30, 2020		Soil	M20-Ap45964		X			X	X	X
15	STP9_5	Apr 30, 2020		Soil	M20-Ap45965		X			X	X	X
16	STP5_8	Apr 30, 2020		Soil	M20-Ap45966		X			X	X	X
17	STP5_9	Apr 30, 2020		Soil	M20-Ap45967		X			X	X	X
18	STP5_10	Apr 30, 2020		Soil	M20-Ap45968		X			X	X	X
19	STP6_8	Apr 30, 2020		Soil	M20-Ap45969		X			X	X	X
20	STP6_9	Apr 30, 2020		Soil	M20-Ap45970		X			X	X	X
21	STP6_10	Apr 30, 2020		Soil	M20-Ap45971		X			X	X	X
22	STP6_11	Apr 30, 2020		Soil	M20-Ap45972		X			X	X	X
23	STP7_7	Apr 30, 2020		Soil	M20-Ap45973		X			X	X	X
24	STP7_8	Apr 30, 2020		Soil	M20-Ap45974		X			X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
25	STP7_9	Apr 30, 2020		Soil	M20-Ap45975		X			X	X	X
26	STP7_10	Apr 30, 2020		Soil	M20-Ap45976		X			X	X	X
27	STP7_11	Apr 30, 2020		Soil	M20-Ap45977		X			X	X	X
28	STP7_11B	Apr 30, 2020		Soil	M20-Ap45978			X				
29	STP7_8B	Apr 30, 2020		Soil	M20-Ap45979			X				
30	QC13	Apr 30, 2020		Soil	M20-Ap45980		X			X	X	X
31	RIN7	Apr 30, 2020		Water	M20-Ap45981					X		X
32	STPW_5	Apr 30, 2020		Soil	M20-My00118	X				X	X	X
33	STPW_6	Apr 30, 2020		Soil	M20-My00119	X				X	X	X
34	STPW_7	Apr 30, 2020		Soil	M20-My00120	X				X	X	X
35	STPW_8	Apr 30, 2020		Soil	M20-My00121	X				X	X	X
36	STPW_9	Apr 30, 2020		Soil	M20-My00122	X				X	X	X
37	STPW_10	Apr 30, 2020		Soil	M20-My00123	X				X	X	X

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Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
38	DUP	Apr 30, 2020		Soil	M20-My00124				X			
Test Counts						6	28	2	1	34	33	34

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Authorised by:

Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **716762-W**
Project name JSS
Received Date Apr 30, 2020

Client Sample ID			**RIN7**
Sample Matrix			**Water**
Eurofins Sample No.			**M20-Ap45981**
Date Sampled			**Apr 30, 2020**
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	0.02	mg/L	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05
TRH C15-C28	0.1	mg/L	0.1
TRH C29-C36	0.1	mg/L	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	0.1
BTEX			
Benzene	0.001	mg/L	< 0.001
Toluene	0.001	mg/L	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002
o-Xylene	0.001	mg/L	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003
4-Bromofluorobenzene (surr.)	1	%	109
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.01	mg/L	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05
TRH >C16-C34	0.1	mg/L	0.1
TRH >C34-C40	0.1	mg/L	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	0.1
Organochlorine Pesticides			
Chlordanes - Total	0.001	mg/L	< 0.001
4.4'-DDD	0.0001	mg/L	< 0.0001
4.4'-DDE	0.0001	mg/L	< 0.0001
4.4'-DDT	0.0001	mg/L	< 0.0001
a-BHC	0.0001	mg/L	< 0.0001
Aldrin	0.0001	mg/L	< 0.0001
b-BHC	0.0001	mg/L	< 0.0001
d-BHC	0.0001	mg/L	< 0.0001
Dieldrin	0.0001	mg/L	< 0.0001
Endosulfan I	0.0001	mg/L	< 0.0001
Endosulfan II	0.0001	mg/L	< 0.0001
Endosulfan sulphate	0.0001	mg/L	< 0.0001
Endrin	0.0001	mg/L	< 0.0001

Client Sample ID			RIN7
Sample Matrix			Water
Eurofins Sample No.			M20-Ap45981
Date Sampled			Apr 30, 2020
Test/Reference	LOR	Unit	
Organochlorine Pesticides			
Endrin aldehyde	0.0001	mg/L	< 0.0001
Endrin ketone	0.0001	mg/L	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	< 0.0001
Heptachlor	0.0001	mg/L	< 0.0001
Heptachlor epoxide	0.0001	mg/L	< 0.0001
Hexachlorobenzene	0.0001	mg/L	< 0.0001
Methoxychlor	0.0001	mg/L	< 0.0001
Toxaphene	0.01	mg/L	< 0.01
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001
Dibutylchlorendate (surr.)	1	%	65
Tetrachloro-m-xylene (surr.)	1	%	150
Organophosphorus Pesticides			
Azinphos-methyl	0.002	mg/L	< 0.002
Bolstar	0.002	mg/L	< 0.002
Chlorfenvinphos	0.002	mg/L	< 0.002
Chlorpyrifos	0.02	mg/L	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	< 0.002
Coumaphos	0.02	mg/L	< 0.02
Demeton-S	0.02	mg/L	< 0.02
Demeton-O	0.002	mg/L	< 0.002
Diazinon	0.002	mg/L	< 0.002
Dichlorvos	0.002	mg/L	< 0.002
Dimethoate	0.002	mg/L	< 0.002
Disulfoton	0.002	mg/L	< 0.002
EPN	0.002	mg/L	< 0.002
Ethion	0.002	mg/L	< 0.002
Ethoprop	0.002	mg/L	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002
Fenitrothion	0.002	mg/L	< 0.002
Fensulfothion	0.002	mg/L	< 0.002
Fenthion	0.002	mg/L	< 0.002
Malathion	0.002	mg/L	< 0.002
Merphos	0.002	mg/L	< 0.002
Methyl parathion	0.002	mg/L	< 0.002
Mevinphos	0.002	mg/L	< 0.002
Monocrotophos	0.002	mg/L	< 0.002
Naled	0.002	mg/L	< 0.002
Omethoate	0.002	mg/L	< 0.002
Phorate	0.002	mg/L	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02
Pyrazophos	0.002	mg/L	< 0.002
Ronnel	0.002	mg/L	< 0.002
Terbufos	0.002	mg/L	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002
Tokuthion	0.002	mg/L	< 0.002
Trichloronate	0.002	mg/L	< 0.002
Triphenylphosphate (surr.)	1	%	111

Client Sample ID			RIN7
Sample Matrix			**Water**
Eurofins Sample No.			**M20-Ap45981**
Date Sampled			**Apr 30, 2020**
Test/Reference	LOR	Unit	
Heavy Metals			
Arsenic	0.001	mg/L	< 0.001
Cadmium	0.0002	mg/L	< 0.0002
Chromium	0.001	mg/L	< 0.001
Copper	0.001	mg/L	< 0.001
Lead	0.001	mg/L	< 0.001
Mercury	0.0001	mg/L	< 0.0001
Nickel	0.001	mg/L	< 0.001
Zinc	0.005	mg/L	0.031

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	May 01, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	May 01, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	May 01, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	May 01, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	May 01, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	May 01, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	May 01, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716762
Phone: +61 2 9428 8100
Fax:

Received: May 1, 2020 8:40 AM
Due: May 1, 2020
Priority: Same day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	STP8_1	Apr 30, 2020		Soil	M20-Ap45951		X			X	X	X
2	STP8_2	Apr 30, 2020		Soil	M20-Ap45952		X			X	X	X
3	STP8_3	Apr 30, 2020		Soil	M20-Ap45953		X			X	X	X
4	STP8_4	Apr 30, 2020		Soil	M20-Ap45954		X			X	X	X
5	STP8_5	Apr 30, 2020		Soil	M20-Ap45955		X			X	X	X
6	STP8_6	Apr 30, 2020		Soil	M20-Ap45956		X			X	X	X
7	STP8_7	Apr 30, 2020		Soil	M20-Ap45957		X			X	X	X
8	STP8_8	Apr 30, 2020		Soil	M20-Ap45958		X					
9	STP8_9	Apr 30, 2020		Soil	M20-Ap45959		X			X	X	X
10	STP8_10	Apr 30, 2020		Soil	M20-Ap45960		X			X	X	X
11	STP9_1	Apr 30, 2020		Soil	M20-Ap45961		X			X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
12	STP9_2	Apr 30, 2020		Soil	M20-Ap45962		X			X	X	X
13	STP9_3	Apr 30, 2020		Soil	M20-Ap45963		X			X	X	X
14	STP9_4	Apr 30, 2020		Soil	M20-Ap45964		X			X	X	X
15	STP9_5	Apr 30, 2020		Soil	M20-Ap45965		X			X	X	X
16	STP5_8	Apr 30, 2020		Soil	M20-Ap45966		X			X	X	X
17	STP5_9	Apr 30, 2020		Soil	M20-Ap45967		X			X	X	X
18	STP5_10	Apr 30, 2020		Soil	M20-Ap45968		X			X	X	X
19	STP6_8	Apr 30, 2020		Soil	M20-Ap45969		X			X	X	X
20	STP6_9	Apr 30, 2020		Soil	M20-Ap45970		X			X	X	X
21	STP6_10	Apr 30, 2020		Soil	M20-Ap45971		X			X	X	X
22	STP6_11	Apr 30, 2020		Soil	M20-Ap45972		X			X	X	X
23	STP7_7	Apr 30, 2020		Soil	M20-Ap45973		X			X	X	X
24	STP7_8	Apr 30, 2020		Soil	M20-Ap45974		X			X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
25	STP7_9	Apr 30, 2020		Soil	M20-Ap45975		X			X	X	X
26	STP7_10	Apr 30, 2020		Soil	M20-Ap45976		X			X	X	X
27	STP7_11	Apr 30, 2020		Soil	M20-Ap45977		X			X	X	X
28	STP7_11B	Apr 30, 2020		Soil	M20-Ap45978			X				
29	STP7_8B	Apr 30, 2020		Soil	M20-Ap45979			X				
30	QC13	Apr 30, 2020		Soil	M20-Ap45980		X			X	X	X
31	RIN7	Apr 30, 2020		Water	M20-Ap45981					X		X
32	STPW_5	Apr 30, 2020		Soil	M20-My00118	X				X	X	X
33	STPW_6	Apr 30, 2020		Soil	M20-My00119	X				X	X	X
34	STPW_7	Apr 30, 2020		Soil	M20-My00120	X				X	X	X
35	STPW_8	Apr 30, 2020		Soil	M20-My00121	X				X	X	X
36	STPW_9	Apr 30, 2020		Soil	M20-My00122	X				X	X	X
37	STPW_10	Apr 30, 2020		Soil	M20-My00123	X				X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
38	DUP	Apr 30, 2020		Soil	M20-My00124				X			
Test Counts						6	28	2	1	34	33	34

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	113			70-130	Pass	
TRH C10-C14	%	120			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	98			70-130	Pass	
Toluene	%	103			70-130	Pass	
Ethylbenzene	%	118			70-130	Pass	
m&p-Xylenes	%	115			70-130	Pass	
Xylenes - Total*	%	115			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	91			70-130	Pass	
TRH C6-C10	%	109			70-130	Pass	
TRH >C10-C16	%	114			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96			80-120	Pass	
Cadmium	%	97			80-120	Pass	
Chromium	%	96			80-120	Pass	

Test			Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper			%	96			80-120	Pass	
Lead			%	98			80-120	Pass	
Mercury			%	92			75-125	Pass	
Nickel			%	96			80-120	Pass	
Zinc			%	99			80-120	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap40291	NCP	%	111			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap40291	NCP	%	106			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap43960	NCP	%	98			75-125	Pass	
Cadmium	M20-Ap43960	NCP	%	76			75-125	Pass	
Chromium	M20-Ap42438	NCP	%	85			75-125	Pass	
Copper	M20-Ap43960	NCP	%	82			75-125	Pass	
Lead	M20-Ap42438	NCP	%	84			75-125	Pass	
Mercury	M20-Ap43960	NCP	%	77			70-130	Pass	
Nickel	M20-Ap43960	NCP	%	83			75-125	Pass	
Zinc	M20-Ap43960	NCP	%	84			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap40290	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M20-Ap40290	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
TRH C29-C36	M20-Ap40290	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap40290	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M20-Ap40290	NCP	mg/L	< 0.1		<1	30%	Pass	
TRH >C34-C40	M20-Ap40290	NCP	mg/L	< 0.1		<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap43960	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Cadmium	M20-Ap43960	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M20-Ap42438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Copper	M20-Ap43960	NCP	mg/L	0.088	0.093	5.0	30%	Pass	
Lead	M20-Ap42438	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Mercury	M20-Ap43960	NCP	mg/L	0.0002	0.0002	2.0	30%	Pass	
Nickel	M20-Ap43960	NCP	mg/L	0.12	0.12	3.0	30%	Pass	
Zinc	M20-Ap43960	NCP	mg/L	0.13	0.13	4.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	No
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Company Name: SLR Consulting (NT)
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Project Name: JSS

Order No.:
Report #: 716762
Phone: +61 2 9428 8100
Fax:

Received: May 1, 2020 8:40 AM
Due: May 1, 2020
Priority: Same day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	CANCELLED	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	STP8_1	Apr 30, 2020		Soil	M20-Ap45951		X			X	X	X
2	STP8_2	Apr 30, 2020		Soil	M20-Ap45952		X			X	X	X
3	STP8_3	Apr 30, 2020		Soil	M20-Ap45953		X			X	X	X
4	STP8_4	Apr 30, 2020		Soil	M20-Ap45954		X			X	X	X
5	STP8_5	Apr 30, 2020		Soil	M20-Ap45955		X			X	X	X
6	STP8_6	Apr 30, 2020		Soil	M20-Ap45956		X			X	X	X
7	STP8_7	Apr 30, 2020		Soil	M20-Ap45957		X			X	X	X
8	STP8_8	Apr 30, 2020		Soil	M20-Ap45958		X					
9	STP8_9	Apr 30, 2020		Soil	M20-Ap45959		X			X	X	X
10	STP8_10	Apr 30, 2020		Soil	M20-Ap45960		X			X	X	X
11	STP9_1	Apr 30, 2020		Soil	M20-Ap45961		X			X	X	X

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Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
12	STP9_2	Apr 30, 2020		Soil	M20-Ap45962		X			X	X	X
13	STP9_3	Apr 30, 2020		Soil	M20-Ap45963		X			X	X	X
14	STP9_4	Apr 30, 2020		Soil	M20-Ap45964		X			X	X	X
15	STP9_5	Apr 30, 2020		Soil	M20-Ap45965		X			X	X	X
16	STP5_8	Apr 30, 2020		Soil	M20-Ap45966		X			X	X	X
17	STP5_9	Apr 30, 2020		Soil	M20-Ap45967		X			X	X	X
18	STP5_10	Apr 30, 2020		Soil	M20-Ap45968		X			X	X	X
19	STP6_8	Apr 30, 2020		Soil	M20-Ap45969		X			X	X	X
20	STP6_9	Apr 30, 2020		Soil	M20-Ap45970		X			X	X	X
21	STP6_10	Apr 30, 2020		Soil	M20-Ap45971		X			X	X	X
22	STP6_11	Apr 30, 2020		Soil	M20-Ap45972		X			X	X	X
23	STP7_7	Apr 30, 2020		Soil	M20-Ap45973		X			X	X	X
24	STP7_8	Apr 30, 2020		Soil	M20-Ap45974		X			X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
25	STP7_9	Apr 30, 2020		Soil	M20-Ap45975		X			X	X	X
26	STP7_10	Apr 30, 2020		Soil	M20-Ap45976		X			X	X	X
27	STP7_11	Apr 30, 2020		Soil	M20-Ap45977		X			X	X	X
28	STP7_11B	Apr 30, 2020		Soil	M20-Ap45978			X				
29	STP7_8B	Apr 30, 2020		Soil	M20-Ap45979			X				
30	QC13	Apr 30, 2020		Soil	M20-Ap45980		X			X	X	X
31	RIN7	Apr 30, 2020		Water	M20-Ap45981					X		X
32	STPW_5	Apr 30, 2020		Soil	M20-My00118	X				X	X	X
33	STPW_6	Apr 30, 2020		Soil	M20-My00119	X				X	X	X
34	STPW_7	Apr 30, 2020		Soil	M20-My00120	X				X	X	X
35	STPW_8	Apr 30, 2020		Soil	M20-My00121	X				X	X	X
36	STPW_9	Apr 30, 2020		Soil	M20-My00122	X				X	X	X
37	STPW_10	Apr 30, 2020		Soil	M20-My00123	X				X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
38	DUP	Apr 30, 2020		Soil	M20-My00124				X			
Test Counts						6	28	2	1	34	33	34

Memorandum

To:	Bill Kmon	**At:**	HK Solutions
From:	Ruairi Hanly	**At:**	SLR Consulting Australia Pty Ltd
Date:	13 May 2020	**Ref:**	680.10679-M03-v1.1.docx
Subject:	Stockpile Characterisation John Stokes Square, Darwin		

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1 Introduction

HK Solutions commissioned SLR Consulting Australia Pty Ltd (SLR) to undertake Stockpile Characterisation at 47 Progress Dr Nightcliff NT 0810 (herein referred to as the "site").

1.1 Background

This Stockpile Characterisation was part of the "John Stokes Square housing complex" project, currently under redevelopment.

The stockpile STP_TS, contained the topsoil material from the site. This stockpile has an estimated volume of 35m^3 and was sampled on 23 April 2020 by a suitably experienced environmental scientist, for classification for reuse / offsite disposal.

1.2 Objective

The objective of this Assessment was to determine if stockpiled soil was suitable for on-site re-use, or require offsite disposal. It is understood, should this assessment deem the stockpiled soil be unsuitable for re-use then the analytical results will be used to facilitate off-site disposal.

1.3 Scope of Works

The following scope of works were undertaken to meet the aforementioned objective.

- Sampling of stockpile STP_TS for characterisation.
- Samples were collected and analysed for contaminants of potential concern (CoPCs) at a National Association of Testing Authorities (NATA) accredited laboratory.
- CoPCs were deemed to be:
  - Total Recoverable Hydrocarbons (TRH).
  - Total Petroleum Hydrocarbons (TPH).
  - Benzene, Toluene, Ethylbenzene and Xylene (BTEX).
  - Organochlorine/ Organophosphate (OC/OP) pesticides.

  - Metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc, and mercury).
  - Asbestos.
- Submission of all soil samples to a National Association of Testing Authorities (NATA) accredited laboratory, with selected samples analysed for key CoPCs.

1.4 Limitations

The following information will assist in understanding the uncertainties relating to the interpretation of the data obtained during this investigation and the recommendations presented in the report and help with assessment and interpretation of the report.

SLR assumes no responsibility for the quality or accuracy of data obtained from external sources, or for occurrences outside the scope of works defined in this report.

All work conducted, and reports produced by SLR are prepared for a particular Client's objective and are based on a specific scope, conditions and limitations, as agreed upon between SLR and the Client. Information and/or report(s) prepared by SLR may therefore not be suitable for any use other than the intended objective.

Before passing on to a third party any information and/or report(s) prepared by SLR, the Client is to inform fully the third party of the objective and scope, and all limitations and conditions, including any other relevant information which applies to the information and/or report(s) prepared by SLR.

It is the responsibility of third parties to investigate fully to their satisfaction if any information and/or report(s) prepared by SLR, is suitable for a specific objective.

Services were conducted in a conscientious and professional manner. The nature of the task, however, and the likely disproportion between any damage or loss which might arise from the work and any report prepared as a result and the cost of our services is such that SLR cannot guarantee that all issues of concern/contamination have been identified.

The report(s) and/or information produced by SLR should not be reproduced and/or presented/reviewed except in full.

2 Methodology

Works undertaken were completed in general accordance within the following guidelines and standards.

- National Environment Protection Council (1999, 2013 revision), National Environment Protection (Assessment of Site Contamination) Measure (ASC NEMP).
- AS 4482.1-2005, Guide to the Sampling and Investigation of Potentially Contaminated Soil. Part 1: Non-volatile and semi-volatile compounds.
- Western Australian Department of Health (DoH) 2019 Guidelines for the Assessment, Remediation and Management of Asbestos Contaminated Sites in Western Australia, Consultation Draft November 2019.

In addition, SLR's Standard Operating Procedures (SOPs) were followed to ensure integrity was maintained and sampling procedures were completed in general accordance with the relevant guidelines and standards.

2.1 Soil Sampling Methodology

Soil samples were collected in accordance with the following methodology outlined below in **Table 1.**

Table 1 Summary of soil and ACM sampling methodology

Activity	Detail / Comment
Stockpile soil sampling	In general accordance with NEPM 2013, samples were collected from approximately 200 - 300 mm below the stockpile surface. Environmental samples were collected and handled by an experienced SLR environmental scientist / engineer.
Sample preservation	Sample collection was undertaken in general accordance with AS4482.1-2005. Dedicated disposable nitrile gloves and laboratory supplied sample containers were used. Samples were placed in clean soil jars and sealed with a screw cap lid or laboratory supplied asbestos bags.
Sample submission	Chain of Custody (COC) documentation were completed at the time of sample collection and accompanied the samples to the laboratory.
Sample analysis	All samples were submitted to a NATA accredited laboratory, Eurofins Environment Testing Australia Pty Ltd (Eurofins), for analysis. Selected soil samples were analysed for either all or a combination of the following contaminants of potential concern. • Total Recoverable Hydrocarbons (TRH). • Total Petroleum Hydrocarbons (TPH). • Benzene, Toluene, Ethylbenzene and Xylene (BTEX). • Organochlorine/ Organophosphate (OC/OP) pesticides. • Metals (arsenic, cadmium, chromium, copper, lead, nickel, zinc, and mercury). • Asbestos.

In total, three (3) soil samples were collected from stockpile STP_TS and placed into laboratory supplied sample jars. All samples collected from stockpile STP_TS were analysed for the contaminants of potential concern.

2.2 Nominated Investigation Levels

The nominated investigation levels (ILs) adopted for this Assessment are:

- National Environment Protection (Assessment of Site Contamination) Amendment Measure No.1 (ASC NEPM):
  - Health Based Investigation Levels (HILs) for Health Investigation Levels A Soils;
  - Health Screening Levels (HSLs) for Low – high density residential HSL A for Vapour Intrusion, Sand.
- Western Australian Department of Health (DoH) 2019:
  - Soil Asbestos Screening Criteria for Fibrous Asbestos (FA) / Asbestos Fines (AF), all site uses.

3 Results

A total of three soil samples were analysed as part of this Assessment. **Table 2** below provides a summary of the analytical soil results with respect to the detected analytes and the corresponding nominated ILs.

Table 2 Summary of laboratory results

Analyte	Unit	LOR*	IL**	STP_TS_1	STP_TS_2	STP_TS_3
Metals						
Arsenic	mg/kg	2	100	12	9	13
Cadmium	mg/kg	0.4	20	<0.4	<0.4	<0.4
Chromium (III+VI)	mg/kg	5	100-	85	54	87
Copper	mg/kg	5	6,000	15	10	15
Lead	mg/kg	5	300	34	14	25
Mercury	mg/kg	0.1	40	<0.1	<0.1	<0.1
Nickel	mg/kg	5	400	10	6.7	13
Zinc	mg/kg	5	7,400	68	47	110
BTEX						
Benzene	mg/kg	0.1	0.5	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1	55	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1	160	<0.1	<0.1	<0.1
Xylene Total	mg/kg	0.3	40	<0.3	<0.3	<0.3
Asbestos						
Asbestos from ACM in Soil	%w/w	0.001%	0.001%	<0.001%	<0.001%	<0.001%
TRH						
C6-C10	mg/kg	20	-	<20	<20	<20
C6-C10 (F1 minus BTEX)	mg/kg	20	45	<20	<20	<20
C10-C16	mg/kg	50	-	<50	<50	<50
C10-C16 (F2 minus Naphthalene)	mg/kg	50	110	<50	<50	<50
C16-C34 (F3)	mg/kg	100	-	<100	180	120
C34-C40 (F4)	mg/kg	100	-	<100	<100	<100
C10-C40 (Sum of total)	mg/kg	100	-	<100	180	120
TPH						
C6-C9	mg/kg	20	-	<20	<20	<20
C10-C14	mg/kg	20	-	<20	<20	<20
C15-C28	mg/kg	50	-	<50	77	68
C29-C36	mg/kg	50	-	<50	150	81
TRH C10-C36 (Total)	mg/kg	50	-	<50	227	149
Naphthalene	mg/kg	0.5	3	<0.5	<0.5	<0.5
Organochlorine Pesticides						
chlordane	mg/kg	0.1	50	<0.1	<0.1	0.4
d-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05	-	<0.05	<0.05	0.39
DDT	mg/kg	0.05	-	<0.05	<0.05	<0.05
DDD	mg/kg	0.05	-	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05	-	0.12	0.2	2.1

Analyte	Unit	LOR*	IL**	STP_TS_1	STP_TS_2	STP_TS_3
DDT+DDE+DDD	mg/kg	0.05	240	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	300	<0.05	<0.05	<0.05
Endrin	mg/kg	0.05	10	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1	-	0.12	0.2	2.98
Other organochlorine pesticides EPAVic	mg/kg	0.1	-	<0.1	<0.1	0.79
4,4-DDE	mg/kg	0.05	-	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05	-	<0.05	<0.05	0.09
Endrin ketone	mg/kg	0.05	-	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05	-	<0.05	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	6	0.12	0.2	2.19
b-BHC	mg/kg	0.05	-	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	-	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	-	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05	-	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05	-	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	6	<0.05	<0.05	<0.05
Toxaphene	mg/kg	1	20	<1	<1	<1
Hexachlorobenzene	mg/kg	0.05	10	<0.05	<0.05	<0.05
Organophosphorous Pesticides						
Dimethoate	mg/kg	0.2	-	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2	-	<0.2	<0.2	<0.2
EPN	mg/kg	0.2	-	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2	-	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2	-	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2	-	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2	-	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2	-	<2	<2	<2
Demeton-O	mg/kg	0.2	-	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2	-	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2	-	<0.2	<0.2	<0.2
Mevinphos (Phosdrin)	mg/kg	0.2	-	<0.2	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2	-	<0.2	<0.2	<0.2
Omethoate	mg/kg	2	-	<2	<2	<2
Phorate	mg/kg	0.2	-	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2	-	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2	-	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2	-	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2	-	<0.2	<0.2	<0.2

Analyte	Unit	LOR*	IL**	STP_TS_1	STP_TS_2	STP_TS_3
Tetrachlorvinphos	mg/kg	0.2	-	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2	-	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2	-	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2	-	<0.2	<0.2	<0.2
Azinophos methyl	mg/kg	0.2	-	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2	-	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	160	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2	-	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2	-	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2	-	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2	-	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2	-	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2	-	<2	<2	<2
Pirimiphos-methyl	mg/kg	0.2	-	<0.2	<0.2	<0.2
Parathion	mg/kg	0.2	-	<0.2	<0.2	<0.2

* LOR = Limit of Reporting
** IL = Investigation Level (NEPM HILA)

4 Conclusion

The laboratory analysis from STP_TS resulted in no exceedances of the nominated investigation level for Health Based Investigation Levels for Low – high density residential HSL A.

However visual observations of STP_TS indicated that the stockpile contained approximately 25% to 30% of vegetation and/or organic matter. The vegetation cover excludes the stockpile material from reuse as a base underneath proposed hardstand development as it would be considered geotechnically unsuitable.

Following a review of the analytical results from the assessment of stockpile STP_TS located at 47 Progress Drive, Nightcliff NT, SLR recommends that the vegetation / organic material be removed / screened from the stockpile, thus the soil stockpile (minus the vegetation) will be classified as **Clean Fill** and suitable for disposal at the Shoal Bay Waste Management Facility. Please note that material assessed as clean fill will be inspected by City of Darwin on site staff at Shoal Bay to ensure the material is suitable to be used for cover. Clean fill must not contain 10% or more of vegetation or rock/rubble larger than 200mm.

5 Further Communication

Should you have any queries relating the any of the above information, please do not hesitate to contact Paul Turyn on +61 428 665 405.

Yours sincerely



Ruairi Hanly

Principal Consultant

Checked/
Authorised by: PT

Attachment A: Laboratory Documentation

ATTACHMENT A – LABORATORY DOCUMENTATION

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld F, 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company	SLR Consulting (NT)	Project №	680.10679
Address	21 Parap Rd, Parap, NT, Australia, 0820	Project Name	JSS Remediation
Contact Name	Sarah Doherty	Project Manager	Sarah Doherty
Phone №	0417 647 498	EDD Format (Excel, EQuIS etc)	Esdat & CSV
Special Directions	Fast TAT- please confirm expected time of delivery asap.	Sampler(s)	
Purchase Order		Handed over by	
Quote ID №	200422SLRNT	Email for Results	sdoherty@slrconsulting.com

Analytes — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to advise SUITE analysis.

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix Soil (S) Water (W)	B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil charterisation	Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar charaterisation	Rinsate bottles	Sample Comments / Dangerous Goods Hazard Warning
1	Char1	23/04/20	S						X					1		
2	STP_TS_1	23/04/20	S	X	X		X			1	1					
3	STP_TS_2	23/04/20	S	X	X		X			1	1					
4	STP_TS_2	23/04/20	S	X	X		X			1	1					
5	ACM1	23/04/20	S	X	X		X			1	1		1			
6	STP1_1	23/04/20	S	X	X		X			1	1					
7	STP1_2	23/04/20	S	X	X		X			1	1		1			
8	STP1_3	23/04/20	S	X	X		X			1	1					
9	STP1_4	23/04/20	S	X	X		X			1	1					
10																
	Add new rows		Total Counts	8	8		8		1	8	8		2	1		

Containers (change container type & size if necessary)

Required Turnaround Time (TAT) (Default will be 5 days if not ticked) — ♦Surcharge will apply

- ☐ Overnight (specify Date)♦
- ☑ Same day♦
- ☐ 1 day♦
- ☐ 2 days♦
- ☐ 3 days♦
- ☑ 5 days (standard)
- ☐ Other( )

Method of Shipment	Courier (#)	Hand Delivered	Postal	Name	Signature	Date / Time
Eurofins | mgt Laboratory Use Only	Received By	Ashvin Desai	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 23/04/20 Time Temperature 32.0C
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date Time Report № 715370

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

eurofins | Environment Testing

Melbourne
6 Monterey Road
Dandenong South Vic 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
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16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS Remediation
Project ID:	680.10679
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 23, 2020 4:00 PM
Eurofins reference:	**715370**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

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IANZ # 1327

Christchurch
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Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 24, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	Char1	Apr 23, 2020		Soil	M20-Ap33439				X	X	
2	STP_TS_1	Apr 23, 2020		Soil	M20-Ap33440	X		X	X		X
3	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33441	X		X	X		X
4	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33442	X		X	X		X
5	ACM1	Apr 23, 2020		Soil	M20-Ap33443	X		X	X		X
6	STP1_1	Apr 23, 2020		Soil	M20-Ap33444	X		X	X		X
7	STP1_2	Apr 23, 2020		Soil	M20-Ap33445	X		X	X		X
8	STP1_3	Apr 23, 2020		Soil	M20-Ap33446	X		X	X		X
9	STP1_4	Apr 23, 2020		Soil	M20-Ap33447	X		X	X		X
10	QC1	Apr 23, 2020		Soil	M20-Ap34638		X				

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

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Site # 23736

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Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 24, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271		X	X	X	X	X
Sydney Laboratory - NATA Site # 18217	X					
Brisbane Laboratory - NATA Site # 20794					X	
Perth Laboratory - NATA Site # 23736						
Test Counts	8	1	8	9	1	8

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **715370-S**
Project name JSS Remediation
Project ID 680.10679
Received Date Apr 23, 2020

Client Sample ID			**Char1**	**STP_TS_1**	**STP_TS_2**	**STP_TS_3**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap33439**	**M20-Ap33440**	**M20-Ap33441**	**M20-Ap33442**
Date Sampled			**Apr 23, 2020**	**Apr 23, 2020**	**Apr 23, 2020**	**Apr 23, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	< 50	77	68
TRH C29-C36	50	mg/kg	-	< 50	150	81
TRH C10-C36 (Total)	50	mg/kg	-	< 50	227	149
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	93	78	87
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	< 100	180	120
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	180	120
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	0.4
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	0.09
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	0.12	0.20	2.1
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05

Client Sample ID			Char1	STP_TS_1	STP_TS_2	STP_TS_3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33439	M20-Ap33440	M20-Ap33441	M20-Ap33442
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	0.39
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	-	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	0.12	0.2	2.19
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	0.12	0.2	2.98
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	0.79
Dibutylchlorendate (surr.)	1	%	-	70	58	67
Tetrachloro-m-xylene (surr.)	1	%	-	59	57	58
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	< 2	< 2	< 2
Naled	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	-	< 2	< 2	< 2
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2

Client Sample ID			Char1	STP_TS_1	STP_TS_2	STP_TS_3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33439	M20-Ap33440	M20-Ap33441	M20-Ap33442
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	92	73	96
% Clay	1	%	17	-	-	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	65	-	-	-
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	6.6	-	-	-
Total Organic Carbon	0.1	%	1.7	-	-	-
% Moisture	1	%	9.3	11	21	11
Heavy Metals						
Arsenic	2	mg/kg	-	12	9.0	13
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	85	54	87
Copper	5	mg/kg	-	15	10	15
Iron	20	mg/kg	120000	-	-	-
Lead	5	mg/kg	-	34	14	25
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	-	10	6.7	13
Zinc	5	mg/kg	-	68	47	110
Heavy Metals						
Iron (%)	0.01	%	12	-	-	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	11	-	-	-

Client Sample ID			STP1_1	STP1_2	STP1_3	STP1_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33444	M20-Ap33445	M20-Ap33446	M20-Ap33447
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	85	84	96	99
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			STP1_1	STP1_2	STP1_3	STP1_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33444	M20-Ap33445	M20-Ap33446	M20-Ap33447
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.09	0.08	< 0.05	0.07
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.58	0.65	0.48	0.76
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	0.06	0.06	< 0.05	0.06
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.67	0.73	0.48	0.83
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.73	0.79	0.48	0.89
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	101	70	64	63
Tetrachloro-m-xylene (surr.)	1	%	106	128	124	135
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP1_1	STP1_2	STP1_3	STP1_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33444	M20-Ap33445	M20-Ap33446	M20-Ap33447
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	91	62	66	67
% Moisture	1	%	8.6	9.4	8.7	9.2
Heavy Metals						
Arsenic	2	mg/kg	16	20	15	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	180	210	120	150
Copper	5	mg/kg	12	12	12	12
Lead	5	mg/kg	17	21	16	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	14	15	14	14
Zinc	5	mg/kg	27	23	29	28

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 24, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 24, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
NEPM Screen for Soil Classification			
% Clay	Brisbane	Apr 27, 2020	0 Days
- Method: LTM-GEN-7040			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Apr 27, 2020	7 Days
- Method: LTM-INO-4030 Conductivity			
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Melbourne	Apr 27, 2020	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Total Organic Carbon	Melbourne	Apr 27, 2020	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Heavy Metals	Melbourne	Apr 27, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Cation Exchange Capacity	Melbourne	Apr 28, 2020	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
% Moisture	Melbourne	Apr 23, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
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NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 24, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	Char1	Apr 23, 2020		Soil	M20-Ap33439				X	X	
2	STP_TS_1	Apr 23, 2020		Soil	M20-Ap33440	X		X	X		X
3	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33441	X		X	X		X
4	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33442	X		X	X		X
5	ACM1	Apr 23, 2020		Soil	M20-Ap33443	X		X	X		X
6	STP1_1	Apr 23, 2020		Soil	M20-Ap33444	X		X	X		X
7	STP1_2	Apr 23, 2020		Soil	M20-Ap33445	X		X	X		X
8	STP1_3	Apr 23, 2020		Soil	M20-Ap33446	X		X	X		X
9	STP1_4	Apr 23, 2020		Soil	M20-Ap33447	X		X	X		X
10	QC1	Apr 23, 2020		Soil	M20-Ap34638		X				

eurofins | Environment Testing

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Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271		X	X	X	X	X
Sydney Laboratory - NATA Site # 18217	X					
Brisbane Laboratory - NATA Site # 20794					X	
Perth Laboratory - NATA Site # 23736						
Test Counts	8	1	8	9	1	8

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	113			80-120	Pass	
Cadmium	%	102			80-120	Pass	
Chromium	%	109			80-120	Pass	
Copper	%	105			80-120	Pass	
Iron	%	117			80-120	Pass	
Lead	%	103			80-120	Pass	
Mercury	%	108			75-125	Pass	
Nickel	%	110			80-120	Pass	
Zinc	%	108			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap33441	CP	%	115			75-125	Pass	
Cadmium	M20-Ap33441	CP	%	101			75-125	Pass	
Copper	M20-Ap33441	CP	%	121			75-125	Pass	
Lead	M20-Ap33441	CP	%	112			75-125	Pass	
Mercury	M20-Ap33441	CP	%	114			70-130	Pass	
Nickel	M20-Ap33441	CP	%	114			75-125	Pass	
Zinc	M20-Ap33441	CP	%	133			75-125	Fail	Q08
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap33447	CP	%	110			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap33447	CP	%	100			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap33440	CP	mg/kg	12	16	26	30%	Pass	
Cadmium	M20-Ap33440	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap33440	CP	mg/kg	85	110	28	30%	Pass	
Copper	M20-Ap33440	CP	mg/kg	15	16	11	30%	Pass	
Lead	M20-Ap33440	CP	mg/kg	34	31	9.0	30%	Pass	
Mercury	M20-Ap33440	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Nickel	M20-Ap33440	CP	mg/kg	10	12	13	30%	Pass	
Zinc	M20-Ap33440	CP	mg/kg	68	63	7.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap33441	CP	mg/kg	9.0	9.3	3.0	30%	Pass	
Cadmium	M20-Ap33441	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap33441	CP	mg/kg	54	56	4.0	30%	Pass	
Copper	M20-Ap33441	CP	mg/kg	10	10	3.0	30%	Pass	
Lead	M20-Ap33441	CP	mg/kg	14	15	4.0	30%	Pass	
Mercury	M20-Ap33441	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap33441	CP	mg/kg	6.7	7.1	5.0	30%	Pass	
Zinc	M20-Ap33441	CP	mg/kg	47	48	2.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap33445	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap33445	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap33445	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap33445	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap33445	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Jonathon Angell	Senior Analyst-Inorganic (QLD)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	715370-AID
Project Name	JSS Remediation
Project ID	680.10679
Received Date	Apr 23, 2020
Date Reported	Apr 28, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name JSS Remediation
Project ID 680.10679
Date Sampled Apr 23, 2020
Report 715370-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP_TS_1	20-Ap33440	Apr 23, 2020	Approximate Sample 619g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP_TS_2	20-Ap33441	Apr 23, 2020	Approximate Sample 375g Sample consisted of: Brown coarse-grained soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP_TS_3	20-Ap33442	Apr 23, 2020	Approximate Sample 711g Sample consisted of: Brown coarse-grained soil, brick, plaster and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
ACM1	20-Ap33443	Apr 23, 2020	Approximate Sample 922g Sample consisted of: Brown coarse-grained soil, plaster and rocks	ACM: Chrysotile, amosite and crocidolite asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 11g Total estimated asbestos content in ACM = 1.7g* Total estimated asbestos concentration in ACM = 0.19% w/w* Organic fibre detected. No trace asbestos detected.
STP1_1	20-Ap33444	Apr 23, 2020	Approximate Sample 798g Sample consisted of: Brown coarse-grained soil, plaster and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP1_2	20-Ap33445	Apr 23, 2020	Approximate Sample 885g Sample consisted of: Brown coarse-grained soil, brick, plaster and rocks	ACM: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 10g Total estimated asbestos content in ACM = 1.0g* Total estimated asbestos concentration in ACM = 0.12% w/w* Organic fibre detected. No trace asbestos detected.
STP1_3	20-Ap33446	Apr 23, 2020	Approximate Sample 716g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP1_4	20-Ap33447	Apr 23, 2020	Approximate Sample 749g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 23, 2020	Indefinite

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Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 28, 2020
Priority: 3 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	Char1	Apr 23, 2020		Soil	M20-Ap33439				X	X	
2	STP_TS_1	Apr 23, 2020		Soil	M20-Ap33440	X		X	X		X
3	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33441	X		X	X		X
4	STP_TS_3	Apr 23, 2020		Soil	M20-Ap33442	X		X	X		X
5	ACM1	Apr 23, 2020		Soil	M20-Ap33443	X					
6	STP1_1	Apr 23, 2020		Soil	M20-Ap33444	X		X	X		X
7	STP1_2	Apr 23, 2020		Soil	M20-Ap33445	X		X	X		X
8	STP1_3	Apr 23, 2020		Soil	M20-Ap33446	X		X	X		X
9	STP1_4	Apr 23, 2020		Soil	M20-Ap33447	X		X	X		X
10	QC1	Apr 23, 2020		Soil	M20-Ap34638		X				

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Received: Apr 23, 2020 4:00 PM
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Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271		X	X	X	X	X
Sydney Laboratory - NATA Site # 18217	X					
Brisbane Laboratory - NATA Site # 20794					X	
Perth Laboratory - NATA Site # 23736						
Test Counts	8	1	7	8	1	7

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

M20-Ap33441: Sample received was less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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APPENDIX E

Photographic Log

Photo	Description
	Photo 1 Material from Lot A was excavated and stockpiled under supervision by an SLR representative. Excavation was continued to a depth at which material appeared to be the reddish gravelly clay which appeared to be natural.

Photo	Description
	Photo 2 Trucks loading out excavated spoil material used the remediated portion of Lot A as a turnaround area. Prior to validation sampling the area was flagged off and access restricted to prevent cross contamination of the site after samples were collected.

Photo	Description
	Photo 3 Representative of the surface of Lot A prior to remediation.

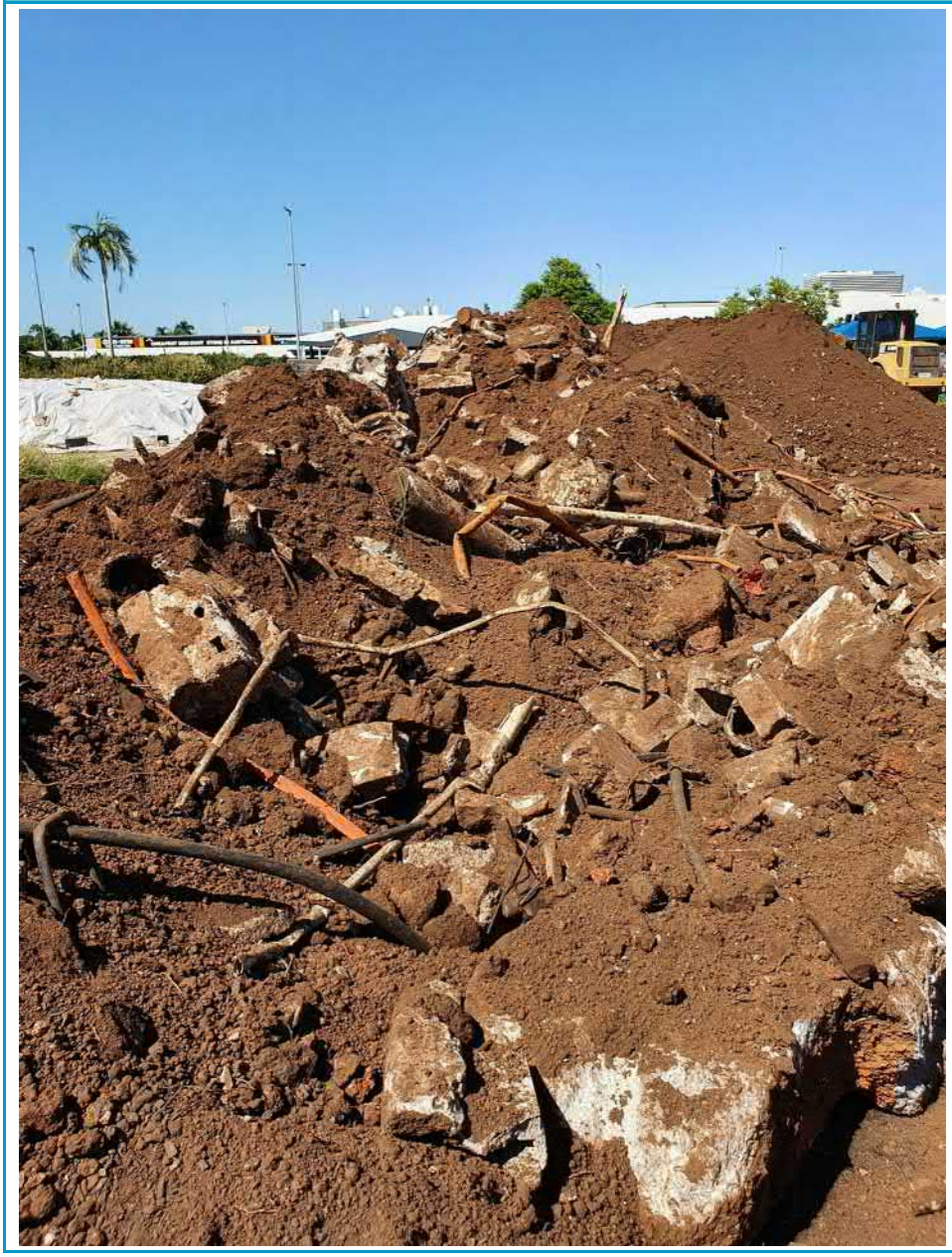
Photo	Description
	Photo 4 Bulk material being screened out of spoil excavated from Lot A.

Photo	Description
	Photo 5 Location of ACM5 and Val_A sampling

APPENDIX F

Analytical Results Tables

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V1	V3	V5	DUP1
Laboratory Report Number								716051	716051	716051	716051
Sample Collection Date								24-04-2020	24-04-2020	24-04-2020	24-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								RPD%	V6	V8	V10
Laboratory Report Number									716051	716051	716051
Sample Collection Date									24-04-2020	24-04-2020	24-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)		soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		-	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		-	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		-	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				-	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				-	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		-	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			-	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						-	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						-	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						-	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						-	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						-	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	-	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	-	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	-	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	-	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V11	V13	V16	V17
Laboratory Report Number								716051	716051	716051	716051
Sample Collection Date								24-04-2020	24-04-2020	24-04-2020	24-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V19	V21	V23	V25
Laboratory Report Number								716051	716051	716051	716051
Sample Collection Date								24-04-2020	24-04-2020	24-04-2020	24-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH $>C_6$-C_9	mg/kg	20						<20	<20	<20	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						<20	<20	<20	<20
TPH $>C_{15}$-C_{28}	mg/kg	50						<50	<50	<50	<50
TPH $>C_{29}$-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH $>C_6$-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V26	V29	V31	V34
Laboratory Report Number								716051	716051	716051	716056
Sample Collection Date								24-04-2020	24-04-2020	24-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH $>C_6$-C_9	mg/kg	20						<20	<20	<20	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						<20	<20	<20	290
TPH $>C_{15}$-C_{28}	mg/kg	50						<50	<50	<50	560
TPH $>C_{29}$-C_{36}	mg/kg	50						<50	<50	<50	150
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	1,000
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH $>C_6$-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	**360**
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	500
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V36	V38	V41	V42
Laboratory Report Number								716056	716056	716056	716056
Sample Collection Date								27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		-	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		-	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		-	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				-	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				-	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		-	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			-	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH $>C_6$-C_9	mg/kg	20						-	<20	<20	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						-	47	45	44
TPH $>C_{15}$-C_{28}	mg/kg	50						-	94	98	110
TPH $>C_{29}$-C_{36}	mg/kg	50						-	<50	<50	82
TPH C_{10}-C_{36} (Total)	mg/kg	50						-	141	143	236
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH $>C_6$-C_{10} (F1)	mg/kg	20		260		215	700	-	<20	<20	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL		170	1,000	-	60	58	55
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100				1,700	3,500	-	<100	<100	140
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100				3,300	10,000	-	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V44	V46	V47	V49
Laboratory Report Number								716056	716056	716056	716056
Sample Collection Date								27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	29
TPH >C_{15}-C_{28}	mg/kg	50						70	<50	<50	63
TPH >C_{29}-C_{36}	mg/kg	50						230	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						300	<50	<50	92
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	200	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	**230**	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V51	V52	V55	V56
Laboratory Report Number								716056	716056	716056	716056
Sample Collection Date								27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH $>C_6$-C_9	mg/kg	20						<20	<20	<20	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						47	42	47	54
TPH $>C_{15}$-C_{28}	mg/kg	50						95	90	91	110
TPH $>C_{29}$-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						142	132	138	164
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH $>C_6$-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL		170	1,000	60	54	59	69
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V57	V59	V61	V62
Laboratory Report Number								716056	716056	716056	716056
Sample Collection Date								27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						55	55	51	51
TPH >C_{15}-C_{28}	mg/kg	50						100	110	110	100
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						155	165	161	151
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	69	69	66	65
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V63	V65	V66	V68
Laboratory Report Number								716332	716332	716332	716332
Sample Collection Date								27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V70	V71	V74	V76
Laboratory Report Number								716332	716332	716332	716332
Sample Collection Date								27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V77	V79	V81	V82
Laboratory Report Number								716332	716332	716332	716332
Sample Collection Date								27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V85	V86	V88	V90
Laboratory Report Number								716332	716332	716332	716332
Sample Collection Date								27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V91	V93	V95	V96
Laboratory Report Number								716332	716332	716332	716332
Sample Collection Date								27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V98	V100	V101	V103
Laboratory Report Number								716332	716332	716332	716332
Sample Collection Date								27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH $>C_6$-C_9	mg/kg	20						<20	<20	<20	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						<20	<20	<20	<20
TPH $>C_{15}$-C_{28}	mg/kg	50						<50	<50	<50	<50
TPH $>C_{29}$-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH $>C_6$-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V105	V106	V108	V111
Laboratory Report Number								716332	716332	716332	716374
Sample Collection Date								27-04-2020	27-04-2020	27-04-2020	28-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
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' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V112	QC12	RPD%	V113
Laboratory Report Number								716374	716374		716374
Sample Collection Date								28-04-2020	28-04-2020		28-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil		soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	-	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	-	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	-	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	-	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	-	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	-	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	-	<0.5
Total Petroleum Hydrocarbons											
TPH $>C_6$-C_9	mg/kg	20						<20	<20	-	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						<20	<20	-	<20
TPH $>C_{15}$-C_{28}	mg/kg	50						<50	<50	-	<50
TPH $>C_{29}$-C_{36}	mg/kg	50						<50	<50	-	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	-	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH $>C_6$-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	-	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	-	<50
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	-	<100
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	-	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
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mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								QC10	RPD%	V114	QC6
Laboratory Report Number								716374		716374	716374
Sample Collection Date								28-04-2020		28-04-2020	28-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil		soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	-	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	-	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	-	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	-	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	-	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	-	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	-	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH $>C_6$-C_9	mg/kg	20						<20	-	<20	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						<20	-	<20	<20
TPH $>C_{15}$-C_{28}	mg/kg	50						<50	-	<50	<50
TPH $>C_{29}$-C_{36}	mg/kg	50						<50	-	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	-	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH $>C_6$-C_{10} (F1)	mg/kg	20		260		215	700	<20	-	<20	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	-	<50	<50
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	-	<100	<100
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	-	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								RPD%	V115	QC5	RPD%
Laboratory Report Number									716374	716374	
Sample Collection Date									28-04-2020	28-04-2020	
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)		soil	soil	
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		-	<0.1	<0.1	-
Toluene	mg/kg	0.1		NL		135		-	<0.1	<0.1	-
Ethylbenzene	mg/kg	0.1		NL		165		-	<0.1	<0.1	-
Xylene (m & p)	mg/kg	0.2		NL				-	<0.2	<0.2	-
Xylene (o)	mg/kg	0.1		NL				-	<0.1	<0.1	-
Xylene (Total)	mg/kg	0.3		230		180		-	<0.3	<0.3	-
Naphthalene	mg/kg	0.5		NL	370			-	<0.5	<0.5	-
Total Petroleum Hydrocarbons											
TPH $>C_6$-C_9	mg/kg	20						-	<20	<20	-
TPH $>C_{10}$-C_{14}	mg/kg	20						-	<20	<20	-
TPH $>C_{15}$-C_{28}	mg/kg	50						-	<50	<50	-
TPH $>C_{29}$-C_{36}	mg/kg	50						-	<50	<50	-
TPH C_{10}-C_{36} (Total)	mg/kg	50						-	<50	<50	-
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH $>C_6$-C_{10} (F1)	mg/kg	20		260		215	700	-	<20	<20	-
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL		170	1,000	-	<50	<50	-
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100				1,700	3,500	-	<100	<100	-
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100				3,300	10,000	-	<100	<100	-

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V116	V121	V126	V129
Laboratory Report Number								716374	716374	716374	716374
Sample Collection Date								28-04-2020	28-04-2020	28-04-2020	28-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil	soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	<0.1	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH >C_6-C_9	mg/kg	20						<20	<20	<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20	<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50	<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								QC7	RPD%	V130	QC9
Laboratory Report Number								716374		716374	716374
Sample Collection Date								28-04-2020		28-04-2020	28-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil		soil	soil
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		<0.1	-	<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	-	<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	-	<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	-	<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	-	<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	-	<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	-	<0.5	<0.5
Total Petroleum Hydrocarbons											
TPH $>C_6$-C_9	mg/kg	20						<20	-	<20	<20
TPH $>C_{10}$-C_{14}	mg/kg	20						<20	-	<20	<20
TPH $>C_{15}$-C_{28}	mg/kg	50						<50	-	<50	<50
TPH $>C_{29}$-C_{36}	mg/kg	50						<50	-	<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	-	<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH $>C_6$-C_{10} (F1)	mg/kg	20		260		215	700	<20	-	<20	<20
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	-	<50	<50
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	-	<100	<100
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	-	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								RPD%	V131	QC8	RPD%
Laboratory Report Number									716374	716374	
Sample Collection Date									28-04-2020	28-04-2020	
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)		soil	soil	
BTEXN Compounds											
Benzene	mg/kg	0.1		3		75		-	<0.1	<0.1	-
Toluene	mg/kg	0.1		NL		135		-	<0.1	<0.1	-
Ethylbenzene	mg/kg	0.1		NL		165		-	<0.1	<0.1	-
Xylene (m & p)	mg/kg	0.2		NL				-	<0.2	<0.2	-
Xylene (o)	mg/kg	0.1		NL				-	<0.1	<0.1	-
Xylene (Total)	mg/kg	0.3		230		180		-	<0.3	<0.3	-
Naphthalene	mg/kg	0.5		NL	370			-	<0.5	<0.5	-
Total Petroleum Hydrocarbons											
TPH $>C_6$-C_9	mg/kg	20						-	<20	<20	-
TPH $>C_{10}$-C_{14}	mg/kg	20						-	<20	<20	-
TPH $>C_{15}$-C_{28}	mg/kg	50						-	<50	<50	-
TPH $>C_{29}$-C_{36}	mg/kg	50						-	<50	<50	-
TPH C_{10}-C_{36} (Total)	mg/kg	50						-	<50	<50	-
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions											
TRH $>C_6$-C_{10} (F1)	mg/kg	20		260		215	700	-	<20	<20	-
TRH $>C_{10}$-C_{16} (F2)	mg/kg	50		NL		170	1,000	-	<50	<50	-
TRH $>C_{16}$-C_{34} (F3)	mg/kg	100				1,700	3,500	-	<100	<100	-
TRH $>C_{34}$-C_{40} (F4)	mg/kg	100				3,300	10,000	-	<100	<100	-

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 01
Soil Validation Results
TRH, TPH and BTEXN
Lot A
John Stokes Square, Darwin
680.10679

Sample ID								V136	V141
Laboratory Report Number								716374	716374
Sample Collection Date								28-04-2020	28-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	IL(03)	IL(04)	IL(05)	soil	soil
BTEXN Compounds									
Benzene	mg/kg	0.1		3		75		<0.1	<0.1
Toluene	mg/kg	0.1		NL		135		<0.1	<0.1
Ethylbenzene	mg/kg	0.1		NL		165		<0.1	<0.1
Xylene (m & p)	mg/kg	0.2		NL				<0.2	<0.2
Xylene (o)	mg/kg	0.1		NL				<0.1	<0.1
Xylene (Total)	mg/kg	0.3		230		180		<0.3	<0.3
Naphthalene	mg/kg	0.5		NL	370			<0.5	<0.5
Total Petroleum Hydrocarbons									
TPH >C_6-C_9	mg/kg	20						<20	<20
TPH >C_{10}-C_{14}	mg/kg	20						<20	<20
TPH >C_{15}-C_{28}	mg/kg	50						<50	<50
TPH >C_{29}-C_{36}	mg/kg	50						<50	<50
TPH C_{10}-C_{36} (Total)	mg/kg	50						<50	<50
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions									
TRH >C_6-C_{10} (F1)	mg/kg	20		260		215	700	<20	<20
TRH >C_{10}-C_{16} (F2)	mg/kg	50		NL		170	1,000	<50	<50
TRH >C_{16}-C_{34} (F3)	mg/kg	100				1,700	3,500	<100	<100
TRH >C_{34}-C_{40} (F4)	mg/kg	100				3,300	10,000	<100	<100

Notes
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram

Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1A(3) HSLs Commercial/Industrial Soil D Vapour Intrusion, Sand, 0-1m
IL(03): ASC NEPM 2013 Table 1B(5) EILs, Commercial and Industrial, fresh contaminant
IL(04): ASC NEPM 2013 Table 1B(6) ESLs for Commercial and Industrial, Coarse Soil, 0-2m
IL(05): ASC NEPM 2013 Table 1B(7) TRH Management Limits in Commercial / Industrial, Coarse Soil
Results Values in highlighted cells exceed nominated Ils

Table 02
Soil Validation Results
OCPs and OPPs
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V1	V3	V5	DUP1	RPD%	V6	V8	V10	V11
Laboratory Report Number					716051	716051	716051	716051		716051	716051	716051	716051
Sample Collection Date					24-04-2020	24-04-2020	24-04-2020	24-04-2020		24-04-2020	24-04-2020	24-04-2020	24-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	soil	soil	soil	soil		soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		0.22	0.23	0.18	0.39	**73.68%**	<0.05	0.06	<0.05	0.22
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			0.22	0.23	0.18	0.39	**73.68%**	<0.05	0.06	<0.05	0.22
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.1	-	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.1	-	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	0.08	<0.05	-	<0.05	<0.05	<0.05	0.06
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			0.22	0.23	0.26	0.39	40.00%	<0.1	<0.1	<0.1	0.28
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	-	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	<2	<2	-	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<2	<2	<2	<2	-	<2	<2	<2	<2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<2	<2	<2	<2	-	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs Commerical/Industrial, fresh contaminant
Results Values in highlighted cells exceed nominated Ils

Table 02
Soil Validation Results
OCPs and OPPs
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V13	V16	V17	V19	V21	V23	V25	V26	V29
Laboratory Report Number					716051	716051	716051	716051	716051	716051	716051	716051	716051
Sample Collection Date					24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		<0.05	<0.05	<0.05	<0.05	<0.05	0.15	<0.05	<0.05	<0.05
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	0.15	<0.05	<0.05	<0.05
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	0.15	<0.1	<0.1	<0.1
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs Commerical/Industrial, fresh contaminant
Results Values in highlighted cells exceed nominated Ils

Table 02
Soil Validation Results
OCPs and OPPs
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V31	V34	V36	V38	V41	V42	V44	V46	V47
Laboratory Report Number					716051	716056	716056	716056	716056	716056	716056	716056	716056
Sample Collection Date					24-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		<0.05	<0.05	-	0.13	0.19	0.1	0.13	<0.05	<0.05
b-BHC	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	-	<0.1	<0.1	0.2	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			<0.05	<0.05	-	0.13	0.19	0.10	0.13	<0.05	<0.05
Endrin	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	-	<0.05	<0.05	0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	-	0.13	0.19	0.35	0.13	<0.1	<0.1
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	-	<0.1	<0.1	0.25	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	-	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	-	<2	<2	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<2	<2	-	<2	<2	<2	<2	<2	<2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<2	<2	-	<2	<2	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs Commerical/Industrial, fresh contaminant
Results Values in highlighted cells exceed nominated Ils

Table 02
Soil Validation Results
OCPs and OPPs
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V49	V51	V52	V55	V56	V57	V59	V61	V62
Laboratory Report Number					716056	716056	716056	716056	716056	716056	716056	716056	716056
Sample Collection Date					27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		<0.05	0.1	<0.05	<0.05	<0.05	<0.05	<0.05	0.09	0.11
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			<0.05	0.10	<0.05	<0.05	<0.05	<0.05	<0.05	0.09	0.11
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.19	0.11
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<2	<2	<2	<2	<2	<2	<2	<2	<2
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs Commerical/Industrial, fresh contaminant
Results Values in highlighted cells exceed nominated Ils

Table 02
Soil Validation Results
OCPs and OPPs
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V63	V65	V66	V68	V70	V71	V74	V76	V77
Laboratory Report Number					716332	716332	716332	716332	716332	716332	716332	716332	716332
Sample Collection Date					27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		<0.05	<0.05	0.13	0.05	<0.05	0.05	0.13	0.1	<0.05
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			<0.05	<0.05	0.13	0.05	<0.05	0.05	0.13	0.10	<0.05
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	0.13	<0.1	<0.1	<0.1	0.13	0.1	<0.1
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<3	<4	<5	<6	<7	<8	<9	<10	<11
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<3	<4	<5	<6	<7	<8	<9	<10	<11
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<3	<4	<5	<6	<7	<8	<9	<10	<11
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs Commerical/Industrial, fresh contaminant
Results Values in highlighted cells exceed nominated Ils

Table 02
Soil Validation Results
OCPs and OPPs
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V79	V81	V82	V85	V86	V88	V90	V91	V93
Laboratory Report Number					716332	716332	716332	716332	716332	716332	716332	716332	716332
Sample Collection Date					27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.09	0.19	0.09
Aldrin + Dieldrin	mg/kg	0.05	**45**		<0.05	0.12	0.1	0.07	<0.05	<0.05	0.41	0.65	0.58
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			<0.05	0.12	0.10	0.07	<0.05	<0.05	0.32	0.46	0.49
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	0.12	0.1	<0.1	<0.1	<0.1	0.41	0.65	0.58
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<12	<13	<14	<15	<16	<17	<18	<19	<20
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<12	<13	<14	<15	<16	<17	<18	<19	<20
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<12	<13	<14	<15	<16	<17	<18	<19	<20
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs Commerical/Industrial, fresh contaminant
Results Values in highlighted cells exceed nominated Ils

Table 02
Soil Validation Results
OCPs and OPPs
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V95	V96	V98	V100	V101	V103	V105	V106	V108
Laboratory Report Number					716332	716332	716332	716332	716332	716332	716332	716332	716332
Sample Collection Date					27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	soil	soil	soil	soil	soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	0.20	0.34
Aldrin + Dieldrin	mg/kg	0.05	**45**		<0.05	<0.05	<0.05	<0.05	<0.05	0.17	<0.05	0.95	1.09
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	0.17	<0.05	0.75	0.75
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	0.17	<0.1	1.05	1.09
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	<1	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			<21	<22	<23	<24	<25	<26	<27	<28	<29
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			<21	<22	<23	<24	<25	<26	<27	<28	<29
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			<21	<22	<23	<24	<25	<26	<27	<28	<29
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs Commerical/Industrial, fresh contaminant
Results Values in highlighted cells exceed nominated ils

Table 02
Soil Validation Results
OCPs and OPPs
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V111	V112	QC12	RPD%	V113	QC10	RPD%	V114	QC6
Laboratory Report Number					716374	716374	716374		716374	716374		716374	716374
Sample Collection Date					28-04-2020	28-04-2020	28-04-2020		28-04-2020	28-04-2020		28-04-2020	28-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)	soil	soil	soil		soil	soil		soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
a-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Aldrin	mg/kg	0.05			0.50	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		2.1	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
b-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1
d-BHC	mg/kg	0.05			<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
DDT	mg/kg	0.05		**640**	<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
DDD	mg/kg	0.05			<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Dieldrin	mg/kg	0.05			1.6	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Endrin	mg/kg	0.05			<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Endrin ketone	mg/kg	0.05			<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		<0.05	<0.05	<0.05	-	<0.05	<0.05	-	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			2.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1
Other organochlorine pesticides EPAVic	mg/kg	0.1			<0.1	<0.1	<0.1	-	<0.1	<0.1	-	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		<1	<1	<1	-	<1	<1	-	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Coumaphos	mg/kg	2			<30	<31	<32	-	<33	<34	-	<35	<36
Demeton-O	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Demeton-S	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Diazinon	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Dichlorvos	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Dimethoate	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Disulfoton	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Ethion	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
EPN	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Ethoprop	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Fensulfothion	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Fenthion	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Fenitrothion	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Malathion	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Methyl parathion	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Monocrotophos	mg/kg	2			<30	<31	<32	-	<33	<34	-	<35	<36
Mevinphos (Phosdrin)	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Merphos	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Omethoate	mg/kg	2			<30	<31	<32	-	<33	<34	-	<35	<36
Parathion	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Phorate	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Pyrazophos	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Ronnel	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Terbufos	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Tokuthion	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2
Trichloronate	mg/kg	0.2			<0.2	<0.2	<0.2	-	<0.2	<0.2	-	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs Commerical/Industrial, fresh contaminant
Results Values in highlighted cells exceed nominated Ils

Table 02
Soil Validation Results
OCPs and OPPs
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					RPD%	V115	QC5	RPD%	V116	V121	V126	V129	QC7
Laboratory Report Number						716374	716374		716374	716374	716374	716374	716374
Sample Collection Date						28-04-2020	28-04-2020		28-04-2020	28-04-2020	28-04-2020	28-04-2020	28-04-2020
Analyte	Unit	LOR	IL(01)	IL(02)		soil	soil		soil	soil	soil	soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
a-BHC	mg/kg	0.05			-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	mg/kg	0.05			-	<0.05	0.05	-	0.30	<0.05	0.07	<0.05	<0.05
Aldrin + Dieldrin	mg/kg	0.05	**45**		-	0.16	0.49	-	2.7	<0.05	0.5	<0.05	<0.05
b-BHC	mg/kg	0.05			-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		-	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
d-BHC	mg/kg	0.05			-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
DDT	mg/kg	0.05		**640**	-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
DDD	mg/kg	0.05			-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	mg/kg	0.05			-	0.16	0.44	-	2.4	<0.05	0.43	<0.05	<0.05
Endrin	mg/kg	0.05			-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin ketone	mg/kg	0.05			-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		-	<0.05	<0.05	-	<0.05	<0.05	<0.05	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			-	0.16	0.49	-	2.7	<0.1	0.5	<0.1	<0.1
Other organochlorine pesticides EPAVic	mg/kg	0.1			-	<0.1	<0.1	-	<0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		-	<1	<1	-	<1	<1	<1	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Coumaphos	mg/kg	2			-	<37	<38	-	<39	<40	<41	<42	<43
Demeton-O	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Demeton-S	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Diazinon	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Dichlorvos	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Dimethoate	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Disulfoton	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Ethion	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
EPN	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Ethoprop	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Fensulfothion	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Fenthion	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Fenitrothion	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Malathion	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Methyl parathion	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Monocrotophos	mg/kg	2			-	<37	<38	-	<39	<40	<41	<42	<43
Mevinphos (Phosdrin)	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Merphos	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Omethoate	mg/kg	2			-	<37	<38	-	<39	<40	<41	<42	<43
Parathion	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Phorate	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Pyrazophos	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Ronnel	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Terbufos	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Tokuthion	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2
Trichloronate	mg/kg	0.2			-	<0.2	<0.2	-	<0.2	<0.2	<0.2	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs Commerical/Industrial, fresh contaminant
Results Values in highlighted cells exceed nominated Ils

Table 02
Soil Validation Results
OCPs and OPPs
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					RPD%	V130	QC9		V131	QC8	RPD%	V136	V141
Laboratory Report Number						716374	716374		716374	716374		716374	716374
Sample Collection Date						28-04-2020	28-04-2020		28-04-2020	28-04-2020		28-04-2020	28-04-2020
Analyte	Unit	LOR	**IL(01)**	**IL(02)**		soil	soil		soil	soil		soil	soil
Organochlorine Pesticides													
4,4-DDE	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
a-BHC	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Aldrin	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	0.07
Aldrin + Dieldrin	mg/kg	0.05	**45**		-	<0.05	<0.05		<0.05	<0.05	-	<0.05	0.15
b-BHC	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
chlordane	mg/kg	0.1	**530**		-	<0.1	<0.1		<0.1	<0.1	-	<0.1	<0.1
d-BHC	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
DDT	mg/kg	0.05		**640**	-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
DDD	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
DDT+DDE+DDD	mg/kg	0.05	**3600**		-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Dieldrin	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	0.08
Endrin	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Endrin ketone	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Endosulfan I	mg/kg	0.05	**2,000**		-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Endosulfan II	mg/kg	0.05	**2,000**		-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Endosulfan sulphate	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Endrin aldehyde	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
g-BHC (Lindane)	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Heptachlor	mg/kg	0.05	**50**		-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Heptachlor epoxide	mg/kg	0.05			-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Hexachlorobenzene	mg/kg	0.05	**80**		-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Methoxychlor	mg/kg	0.05	**2,500**		-	<0.05	<0.05		<0.05	<0.05	-	<0.05	<0.05
Organochlorine pesticides EPAVic	mg/kg	0.1			-	<0.1	<0.1		<0.1	<0.1	-	<0.1	0.15
Other organochlorine pesticides EPAVic	mg/kg	0.1			-	<0.1	<0.1		<0.1	<0.1	-	<0.1	<0.1
Toxaphene	mg/kg	1	**160**		-	<1	<1		<1	<1	-	<1	<1
Organophosphorus Pesticides													
Azinophos methyl	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Bolstar (Sulprofos)	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Chlorfenvinphos	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Chlorpyrifos	mg/kg	0.2	**2,000**		-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Chlorpyrifos-methyl	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Coumaphos	mg/kg	2			-	<44	<45		<46	<47	-	<48	<49
Demeton-O	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Demeton-S	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Diazinon	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Dichlorvos	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Dimethoate	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Disulfoton	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Ethion	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
EPN	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Ethoprop	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Fensulfothion	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Fenthion	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Fenitrothion	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Malathion	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Methyl parathion	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Monocrotophos	mg/kg	2			-	<44	<45		<46	<47	-	<48	<49
Mevinphos (Phosdrin)	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Merphos	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Naled (Dibrom)	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Omethoate	mg/kg	2			-	<44	<45		<46	<47	-	<48	<49
Parathion	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Pirimiphos-methyl	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Phorate	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Pyrazophos	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Ronnel	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Terbufos	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Tetrachlorvinphos	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Tokuthion	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2
Trichloronate	mg/kg	0.2			-	<0.2	<0.2		<0.2	<0.2	-	<0.2	<0.2

Notes:
LOR = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs Commerical/Industrial, fresh contaminant
Results Values in highlighted cells exceed nominated Ils

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID							V1	V3	V5	DUP1	RPD%
Laboratory Report Number							716051	716051	716051	716051	
Sample Collection Date							24-04-2020	24-04-2020	24-04-2020	24-04-2020	
Matrix Type							soil	soil	soil	soil	
Analyte	Unit	LOR	**IL(01)**	**IL(02)**	**IL(03)**	**IL(04)**					
Metals											
Arsenic	mg/kg	2	**3,000**	**80**			15	20	18	13	32.26%
Cadmium	mg/kg	0.4	**900**				<0.4	<0.4	<0.4	<0.4	-
Chromium (III+IV)	mg/kg	5	**3600^**	**340**			180	240	250	160	43.90%
Copper	mg/kg	5	**240,000**	**75**			11	10	8.5	13	41.86%
Lead	mg/kg	5	**1,500**	**440**			15	17	16	18	11.76%
Mercury	mg/kg	0.1	**730**				<0.1	<0.1	<0.1	<0.1	-
Nickel	mg/kg	5	**6,000**	**40**			13	12	12	17	34.48%
Zinc	mg/kg	5	**400,000**	**150**			20	16	11	13	16.67%
Asbestos											
Asbestos Identification	-	-					ND	ND	ND	ND	-
ACM Raw Weight	g	0.0001					-	-	-	-	-
Estimated Asbestos Content	g	0.0001					-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			**0.001**	**0.05**	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commercial/industrial
Results Values in highlighted cells exceed nominated Ils

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V6	V8	V10	V11	V13	V16
Laboratory Report Number					716051	716051	716051	716051	716051	716051
Sample Collection Date					24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	15	22	15	15	15	14
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	210	210	170	190	150	150
Copper	mg/kg	5	**240,000**	**75**	10	10	11	10	12	12
Lead	mg/kg	5	**1,500**	**440**	15	15	15	15	14	15
Mercury	mg/kg	0.1	**730**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	13	11	12	13	17	15
Zinc	mg/kg	5	**400,000**	**150**	13	20	8.8	15	9.7	15
Asbestos										
Asbestos Identification	-	-			Chrysotile (FA)	ND	ND	ND	ND	ND
ACM Raw Weight	g	0.0001			0.008	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			0.0024	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			0.00035	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V17	V19	V21	V23	V25	V26
Laboratory Report Number					716051	716051	716051	716051	716051	716051
Sample Collection Date					24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020	24-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	12	14	13	7.9	12	18
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	130	190	170	80	160	200
Copper	mg/kg	5	**240,000**	**75**	12	11	9.9	6.3	9.7	11
Lead	mg/kg	5	**1,500**	**440**	13	14	12	8.2	13	14
Mercury	mg/kg	0.1	**730**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	16	15	12	7.7	13	12
Zinc	mg/kg	5	**400,000**	**150**	10	8.9	7.1	11	8.0	7.2
Asbestos										
Asbestos Identification	-	-			ND	ND	ND	ND	ND	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V29	V31	V34	V36	V38	V41
Laboratory Report Number					716051	716051	716056	716056	716056	716056
Sample Collection Date					24-04-2020	24-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	9.5	13	16	-	19	14
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	-	<0.4	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	120	160	230	-	190	150
Copper	mg/kg	5	**240,000**	**75**	11	13	11	-	9.8	11
Lead	mg/kg	5	**1,500**	**440**	11	18	24	-	17	13
Mercury	mg/kg	0.1	**730**		<0.1	<0.1	<0.1	-	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	13	17	15	-	13	13
Zinc	mg/kg	5	**400,000**	**150**	8.9	13	14	-	17	28
Asbestos										
Asbestos Identification	-	-			ND	ND	ND	ND	ND	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V42	V44	V46	V47	V49	V51
Laboratory Report Number					716056	716056	716056	716056	716056	716056
Sample Collection Date					27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	20	14	22	16	46	23
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	220	130	190	160	260	300
Copper	mg/kg	5	**240,000**	**75**	11	30	11	9.0	8.8	7.8
Lead	mg/kg	5	**1,500**	**440**	18	80	17	13	280	18
Mercury	mg/kg	0.1	**730**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	16	9.3	15	10	12	12
Zinc	mg/kg	5	**400,000**	**150**	18	120	24	14	13	14
Asbestos										
Asbestos Identification	-	-			ND	ND	ND	ND	ND	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V52	V55	V56	V57	V59	V61
Laboratory Report Number					716056	716056	716056	716056	716056	716056
Sample Collection Date					27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	24	20	15	16	13	22
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	290	200	150	240	100	150
Copper	mg/kg	5	**240,000**	**75**	9.3	12	9.9	7.9	10	8.3
Lead	mg/kg	5	**1,500**	**440**	21	19	14	15	12	20
Mercury	mg/kg	0.1	**730**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	12	14	16	13	11	11
Zinc	mg/kg	5	**400,000**	**150**	35	19	15	11	35	39
Asbestos										
Asbestos Identification	-	-			ND	ND	ND	ND	ND	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V62	V63	V65	V66	V68	V70
Laboratory Report Number					716056	716332	716332	716332	716332	716332
Sample Collection Date					27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	15	17	22	27	16	15
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	140	160	200	300	180	110
Copper	mg/kg	5	**240,000**	**75**	9.4	14	18	13	14	14
Lead	mg/kg	5	**1,500**	**440**	14	21	20	22	19	19
Mercury	mg/kg	0.1	**730**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	12	19	21	27	28	24
Zinc	mg/kg	5	**400,000**	**150**	25	48	23	16	17	28
Asbestos										
Asbestos Identification	-	-			ND	ND	ND	ND	ND	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V71	V74	V76	V77	V79	V81
Laboratory Report Number					716332	716332	716332	716332	716332	716332
Sample Collection Date					27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	16	19	32	20	32	25
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	150	190	280	190	290	260
Copper	mg/kg	5	**240,000**	**75**	12	12	12	13	11	12
Lead	mg/kg	5	**1,500**	**440**	17	19	27	21	26	21
Mercury	mg/kg	0.1	**730**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	20	23	24	20	18	21
Zinc	mg/kg	5	**400,000**	**150**	22	20	32	29	24	20
Asbestos										
Asbestos Identification	-	-			ND	ND	ND	ND	ND	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V82	V85	V86	V88	V90	V91
Laboratory Report Number					716332	716332	716332	716332	716332	716332
Sample Collection Date					27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	19	24	20	21	25	27
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	180	250	240	230	240	230
Copper	mg/kg	5	**240,000**	**75**	14	11	9.1	11	14	12
Lead	mg/kg	5	**1,500**	**440**	20	22	21	23	21	22
Mercury	mg/kg	0.1	**730**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	23	20	18	20	18	19
Zinc	mg/kg	5	**400,000**	**150**	29	17	15	35	26	28
Asbestos										
Asbestos Identification	-	-			ND	ND	ND	ND	ND	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V93	V95	V96	V98	V100	V101
Laboratory Report Number					716332	716332	716332	716332	716332	716332
Sample Collection Date					27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020	27-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	13	19	26	17	29	17
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	88	180	220	160	240	160
Copper	mg/kg	5	**240,000**	**75**	16	12	14	10	10	11
Lead	mg/kg	5	**1,500**	**440**	16	23	26	21	23	17
Mercury	mg/kg	0.1	**730**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	18	18	18	15	19	19
Zinc	mg/kg	5	**400,000**	**150**	47	34	38	29	17	20
Asbestos										
Asbestos Identification	-	-			ND	ND	ND	ND	ND	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V103	V105	V106	V108	V111	V112
Laboratory Report Number					716332	716332	716332	716332	716374	716374
Sample Collection Date					27-04-2020	27-04-2020	27-04-2020	27-04-2020	28-04-2020	28-04-2020
Matrix Type					soil	soil	soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	23	26	25	14	13	18
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	220	310	200	130	140	220
Copper	mg/kg	5	**240,000**	**75**	12	10.0	12	7.9	5.6	7.8
Lead	mg/kg	5	**1,500**	**440**	22	25	18	14	14	19
Mercury	mg/kg	0.1	**730**		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	**6,000**	**40**	17	17	11	13	6.3	13
Zinc	mg/kg	5	**400,000**	**150**	33	15	39	20	11	28
Asbestos										
Asbestos Identification	-	-			ND	ND	ND	ND	ND	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					QC12	RPD%	V113	QC10	RPD%	V114
Laboratory Report Number					716374		716374	716374		716374
Sample Collection Date					28-04-2020		28-04-2020	28-04-2020		28-04-2020
Matrix Type					soil		soil	soil		soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	16	11.76%	22	22	0.00%	16
Cadmium	mg/kg	0.4	**900**		<0.4	-	<0.4	<0.4	-	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	220	0.00%	230	230	0.00%	180
Copper	mg/kg	5	**240,000**	**75**	8.4	7.41%	9.9	11	10.53%	8.6
Lead	mg/kg	5	**1,500**	**440**	19	0.00%	23	23	0.00%	17
Mercury	mg/kg	0.1	**730**		<0.1	-	<0.1	<0.1	-	<0.1
Nickel	mg/kg	5	**6,000**	**40**	14	7.41%	16	17	6.06%	12
Zinc	mg/kg	5	**400,000**	**150**	27	3.64%	33	29	12.90%	15
Asbestos										
Asbestos Identification	-	-			ND	-	ND	ND	-	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					QC6	RPD%	V115	QC5	RPD%	V116
Laboratory Report Number					716374		716374	716374		716374
Sample Collection Date					28-04-2020		28-04-2020	28-04-2020		28-04-2020
Matrix Type					soil		soil	soil		soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	16	0.00%	20	15	28.57%	13
Cadmium	mg/kg	0.4	**900**		<0.4	-	<0.4	<0.4	-	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	170	5.71%	220	130	51.43%	160
Copper	mg/kg	5	**240,000**	**75**	9.3	7.82%	7.0	11	44.44%	6.3
Lead	mg/kg	5	**1,500**	**440**	15	12.50%	18	14	25.00%	14
Mercury	mg/kg	0.1	**730**		<0.1	-	<0.1	<0.1	-	<0.1
Nickel	mg/kg	5	**6,000**	**40**	14	15.38%	11	17	42.86%	10
Zinc	mg/kg	5	**400,000**	**150**	21	33.33%	11	29	90.00%	14
Asbestos										
Asbestos Identification	-	-			ND	-	ND	ND	-	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V121	V126	V129	QC7	RPD%	V130
Laboratory Report Number					716374	716374	716374	716374		716374
Sample Collection Date					28-04-2020	28-04-2020	28-04-2020	28-04-2020		28-04-2020
Matrix Type					soil	soil	soil	soil		soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	10	23	23	23	0.00%	17
Cadmium	mg/kg	0.4	**900**		<0.4	<0.4	<0.4	<0.4	-	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	87	250	230	240	4.26%	200
Copper	mg/kg	5	**240,000**	**75**	5.8	11	8.0	10	22.22%	11
Lead	mg/kg	5	**1,500**	**440**	8.4	23	19	23	19.05%	19
Mercury	mg/kg	0.1	**730**		<0.1	<0.1	<0.1	<0.1	-	<0.1
Nickel	mg/kg	5	**6,000**	**40**	8.4	16	13	17	26.67%	17
Zinc	mg/kg	5	**400,000**	**150**	17	140	22	26	16.67%	23
Asbestos										
Asbestos Identification	-	-			ND	ND	ND	ND	-	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					QC9	RPD%	V131	QC8	RPD%	V136
Laboratory Report Number					716374		716374	716374		716374
Sample Collection Date					28-04-2020		28-04-2020	28-04-2020		28-04-2020
Matrix Type					soil		soil	soil		soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**						
Metals										
Arsenic	mg/kg	2	**3,000**	**80**	25	38.10%	24	30	22.22%	31
Cadmium	mg/kg	0.4	**900**		<0.4	-	<0.4	<0.4	-	<0.4
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	240	18.18%	240	320	28.57%	320
Copper	mg/kg	5	**240,000**	**75**	11	0.00%	11	9.4	15.69%	9.4
Lead	mg/kg	5	**1,500**	**440**	22	14.63%	22	26	16.67%	32
Mercury	mg/kg	0.1	**730**		<0.1	-	<0.1	<0.1	-	<0.1
Nickel	mg/kg	5	**6,000**	**40**	15	12.50%	17	14	19.35%	16
Zinc	mg/kg	5	**400,000**	**150**	22	4.44%	22	21	4.65%	26
Asbestos										
Asbestos Identification	-	-			ND	-	ND	ND	-	ND
ACM Raw Weight	g	0.0001			-	-	-	-	-	-
Estimated Asbestos Content	g	0.0001			-	-	-	-	-	-
Asbestos Concentration	% w/w	0.0001			-	-	-	-	-	-

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 03
Soil Validation Results
Metals and Asbestos
Lot A
John Stokes Square, Darwin
680.10679

Sample ID					V141	Val_A	ACM1	ACM5
Laboratory Report Number					716374	716374	715370	716056
Sample Collection Date					28-04-2020	28-04-2020	23-04-2020	27-04-2020
Matrix Type					soil	soil	soil	soil
Analyte	Unit	LOR	**IL(01)**	**IL(02)**				
Metals								
Arsenic	mg/kg	2	**3,000**	**80**	19	-	-	-
Cadmium	mg/kg	0.4	**900**		<0.4	-	-	-
Chromium (III+IV)	mg/kg	5	**3600^**	**340**	200	-	-	-
Copper	mg/kg	5	**240,000**	**75**	18	-	-	-
Lead	mg/kg	5	**1,500**	**440**	21	-	-	-
Mercury	mg/kg	0.1	**730**		<0.1	-	-	-
Nickel	mg/kg	5	**6,000**	**40**	17	-	-	-
Zinc	mg/kg	5	**400,000**	**150**	29	-	-	-
Asbestos								
Asbestos Identification	-	-			ND	ND	Chrysotile (ACM)	Chrysotile (ACM)
ACM Raw Weight	g	0.0001			-	-	11	13
Estimated Asbestos Content	g	0.0001			-	-	1.7	1.3
Asbestos Concentration	% w/w	0.0001			-	-	**0.19**	**0.16**

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
mg/kg = milligrams per kilogram
NE = not established
ND = Non detect
^ IL for Chromium (VI)
# Weathered
ACM - Asbestos Containing Material
AF - Asbestos Fines
FA - Fibrous Asbestos
Nominated Investigation Levels (ILs):
IL(01): ASC NEPM 2013 Table 1A(1) HILs Commercial/Industrial D Soil
IL(02): ASC NEPM 2013 Table 1B(5) EILs, Commerical/Industrial, fresh contaminant
IL(03): WA DOH 2019, Soil Asbestos Screening Criteria for FA/AF, all site uses
IL(04): WA DOH 2019, Soil Asbestos Screening Criteria for ACM, non sensitive commer
Results Values in highlighted cells exceed nominated Il

Table 04
Rinsate Results
Lot A
John Stokes Square, Darwin
680.10679

Sample ID			R1	R2	R3	R4
Laboratory Report Number			716332	716332	716332	716332
Sample Collection Date			23-04-2020	24-04-2020	25-04-2020	27-04-2020
Matrix Type			water	water	water	water
BTEXN Compounds						
Benzene	µg/L	1	<1	<1	<1	<1
Toluene	µg/L	1	<1	<1	<1	<1
Ethylbenzene	µg/L	1	<1	<1	<1	<1
Xylene (m & p)	µg/L	2	<2	<2	<2	<2
Xylene (o)	µg/L	1	<1	<1	<1	<1
Xylene Total	µg/L	3	<3	<3	<3	<3
Naphthalene	µg/L	10	<10	<10	<10	<10
Total Petroleum Hydrocarbons						
TPH $>C_6$-C_9	µg/L	20	<20	<20	<20	<20
TPH $>C_{10}$-C_{14}	µg/L	50	<50	<50	<50	<50
TPH $>C_{15}$-C_{28}	µg/L	100	<100	<100	<100	<100
TPH $>C_{29}$-C_{36}	µg/L	100	<100	<100	<100	<100
Total Recoverable Hydrocarbons - ASC NEPM 2013 Fractions						
TRH $>C_6$-C_{10} (F1)	µg/L	20	<20	<20	<20	<20
TRH $>C_{10}$-C_{16} (F2)	µg/L	50	<50	<50	<50	<50
TRH $>C_{16}$-C_{34} (F3)	µg/L	100	<100	<100	<100	<100
TRH $>C_{34}$-C_{40} (F4)	µg/L	100	<100	<100	<100	<100
Organochlorine Pesticides						
4,4-DDE	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
a-BHC	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Aldrin + Dieldrin	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
b-BHC	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
DDT+DDE+DDD	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Endrin	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Organochlorine pesticides EPAVic	µg/L	1	<1	<1	<1	<1
Other organochlorine pesticides EPAVic	µg/L	1	<1	<1	<1	<1
Endrin ketone	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
g-BHC (Lindane)	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan sulphate	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Endrin aldehyde	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Hexachlorobenzene	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Toxaphene	mg/L	0.01	<0.01	<0.01	<0.01	<0.01
Organophosphorus Pesticides						
Azinophos methyl	µg/L	2	<2	<2	<2	<2
Bolstar (Sulprofos)	µg/L	2	<2	<2	<2	<2
Chlorfenvinphos	µg/L	2	<2	<2	<2	<2
Chlorpyrifos	µg/L	20	<20	<20	<20	<20
Chlorpyrifos-methyl	µg/L	2	<2	<2	<2	<2
Coumaphos	µg/L	20	<20	<20	<20	<20
Diazinon	µg/L	2	<2	<2	<2	<2
Dichlorvos	µg/L	2	<2	<2	<2	<2
Demeton-O	µg/L	2	<2	<2	<2	<2
Demeton-S	µg/L	20	<20	<20	<20	<20
Dimethoate	µg/L	2	<2	<2	<2	<2
Disulfoton	µg/L	2	<2	<2	<2	<2
EPN	µg/L	2	<2	<2	<2	<2
Ethion	µg/L	2	<2	<2	<2	<2
Ethoprop	µg/L	2	<2	<2	<2	<2
Fenitrothion	µg/L	2	<2	<2	<2	<2
Fensulfothion	µg/L	2	<2	<2	<2	<2
Fenthion	µg/L	2	<2	<2	<2	<2
Malathion	µg/L	2	<2	<2	<2	<2
Merphos	mg/L	0.002	<0.002	<0.002	<0.002	<0.002
Methyl parathion	µg/L	2	<2	<2	<2	<2
Mevinphos (Phosdrin)	µg/L	2	<2	<2	<2	<2
Monocrotophos	µg/L	2	<2	<2	<2	<2
Naled (Dibrom)	µg/L	2	<2	<2	<2	<2
Omethoate	µg/L	2	<2	<2	<2	<2
Phorate	µg/L	2	<2	<2	<2	<2
Pyrazophos	µg/L	2	<2	<2	<2	<2
Ronnel	µg/L	2	<2	<2	<2	<2
Terbufos	µg/L	2	<2	<2	<2	<2
Tokuthion	mg/L	0.002	<0.002	<0.002	<0.002	<0.002
Pirimiphos-methyl	mg/L	0.02	<0.02	<0.02	<0.02	<0.02
Parathion	µg/L	2	<2	<2	<2	<2
Trichloronate	µg/L	2	<2	<2	<2	<2
Tetrachlorvinphos	mg/L	0.002	<0.002	<0.002	<0.002	<0.002
Metals						
Arsenic	µg/L	1	<1	<1	<1	<1
Cadmium	µg/L	0.2	<0.2	<0.2	<0.2	<0.2
Chromium (III+VI)	µg/L	1	<1	<1	<1	<1
Copper	µg/L	1	<1	<1	<1	<1
Lead	µg/L	1	<1	<1	<1	<1
Mercury	µg/L	0.1	<0.1	<0.1	<0.1	<0.1
Nickel	µg/L	1	<1	<1	<1	<1
Zinc	µg/L	5	<5	<5	<5	<5

Notes:
LOR (1) = Limit of Reporting (= Method Detection Limit) for Eurofins
' - ' unable to be calculated / not analysed
µg/L = millgram per litre

APPENDIX G

Certified Laboratory Documentation

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ Sydney Laboratory
Unit F3 Bld F, 16 Mars Road Lane Cove West NSW 2066
02 9900 8400 EnviroSampleNSW@eurofins.com

☐ Brisbane Laboratory
Unit 1 21 Smallwood Place Murarrie QLD 4172
07 3902 4600 EnviroSampleQLD@eurofins.com

☐ Perth Laboratory
Unit 2 91 Leach Highway Kewdale WA 6105
08 9251 9600 EnviroSampleWA@eurofins.com

☐ Melbourne Laboratory
6 Monterey Road Dandenong South VIC 3175
03 8564 5000 EnviroSampleVic@eurofins.com

Company	SLR Consulting (NT)	Project №	680.10679
Address	21 Parap Rd, Parap, NT, Australia, 0820	Project Name	JSS Remediation
Contact Name	Sarah Doherty	Project Manager	Sarah Doherty
Phone №	0417 647 498	EDD Format (Excel, EQuIS etc)	Esdat & CSV
Special Directions	Fast TAT- please confirm expected time of delivery asap.	Sampler(s)	
Purchase Order		Handed over by	
Quote ID №	200422SLRNT	Email for Results	sdoherty@slrconsulting.com

Analytes — Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to advise SUITE analysis.

№	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix Soil (S) Water (W)	B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil charterisation	Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar charaterisation	Rinsate bottles	Sample Comments / Dangerous Goods Hazard Warning
1	Char1	23/04/20	S						X					1		
2	STP_TS_1	23/04/20	S	X	X		X			1	1					
3	STP_TS_2	23/04/20	S	X	X		X			1	1					
4	STP_TS_2	23/04/20	S	X	X		X			1	1					
5	ACM1	23/04/20	S	X	X		X			1	1		1			
6	STP1_1	23/04/20	S	X	X		X			1	1					
7	STP1_2	23/04/20	S	X	X		X			1	1		1			
8	STP1_3	23/04/20	S	X	X		X			1	1					
9	STP1_4	23/04/20	S	X	X		X			1	1					
10																
	Add new rows		Total Counts	8	8		8		1	8	8		2	1		

Containers (change container type & size if necessary)

Required Turnaround Time (TAT) (Default will be 5 days if not ticked) — ♦Surcharge will apply

- ☐ Overnight (specify Date)♦
- ☑ Same day♦
- ☐ 1 day♦
- ☐ 2 days♦
- ☐ 3 days♦
- ☑ 5 days (standard)
- ☐ Other( )

Method of Shipment	Courier (#)	Hand Delivered	Postal	Name	Signature	Date / Time
Eurofins | mgt Laboratory Use Only	Received By	Ashvin Desai	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 23/04/20 Time Temperature 32.0C
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date Time Report № 715370

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request.

eurofins | Environment Testing

Melbourne
6 Monterey Road
Dandenong South Vic 3175
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9900 8400
NATA # 1261 Site # 18217

Brisbane
1/21 Smallwood Place
Murarrie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS Remediation
Project ID:	680.10679
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 23, 2020 4:00 PM
Eurofins reference:	**715370**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

Australia

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NATA # 1261
Site # 23736

New Zealand

Auckland
35 O'Rorke Road
Penrose, Auckland 1061
Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 24, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	Char1	Apr 23, 2020		Soil	M20-Ap33439				X	X	
2	STP_TS_1	Apr 23, 2020		Soil	M20-Ap33440	X		X	X		X
3	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33441	X		X	X		X
4	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33442	X		X	X		X
5	ACM1	Apr 23, 2020		Soil	M20-Ap33443	X		X	X		X
6	STP1_1	Apr 23, 2020		Soil	M20-Ap33444	X		X	X		X
7	STP1_2	Apr 23, 2020		Soil	M20-Ap33445	X		X	X		X
8	STP1_3	Apr 23, 2020		Soil	M20-Ap33446	X		X	X		X
9	STP1_4	Apr 23, 2020		Soil	M20-Ap33447	X		X	X		X
10	QC1	Apr 23, 2020		Soil	M20-Ap34638		X				

eurofins | Environment Testing

ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

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Phone : +64 9 526 45 51
IANZ # 1327

Christchurch
43 Detroit Drive
Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 24, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271		X	X	X	X	X
Sydney Laboratory - NATA Site # 18217	X					
Brisbane Laboratory - NATA Site # 20794					X	
Perth Laboratory - NATA Site # 23736						
Test Counts	8	1	8	9	1	8

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **715370-S**
Project name JSS Remediation
Project ID 680.10679
Received Date Apr 23, 2020

Client Sample ID			**Char1**	**STP_TS_1**	**STP_TS_2**	**STP_TS_3**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap33439**	**M20-Ap33440**	**M20-Ap33441**	**M20-Ap33442**
Date Sampled			**Apr 23, 2020**	**Apr 23, 2020**	**Apr 23, 2020**	**Apr 23, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	< 50	77	68
TRH C29-C36	50	mg/kg	-	< 50	150	81
TRH C10-C36 (Total)	50	mg/kg	-	< 50	227	149
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	93	78	87
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	< 100	180	120
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	180	120
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	0.4
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	0.09
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	0.12	0.20	2.1
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05

Client Sample ID			Char1	STP_TS_1	STP_TS_2	STP_TS_3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33439	M20-Ap33440	M20-Ap33441	M20-Ap33442
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	0.39
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	-	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	0.12	0.2	2.19
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	0.12	0.2	2.98
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	0.79
Dibutylchlorendate (surr.)	1	%	-	70	58	67
Tetrachloro-m-xylene (surr.)	1	%	-	59	57	58
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	< 2	< 2	< 2
Naled	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	-	< 2	< 2	< 2
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2

Client Sample ID			Char1	STP_TS_1	STP_TS_2	STP_TS_3
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33439	M20-Ap33440	M20-Ap33441	M20-Ap33442
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	92	73	96
% Clay	1	%	17	-	-	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	65	-	-	-
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	6.6	-	-	-
Total Organic Carbon	0.1	%	1.7	-	-	-
% Moisture	1	%	9.3	11	21	11
Heavy Metals						
Arsenic	2	mg/kg	-	12	9.0	13
Cadmium	0.4	mg/kg	-	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	-	85	54	87
Copper	5	mg/kg	-	15	10	15
Iron	20	mg/kg	120000	-	-	-
Lead	5	mg/kg	-	34	14	25
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	-	10	6.7	13
Zinc	5	mg/kg	-	68	47	110
Heavy Metals						
Iron (%)	0.01	%	12	-	-	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	11	-	-	-

Client Sample ID			STP1_1	STP1_2	STP1_3	STP1_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33444	M20-Ap33445	M20-Ap33446	M20-Ap33447
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	85	84	96	99
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			STP1_1	STP1_2	STP1_3	STP1_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33444	M20-Ap33445	M20-Ap33446	M20-Ap33447
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.09	0.08	< 0.05	0.07
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.58	0.65	0.48	0.76
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	0.06	0.06	< 0.05	0.06
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.67	0.73	0.48	0.83
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.73	0.79	0.48	0.89
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	101	70	64	63
Tetrachloro-m-xylene (surr.)	1	%	106	128	124	135
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP1_1	STP1_2	STP1_3	STP1_4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap33444	M20-Ap33445	M20-Ap33446	M20-Ap33447
Date Sampled			Apr 23, 2020	Apr 23, 2020	Apr 23, 2020	Apr 23, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	91	62	66	67
% Moisture	1	%	8.6	9.4	8.7	9.2
Heavy Metals						
Arsenic	2	mg/kg	16	20	15	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	180	210	120	150
Copper	5	mg/kg	12	12	12	12
Lead	5	mg/kg	17	21	16	16
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	14	15	14	14
Zinc	5	mg/kg	27	23	29	28

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 24, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 24, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 24, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
NEPM Screen for Soil Classification			
% Clay	Brisbane	Apr 27, 2020	0 Days
- Method: LTM-GEN-7040			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Apr 27, 2020	7 Days
- Method: LTM-INO-4030 Conductivity			
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Melbourne	Apr 27, 2020	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Total Organic Carbon	Melbourne	Apr 27, 2020	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Heavy Metals	Melbourne	Apr 27, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Cation Exchange Capacity	Melbourne	Apr 28, 2020	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
% Moisture	Melbourne	Apr 23, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
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Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 24, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	Char1	Apr 23, 2020		Soil	M20-Ap33439				X	X	
2	STP_TS_1	Apr 23, 2020		Soil	M20-Ap33440	X		X	X		X
3	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33441	X		X	X		X
4	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33442	X		X	X		X
5	ACM1	Apr 23, 2020		Soil	M20-Ap33443	X		X	X		X
6	STP1_1	Apr 23, 2020		Soil	M20-Ap33444	X		X	X		X
7	STP1_2	Apr 23, 2020		Soil	M20-Ap33445	X		X	X		X
8	STP1_3	Apr 23, 2020		Soil	M20-Ap33446	X		X	X		X
9	STP1_4	Apr 23, 2020		Soil	M20-Ap33447	X		X	X		X
10	QC1	Apr 23, 2020		Soil	M20-Ap34638		X				

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Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271		X	X	X	X	X
Sydney Laboratory - NATA Site # 18217	X					
Brisbane Laboratory - NATA Site # 20794					X	
Perth Laboratory - NATA Site # 23736						
Test Counts	8	1	8	9	1	8

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	113			80-120	Pass	
Cadmium	%	102			80-120	Pass	
Chromium	%	109			80-120	Pass	
Copper	%	105			80-120	Pass	
Iron	%	117			80-120	Pass	
Lead	%	103			80-120	Pass	
Mercury	%	108			75-125	Pass	
Nickel	%	110			80-120	Pass	
Zinc	%	108			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap33441	CP	%	115			75-125	Pass	
Cadmium	M20-Ap33441	CP	%	101			75-125	Pass	
Copper	M20-Ap33441	CP	%	121			75-125	Pass	
Lead	M20-Ap33441	CP	%	112			75-125	Pass	
Mercury	M20-Ap33441	CP	%	114			70-130	Pass	
Nickel	M20-Ap33441	CP	%	114			75-125	Pass	
Zinc	M20-Ap33441	CP	%	133			75-125	Fail	Q08
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap33447	CP	%	110			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap33447	CP	%	100			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1	Result 2	RPD	Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap33440	CP	mg/kg	12	16	26	30%	Pass	
Cadmium	M20-Ap33440	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap33440	CP	mg/kg	85	110	28	30%	Pass	
Copper	M20-Ap33440	CP	mg/kg	15	16	11	30%	Pass	
Lead	M20-Ap33440	CP	mg/kg	34	31	9.0	30%	Pass	
Mercury	M20-Ap33440	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Nickel	M20-Ap33440	CP	mg/kg	10	12	13	30%	Pass	
Zinc	M20-Ap33440	CP	mg/kg	68	63	7.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap33441	CP	mg/kg	9.0	9.3	3.0	30%	Pass	
Cadmium	M20-Ap33441	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap33441	CP	mg/kg	54	56	4.0	30%	Pass	
Copper	M20-Ap33441	CP	mg/kg	10	10	3.0	30%	Pass	
Lead	M20-Ap33441	CP	mg/kg	14	15	4.0	30%	Pass	
Mercury	M20-Ap33441	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap33441	CP	mg/kg	6.7	7.1	5.0	30%	Pass	
Zinc	M20-Ap33441	CP	mg/kg	47	48	2.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap33445	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap33445	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap33445	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap33445	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap33445	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap33445	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Jonathon Angell	Senior Analyst-Inorganic (QLD)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	715370-AID
Project Name	JSS Remediation
Project ID	680.10679
Received Date	Apr 23, 2020
Date Reported	Apr 28, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name JSS Remediation
Project ID 680.10679
Date Sampled Apr 23, 2020
Report 715370-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP_TS_1	20-Ap33440	Apr 23, 2020	Approximate Sample 619g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP_TS_2	20-Ap33441	Apr 23, 2020	Approximate Sample 375g Sample consisted of: Brown coarse-grained soil, rocks and organic debris	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP_TS_3	20-Ap33442	Apr 23, 2020	Approximate Sample 711g Sample consisted of: Brown coarse-grained soil, brick, plaster and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
ACM1	20-Ap33443	Apr 23, 2020	Approximate Sample 922g Sample consisted of: Brown coarse-grained soil, plaster and rocks	ACM: Chrysotile, amosite and crocidolite asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 11g Total estimated asbestos content in ACM = 1.7g* Total estimated asbestos concentration in ACM = 0.19% w/w* Organic fibre detected. No trace asbestos detected.
STP1_1	20-Ap33444	Apr 23, 2020	Approximate Sample 798g Sample consisted of: Brown coarse-grained soil, plaster and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP1_2	20-Ap33445	Apr 23, 2020	Approximate Sample 885g Sample consisted of: Brown coarse-grained soil, brick, plaster and rocks	ACM: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 10g Total estimated asbestos content in ACM = 1.0g* Total estimated asbestos concentration in ACM = 0.12% w/w* Organic fibre detected. No trace asbestos detected.
STP1_3	20-Ap33446	Apr 23, 2020	Approximate Sample 716g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP1_4	20-Ap33447	Apr 23, 2020	Approximate Sample 749g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 23, 2020	Indefinite

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
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NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 28, 2020
Priority: 3 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271							X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X					
Brisbane Laboratory - NATA Site # 20794										X	
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	Char1	Apr 23, 2020		Soil	M20-Ap33439				X	X	
2	STP_TS_1	Apr 23, 2020		Soil	M20-Ap33440	X		X	X		X
3	STP_TS_2	Apr 23, 2020		Soil	M20-Ap33441	X		X	X		X
4	STP_TS_3	Apr 23, 2020		Soil	M20-Ap33442	X		X	X		X
5	ACM1	Apr 23, 2020		Soil	M20-Ap33443	X					
6	STP1_1	Apr 23, 2020		Soil	M20-Ap33444	X		X	X		X
7	STP1_2	Apr 23, 2020		Soil	M20-Ap33445	X		X	X		X
8	STP1_3	Apr 23, 2020		Soil	M20-Ap33446	X		X	X		X
9	STP1_4	Apr 23, 2020		Soil	M20-Ap33447	X		X	X		X
10	QC1	Apr 23, 2020		Soil	M20-Ap34638		X				

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IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS Remediation
Project ID: 680.10679

Order No.:
Report #: 715370
Phone: +61 2 9428 8100
Fax:

Received: Apr 23, 2020 4:00 PM
Due: Apr 28, 2020
Priority: 3 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271		X	X	X	X	X
Sydney Laboratory - NATA Site # 18217	X					
Brisbane Laboratory - NATA Site # 20794					X	
Perth Laboratory - NATA Site # 23736						
Test Counts	8	1	7	8	1	7

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

M20-Ap33441: Sample received was less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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CHAIN OF CUSTODY RECORD

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☐ Melbourne Laboratory
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Company	SLR Consulting (NT)	Project No		Project Manager	Sarah Doherty
Address	5/21 Parap Rd Parap NT 0820	Project Name	JSS	EDD Format (Esdat, Ecdis etc)	Esdat & csv
Contact Name	Sarah Doherty				
Phone No	417647498				
Special Directions					
Purchase Order					
Quote ID No	200422SLRNT				

Sampler(s)	Sarah Doherty
Handed over by	
Email for Results	gsheridan@slrconsulting.com; pturyn@slrconsulting.com; sdoherty@slrconsulting.com

Containers (Change container type & size if necessary)

Required Turnaround Time (TAT) (Default will be 5 days if not stated)

*Surcharge will apply

☐ Overnight (requesting by 5pm)* ☑ Same day* ☐ 1 day* ☐ 2 days* ☐ 3 days* ☐ 5 days (Standard) ☐ Other( )

Analyses (Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing)

No	Client Sample ID	Sampled Date/Time (dd/mm/yy hh:mm)	Matrix Solid (S) Water (W)	B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil charterisation	Hold	Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar charaterisation	Rinsate bottles	Sample Comments / Dangerous Goods Hazard Warning
1	STP3-1	24/04/20	S	X	X		X				1	1					
2	STP3-2	24/04/20	S	X	X		X				1	1		1			
3	STP3-3	24/04/20	S	X	X		X				1	1					
4	STP3-4	24/04/20	S	X	X		X				1	1					
5	STP3-5	24/04/20	S	X	X		X				1	1		1			
6	STP3-6	24/04/20	S	X	X		X				1	1					
7	STP3-7	24/04/20	S	X	X		X				1	1					
8	STP3-8	24/04/20	S	X	X		X				1	1					
9	V1	23/04/20	S	X	X		X				1	1					
10	V2									X	1		1				
11	V3			X	X	X					1		1				
12	V4									X	1		1				
13	V5			X	X	X					1		1				
14	V6			X	X		X				1	1					

Carbene
EF
2/4 9a
71607

| | | |

Btu OC Ale

| | | |

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Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 28, 2020 9:00 AM
Eurofins reference:	**716051**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

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Project Name: JSS

Order No.:
Report #: 716051
Phone: +61 2 9428 8100
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Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	STP3-1	Apr 24, 2020		Soil	M20-Ap39870		X		X	X	X
2	STP3-2	Apr 24, 2020		Soil	M20-Ap39871		X		X	X	X
3	STP3-3	Apr 24, 2020		Soil	M20-Ap39872		X		X	X	X
4	STP3-4	Apr 24, 2020		Soil	M20-Ap39873		X		X	X	X
5	STP3-5	Apr 24, 2020		Soil	M20-Ap39874		X		X	X	X
6	STP3-6	Apr 24, 2020		Soil	M20-Ap39875		X		X	X	X
7	STP3-7	Apr 24, 2020		Soil	M20-Ap39876		X		X	X	X
8	STP3-8	Apr 24, 2020		Soil	M20-Ap39877		X		X	X	X
9	V1	Apr 24, 2020		Soil	M20-Ap39878		X		X	X	X
10	V3	Apr 24, 2020		Soil	M20-Ap39879	X			X	X	X
11	V5	Apr 24, 2020		Soil	M20-Ap39880	X			X	X	X

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NT 0801

Project Name: JSS

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15	V11	Apr 24, 2020		Soil	M20-Ap39884		X		X	X	X
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23	V26	Apr 24, 2020		Soil	M20-Ap39892		X		X	X	X
24	V29	Apr 24, 2020		Soil	M20-Ap39893	X			X	X	X

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Perth Laboratory - NATA Site # 23736											
25	V31	Apr 24, 2020		Soil	M20-Ap39894		X		X	X	X
26	DUP1	Apr 24, 2020		Soil	M20-Ap39895	X			X	X	X
27	V2	Apr 24, 2020		Soil	M20-Ap39896			X			
28	V4	Apr 24, 2020		Soil	M20-Ap39897			X			
29	V7	Apr 24, 2020		Soil	M20-Ap39898			X			
30	V9	Apr 24, 2020		Soil	M20-Ap39899			X			
31	V12	Apr 24, 2020		Soil	M20-Ap39900			X			
32	V14	Apr 24, 2020		Soil	M20-Ap39901			X			
33	V15	Apr 24, 2020		Soil	M20-Ap39902			X			
34	V18	Apr 24, 2020		Soil	M20-Ap39903			X			
35	V20	Apr 24, 2020		Soil	M20-Ap39904			X			
36	V22	Apr 24, 2020		Soil	M20-Ap39905			X			
37	V24	Apr 24, 2020		Soil	M20-Ap39906			X			

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Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
38	V27	Apr 24, 2020		Soil	M20-Ap39907			X			
39	V28	Apr 24, 2020		Soil	M20-Ap39908			X			
40	V30	Apr 24, 2020		Soil	M20-Ap39909			X			
41	V32	Apr 24, 2020		Soil	M20-Ap39910			X			
42	DUP2	Apr 24, 2020		Soil	M20-Ap39911			X			
Test Counts						11	15	16	26	26	26

Certificate of Analysis

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	716051-AID
Project Name	JSS
Received Date	Apr 28, 2020
Date Reported	Apr 29, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Project Name JSS
Project ID
Date Sampled Apr 24, 2020
Report 716051-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP3-1	20-Ap39870	Apr 24, 2020	Approximate Sample 568g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP3-2	20-Ap39871	Apr 24, 2020	Approximate Sample 585g Sample consisted of: Brown fine-grained clayey soil, fibre plaster cement material and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP3-3	20-Ap39872	Apr 24, 2020	Approximate Sample 580g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP3-4	20-Ap39873	Apr 24, 2020	Approximate Sample 515g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP3-5	20-Ap39874	Apr 24, 2020	Approximate Sample 516g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	FA: Chrysotile and amosite asbestos detected in weathered fibre cement fragments. Approximate raw weight of FA = 7.1g Estimated asbestos content in FA = 2.8g* Total estimated asbestos concentration in FA = 0.55% w/w* Organic fibre detected. No trace asbestos detected.
STP3-6	20-Ap39875	Apr 24, 2020	Approximate Sample 649g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP3-7	20-Ap39876	Apr 24, 2020	Approximate Sample 490g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP3-8	20-Ap39877	Apr 24, 2020	Approximate Sample 630g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V1	20-Ap39878	Apr 24, 2020	Approximate Sample 706g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V3	20-Ap39879	Apr 24, 2020	Approximate Sample 180g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V5	20-Ap39880	Apr 24, 2020	Approximate Sample 177g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V6	20-Ap39881	Apr 24, 2020	Approximate Sample 688g Sample consisted of: Brown fine-grained clayey soil and rocks	FA: Chrysotile asbestos detected in weathered fibre cement fragments. Approximate raw weight of FA = 0.0080g Estimated asbestos content in FA = 0.0024g* Total estimated asbestos concentration in FA = 0.00035% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V8	20-Ap39882	Apr 24, 2020	Approximate Sample 226g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V10	20-Ap39883	Apr 24, 2020	Approximate Sample 187g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V11	20-Ap39884	Apr 24, 2020	Approximate Sample 573g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V13	20-Ap39885	Apr 24, 2020	Approximate Sample 195g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V16	20-Ap39886	Apr 24, 2020	Approximate Sample 645g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V17	20-Ap39887	Apr 24, 2020	Approximate Sample 170g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V19	20-Ap39888	Apr 24, 2020	Approximate Sample 162g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V21	20-Ap39889	Apr 24, 2020	Approximate Sample 501g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V23	20-Ap39890	Apr 24, 2020	Approximate Sample 236g Sample consisted of: Brown fine-grained sandy soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V25	20-Ap39891	Apr 24, 2020	Approximate Sample 155g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V26	20-Ap39892	Apr 24, 2020	Approximate Sample 517g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V29	20-Ap39893	Apr 24, 2020	Approximate Sample 206g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V31	20-Ap39894	Apr 24, 2020	Approximate Sample 505g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
DUP1	20-Ap39895	Apr 24, 2020	Approximate Sample 160g Sample consisted of: Brown fine-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 28, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 28, 2020	Indefinite

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NATA # 1261
Site # 23736

New Zealand

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Penrose, Auckland 1061
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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716051
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
25	V31	Apr 24, 2020		Soil	M20-Ap39894		X		X	X	X
26	DUP1	Apr 24, 2020		Soil	M20-Ap39895	X			X	X	X
27	V2	Apr 24, 2020		Soil	M20-Ap39896			X			
28	V4	Apr 24, 2020		Soil	M20-Ap39897			X			
29	V7	Apr 24, 2020		Soil	M20-Ap39898			X			
30	V9	Apr 24, 2020		Soil	M20-Ap39899			X			
31	V12	Apr 24, 2020		Soil	M20-Ap39900			X			
32	V14	Apr 24, 2020		Soil	M20-Ap39901			X			
33	V15	Apr 24, 2020		Soil	M20-Ap39902			X			
34	V18	Apr 24, 2020		Soil	M20-Ap39903			X			
35	V20	Apr 24, 2020		Soil	M20-Ap39904			X			
36	V22	Apr 24, 2020		Soil	M20-Ap39905			X			
37	V24	Apr 24, 2020		Soil	M20-Ap39906			X			

eurofins | Environment Testing

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NATA # 1261 Site # 20794

Perth
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Company Name: SLR Consulting (NT)
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Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
38	V27	Apr 24, 2020		Soil	M20-Ap39907			X			
39	V28	Apr 24, 2020		Soil	M20-Ap39908			X			
40	V30	Apr 24, 2020		Soil	M20-Ap39909			X			
41	V32	Apr 24, 2020		Soil	M20-Ap39910			X			
42	DUP2	Apr 24, 2020		Soil	M20-Ap39911			X			
Test Counts						11	15	16	26	26	26

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

M20-Ap39876: Sample received was less than the nominal 500mL as recommended in Section 4.10 of the NEPM Schedule B1 - Guideline on Investigation Levels for Soil and Groundwater.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **716051-S**
Project name JSS
Received Date Apr 28, 2020

Client Sample ID			**STP3-1**	**STP3-2**	**STP3-3**	**STP3-4**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap39870**	**M20-Ap39871**	**M20-Ap39872**	**M20-Ap39873**
Date Sampled			**Apr 24, 2020**	**Apr 24, 2020**	**Apr 24, 2020**	**Apr 24, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	101	99	99	105
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.21	0.15	0.19	0.18
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	0.15	0.11	0.17	0.17

Client Sample ID			STP3-1	STP3-2	STP3-3	STP3-4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39870	M20-Ap39871	M20-Ap39872	M20-Ap39873
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.21	0.15	0.19	0.18
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.36	0.26	0.36	0.35
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	0.15	0.11	0.17	0.17
Dibutylchlorendate (surr.)	1	%	110	76	112	99
Tetrachloro-m-xylene (surr.)	1	%	69	59	82	79
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	85	71	92	89

Client Sample ID			STP3-1	STP3-2	STP3-3	STP3-4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39870	M20-Ap39871	M20-Ap39872	M20-Ap39873
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	17	28	17	19
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	130	240	150	160
Copper	5	mg/kg	13	15	14	14
Lead	5	mg/kg	16	22	17	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	14	18	15	15
Zinc	5	mg/kg	28	26	33	28
% Moisture	1	%	8.8	8.7	9.8	9.6

Client Sample ID			STP3-5	STP3-6	STP3-7	STP3-8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39874	M20-Ap39875	M20-Ap39876	M20-Ap39877
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	105	124	116	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			STP3-5	STP3-6	STP3-7	STP3-8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39874	M20-Ap39875	M20-Ap39876	M20-Ap39877
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	0.26	0.24	0.35	1.3
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	0.21	0.24	1.0
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.26	0.24	0.35	1.3
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.26	0.45	0.59	2.3
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	0.21	0.24	1
Dibutylchlorendate (surr.)	1	%	105	80	109	103
Tetrachloro-m-xylene (surr.)	1	%	73	66	84	75
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			STP3-5	STP3-6	STP3-7	STP3-8
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39874	M20-Ap39875	M20-Ap39876	M20-Ap39877
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	82	69	82	89
Heavy Metals						
Arsenic	2	mg/kg	15	16	19	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	120	190	200	140
Copper	5	mg/kg	13	13	12	11
Lead	5	mg/kg	18	17	17	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	16	14	14
Zinc	5	mg/kg	32	27	22	20
% Moisture	1	%	10	10	9.0	9.2

Client Sample ID			V1	V3	V5	V6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39878	M20-Ap39879	M20-Ap39880	M20-Ap39881
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	102	104	108	95
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			V1	V3	V5	V6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39878	M20-Ap39879	M20-Ap39880	M20-Ap39881
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.22	0.23	0.18	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	0.08	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.22	0.23	0.18	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.22	0.23	0.26	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	102	85	112	123
Tetrachloro-m-xylene (surr.)	1	%	74	69	88	58
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V1	V3	V5	V6
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39878	M20-Ap39879	M20-Ap39880	M20-Ap39881
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	79	70	100	93
Heavy Metals						
Arsenic	2	mg/kg	15	20	18	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	180	240	250	210
Copper	5	mg/kg	11	10	8.5	10
Lead	5	mg/kg	15	17	16	15
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	12	12	13
Zinc	5	mg/kg	20	16	11	13
% Moisture	1	%	5.8	4.4	4.9	19

Client Sample ID			V8	V10	V11	V13
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39882	M20-Ap39883	M20-Ap39884	M20-Ap39885
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	109	101	104	101

Client Sample ID			V8	V10	V11	V13
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39882	M20-Ap39883	M20-Ap39884	M20-Ap39885
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.06	< 0.05	0.22	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	0.06	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.06	< 0.05	0.22	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.28	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	79	88	118	91
Tetrachloro-m-xylene (surr.)	1	%	76	63	84	58
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V8	V10	V11	V13
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39882	M20-Ap39883	M20-Ap39884	M20-Ap39885
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	124	67	124	67
Heavy Metals						
Arsenic	2	mg/kg	22	15	15	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	210	170	190	150
Copper	5	mg/kg	10	11	10	12
Lead	5	mg/kg	15	15	15	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	11	12	13	17
Zinc	5	mg/kg	20	8.8	15	9.7
% Moisture	1	%	3.2	4.6	3.6	7.2

Client Sample ID			V16	V17	V19	V21
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39886	M20-Ap39887	M20-Ap39888	M20-Ap39889
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			V16	V17	V19	V21
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39886	M20-Ap39887	M20-Ap39888	M20-Ap39889
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	104	109	103	114
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	118	110	103	115
Tetrachloro-m-xylene (surr.)	1	%	73	68	60	71
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V16	V17	V19	V21
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39886	M20-Ap39887	M20-Ap39888	M20-Ap39889
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	95	71	72	96
Heavy Metals						
Arsenic	2	mg/kg	14	12	14	13
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	150	130	190	170
Copper	5	mg/kg	12	12	11	9.9
Lead	5	mg/kg	15	13	14	12
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	16	15	12
Zinc	5	mg/kg	15	10	8.9	7.1
% Moisture	1	%	4.4	5.8	4.7	6.0

Client Sample ID			V23	V25	V26	V29
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39890	M20-Ap39891	M20-Ap39892	M20-Ap39893
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	102	98	104	112
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.15	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.15	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.15	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	119	116	96	113
Tetrachloro-m-xylene (surr.)	1	%	65	78	66	68

Client Sample ID			V23	V25	V26	V29
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39890	M20-Ap39891	M20-Ap39892	M20-Ap39893
Date Sampled			Apr 24, 2020	Apr 24, 2020	Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	90	58	50	73
Heavy Metals						
Arsenic	2	mg/kg	7.9	12	18	9.5
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	80	160	200	120
Copper	5	mg/kg	6.3	9.7	11	11
Lead	5	mg/kg	8.2	13	14	11
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	7.7	13	12	13
Zinc	5	mg/kg	11	8.0	7.2	8.9
% Moisture	1	%	2.3	4.4	9.9	3.6

Client Sample ID			V31	DUP1
Sample Matrix			Soil	Soil
Eurofins Sample No.			M20-Ap39894	M20-Ap39895
Date Sampled			Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit		
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				
TRH C6-C9	20	mg/kg	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50
BTEX				
Benzene	0.1	mg/kg	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	122	107
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100
Organochlorine Pesticides				
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	0.39
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.39
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	0.39
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	117	130
Tetrachloro-m-xylene (surr.)	1	%	52	56

Client Sample ID			V31	DUP1
Sample Matrix			Soil	Soil
Eurofins Sample No.			M20-Ap39894	M20-Ap39895
Date Sampled			Apr 24, 2020	Apr 24, 2020
Test/Reference	LOR	Unit		
Organophosphorus Pesticides				
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	77	109
Heavy Metals				
Arsenic	2	mg/kg	13	13
Cadmium	0.4	mg/kg	< 0.4	< 0.4
Chromium	5	mg/kg	160	170
Copper	5	mg/kg	13	11
Lead	5	mg/kg	18	13
Mercury	0.1	mg/kg	< 0.1	< 0.1
Nickel	5	mg/kg	17	13
Zinc	5	mg/kg	13	18
% Moisture	1	%	9.5	5.0

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 28, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 28, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
% Moisture	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716051
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	STP3-1	Apr 24, 2020		Soil	M20-Ap39870		X		X	X	X
2	STP3-2	Apr 24, 2020		Soil	M20-Ap39871		X		X	X	X
3	STP3-3	Apr 24, 2020		Soil	M20-Ap39872		X		X	X	X
4	STP3-4	Apr 24, 2020		Soil	M20-Ap39873		X		X	X	X
5	STP3-5	Apr 24, 2020		Soil	M20-Ap39874		X		X	X	X
6	STP3-6	Apr 24, 2020		Soil	M20-Ap39875		X		X	X	X
7	STP3-7	Apr 24, 2020		Soil	M20-Ap39876		X		X	X	X
8	STP3-8	Apr 24, 2020		Soil	M20-Ap39877		X		X	X	X
9	V1	Apr 24, 2020		Soil	M20-Ap39878		X		X	X	X
10	V3	Apr 24, 2020		Soil	M20-Ap39879	X			X	X	X
11	V5	Apr 24, 2020		Soil	M20-Ap39880	X			X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
12	V6	Apr 24, 2020		Soil	M20-Ap39881		X		X	X	X
13	V8	Apr 24, 2020		Soil	M20-Ap39882	X			X	X	X
14	V10	Apr 24, 2020		Soil	M20-Ap39883	X			X	X	X
15	V11	Apr 24, 2020		Soil	M20-Ap39884		X		X	X	X
16	V13	Apr 24, 2020		Soil	M20-Ap39885	X			X	X	X
17	V16	Apr 24, 2020		Soil	M20-Ap39886		X		X	X	X
18	V17	Apr 24, 2020		Soil	M20-Ap39887	X			X	X	X
19	V19	Apr 24, 2020		Soil	M20-Ap39888	X			X	X	X
20	V21	Apr 24, 2020		Soil	M20-Ap39889		X		X	X	X
21	V23	Apr 24, 2020		Soil	M20-Ap39890	X			X	X	X
22	V25	Apr 24, 2020		Soil	M20-Ap39891	X			X	X	X
23	V26	Apr 24, 2020		Soil	M20-Ap39892		X		X	X	X
24	V29	Apr 24, 2020		Soil	M20-Ap39893	X			X	X	X

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Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
25	V31	Apr 24, 2020		Soil	M20-Ap39894		X		X	X	X
26	DUP1	Apr 24, 2020		Soil	M20-Ap39895	X			X	X	X
27	V2	Apr 24, 2020		Soil	M20-Ap39896			X			
28	V4	Apr 24, 2020		Soil	M20-Ap39897			X			
29	V7	Apr 24, 2020		Soil	M20-Ap39898			X			
30	V9	Apr 24, 2020		Soil	M20-Ap39899			X			
31	V12	Apr 24, 2020		Soil	M20-Ap39900			X			
32	V14	Apr 24, 2020		Soil	M20-Ap39901			X			
33	V15	Apr 24, 2020		Soil	M20-Ap39902			X			
34	V18	Apr 24, 2020		Soil	M20-Ap39903			X			
35	V20	Apr 24, 2020		Soil	M20-Ap39904			X			
36	V22	Apr 24, 2020		Soil	M20-Ap39905			X			
37	V24	Apr 24, 2020		Soil	M20-Ap39906			X			

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
38	V27	Apr 24, 2020		Soil	M20-Ap39907			X			
39	V28	Apr 24, 2020		Soil	M20-Ap39908			X			
40	V30	Apr 24, 2020		Soil	M20-Ap39909			X			
41	V32	Apr 24, 2020		Soil	M20-Ap39910			X			
42	DUP2	Apr 24, 2020		Soil	M20-Ap39911			X			
Test Counts						11	15	16	26	26	26

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	124			70-130	Pass	
TRH C10-C14	%	99			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	120			70-130	Pass	
Toluene	%	116			70-130	Pass	
Ethylbenzene	%	119			70-130	Pass	
m&p-Xylenes	%	118			70-130	Pass	
Xylenes - Total*	%	99			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	121			70-130	Pass	
TRH C6-C10	%	119			70-130	Pass	
TRH >C10-C16	%	114			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	85			70-130	Pass	
4.4'-DDD	%	98			70-130	Pass	
4.4'-DDE	%	97			70-130	Pass	
4.4'-DDT	%	74			70-130	Pass	
a-BHC	%	89			70-130	Pass	
Aldrin	%	95			70-130	Pass	
b-BHC	%	89			70-130	Pass	
d-BHC	%	97			70-130	Pass	
Dieldrin	%	96			70-130	Pass	
Endosulfan I	%	115			70-130	Pass	
Endosulfan II	%	102			70-130	Pass	
Endosulfan sulphate	%	82			70-130	Pass	
Endrin	%	88			70-130	Pass	
Endrin aldehyde	%	103			70-130	Pass	
Endrin ketone	%	102			70-130	Pass	
g-BHC (Lindane)	%	109			70-130	Pass	
Heptachlor	%	78			70-130	Pass	
Heptachlor epoxide	%	78			70-130	Pass	
Hexachlorobenzene	%	97			70-130	Pass	
Methoxychlor	%	81			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	83			70-130	Pass	
Dimethoate	%	77			70-130	Pass	
Ethion	%	77			70-130	Pass	
Fenitrothion	%	80			70-130	Pass	
Methyl parathion	%	78			70-130	Pass	
Mevinphos	%	81			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	87			80-120	Pass	
Cadmium	%	103			80-120	Pass	
Chromium	%	91			80-120	Pass	
Copper	%	92			80-120	Pass	
Lead	%	92			80-120	Pass	
Mercury	%	112			75-125	Pass	
Nickel	%	88			80-120	Pass	
Zinc	%	85			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDT	M20-Ap40589	NCP	%	94			70-130	Pass	
Methoxychlor	M20-Ap40589	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap39871	CP	%	127			70-130	Pass	
TRH C10-C14	M20-Ap39871	CP	%	95			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap39871	CP	%	123			70-130	Pass	
Toluene	M20-Ap39871	CP	%	122			70-130	Pass	
Ethylbenzene	M20-Ap39871	CP	%	126			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	M20-Ap39871	CP	%	126			70-130	Pass	
o-Xylene	M20-Ap39871	CP	%	129			70-130	Pass	
Xylenes - Total*	M20-Ap39871	CP	%	115			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap39871	CP	%	129			70-130	Pass	
TRH C6-C10	M20-Ap39871	CP	%	122			70-130	Pass	
TRH >C10-C16	M20-Ap39871	CP	%	94			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap39871	CP	%	79			75-125	Pass	
Cadmium	M20-Ap39871	CP	%	98			75-125	Pass	
Copper	M20-Ap39871	CP	%	100			75-125	Pass	
Lead	M20-Ap39871	CP	%	76			75-125	Pass	
Mercury	M20-Ap39871	CP	%	104			70-130	Pass	
Nickel	M20-Ap39871	CP	%	102			75-125	Pass	
Zinc	M20-Ap39871	CP	%	100			75-125	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap36520	NCP	%	127			70-130	Pass	
Dimethoate	M20-Ap36520	NCP	%	76			70-130	Pass	
Ethion	M20-Ap36520	NCP	%	89			70-130	Pass	
Fenitrothion	M20-Ap36520	NCP	%	112			70-130	Pass	
Methyl parathion	M20-Ap36520	NCP	%	116			70-130	Pass	
Mevinphos	M20-Ap36520	NCP	%	86			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap39881	CP	%	99			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap39881	CP	%	102			70-130	Pass	
Toluene	M20-Ap39881	CP	%	110			70-130	Pass	
Ethylbenzene	M20-Ap39881	CP	%	115			70-130	Pass	
m&p-Xylenes	M20-Ap39881	CP	%	114			70-130	Pass	
o-Xylene	M20-Ap39881	CP	%	119			70-130	Pass	
Xylenes - Total*	M20-Ap39881	CP	%	116			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap39881	CP	%	123			70-130	Pass	
TRH C6-C10	M20-Ap39881	CP	%	97			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap39881	CP	%	107			75-125	Pass	
Cadmium	M20-Ap39881	CP	%	99			75-125	Pass	
Copper	M20-Ap39881	CP	%	108			75-125	Pass	
Lead	M20-Ap39881	CP	%	102			75-125	Pass	
Mercury	M20-Ap39881	CP	%	102			70-130	Pass	
Nickel	M20-Ap39881	CP	%	106			75-125	Pass	
Zinc	M20-Ap39881	CP	%	101			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap39891	CP	%	101			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzene	M20-Ap39891	CP	%	94			70-130	Pass	
Toluene	M20-Ap39891	CP	%	105			70-130	Pass	
Ethylbenzene	M20-Ap39891	CP	%	108			70-130	Pass	
m&p-Xylenes	M20-Ap39891	CP	%	108			70-130	Pass	
o-Xylene	M20-Ap39891	CP	%	112			70-130	Pass	
Xylenes - Total*	M20-Ap39891	CP	%	109			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap39891	CP	%	117			70-130	Pass	
TRH C6-C10	M20-Ap39891	CP	%	97			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap39891	CP	%	126			70-130	Pass	
4.4'-DDD	M20-Ap39891	CP	%	101			70-130	Pass	
4.4'-DDE	M20-Ap39891	CP	%	122			70-130	Pass	
a-BHC	M20-Ap39891	CP	%	117			70-130	Pass	
Aldrin	M20-Ap39891	CP	%	107			70-130	Pass	
b-BHC	M20-Ap39891	CP	%	121			70-130	Pass	
d-BHC	M20-Ap39891	CP	%	94			70-130	Pass	
Dieldrin	M20-Ap39891	CP	%	80			70-130	Pass	
Endosulfan I	M20-Ap39891	CP	%	96			70-130	Pass	
Endosulfan II	M20-Ap39891	CP	%	111			70-130	Pass	
Endosulfan sulphate	M20-Ap39891	CP	%	105			70-130	Pass	
Endrin	M20-Ap39891	CP	%	74			70-130	Pass	
Endrin aldehyde	M20-Ap39891	CP	%	120			70-130	Pass	
Endrin ketone	M20-Ap39891	CP	%	110			70-130	Pass	
g-BHC (Lindane)	M20-Ap39891	CP	%	120			70-130	Pass	
Heptachlor	M20-Ap39891	CP	%	79			70-130	Pass	
Heptachlor epoxide	M20-Ap39891	CP	%	82			70-130	Pass	
Hexachlorobenzene	M20-Ap39891	CP	%	96			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap39891	CP	%	95			75-125	Pass	
Cadmium	M20-Ap39891	CP	%	99			75-125	Pass	
Chromium	M20-Ap39891	CP	%	103			75-125	Pass	
Copper	M20-Ap39891	CP	%	102			75-125	Pass	
Lead	M20-Ap39891	CP	%	97			75-125	Pass	
Mercury	M20-Ap39891	CP	%	102			70-130	Pass	
Nickel	M20-Ap39891	CP	%	99			75-125	Pass	
Zinc	M20-Ap39891	CP	%	95			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39870	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap40597	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap40597	NCP	mg/kg	470	580	21	30%	Pass	
TRH C29-C36	M20-Ap40597	NCP	mg/kg	290	350	20	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39870	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39870	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39870	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39870	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39870	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39870	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39870	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39870	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap40597	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap40597	NCP	mg/kg	680		21	30%	Pass	
TRH >C34-C40	M20-Ap40597	NCP	mg/kg	100		20	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap40589	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap40589	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap40589	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap40589	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Omethoate	M20-Ap40589	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap40589	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39870	CP	%	8.8	9.9	12	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39871	CP	mg/kg	28	29	2.0	30%	Pass	
Cadmium	M20-Ap39871	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39871	CP	mg/kg	240	240	1.0	30%	Pass	
Copper	M20-Ap39871	CP	mg/kg	15	16	2.0	30%	Pass	
Lead	M20-Ap39871	CP	mg/kg	22	22	<1	30%	Pass	
Mercury	M20-Ap39871	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39871	CP	mg/kg	18	18	1.0	30%	Pass	
Zinc	M20-Ap39871	CP	mg/kg	26	26	1.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39880	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39880	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39880	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39880	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39880	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39880	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39880	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39880	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39880	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Toxaphene	M20-Ap24124	NCP	mg/kg	< 1	< 1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39880	CP	mg/kg	18	18	3.0	30%	Pass	
Cadmium	M20-Ap39880	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39880	CP	mg/kg	250	190	26	30%	Pass	
Copper	M20-Ap39880	CP	mg/kg	8.5	11	25	30%	Pass	
Lead	M20-Ap39880	CP	mg/kg	16	16	<1	30%	Pass	
Mercury	M20-Ap39880	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39880	CP	mg/kg	12	12	2.0	30%	Pass	
Zinc	M20-Ap39880	CP	mg/kg	11	13	14	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39880	CP	%	4.9	4.6	7.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39881	CP	mg/kg	15	15	1.0	30%	Pass	
Cadmium	M20-Ap39881	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39881	CP	mg/kg	210	200	5.0	30%	Pass	
Copper	M20-Ap39881	CP	mg/kg	10	10	1.0	30%	Pass	
Lead	M20-Ap39881	CP	mg/kg	15	15	2.0	30%	Pass	
Mercury	M20-Ap39881	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39881	CP	mg/kg	13	13	1.0	30%	Pass	
Zinc	M20-Ap39881	CP	mg/kg	13	14	2.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39890	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39890	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39890	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39890	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39890	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39890	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39890	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39890	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39890	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39890	CP	%	2.3	2.3	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39891	CP	mg/kg	12	12	2.0	30%	Pass	
Cadmium	M20-Ap39891	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39891	CP	mg/kg	160	170	3.0	30%	Pass	
Copper	M20-Ap39891	CP	mg/kg	9.7	9.7	1.0	30%	Pass	
Lead	M20-Ap39891	CP	mg/kg	13	13	2.0	30%	Pass	
Mercury	M20-Ap39891	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39891	CP	mg/kg	13	14	1.0	30%	Pass	
Zinc	M20-Ap39891	CP	mg/kg	8.0	7.7	4.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

Address	5/21 Parap Rd Parap NT 0820
Contact Name	Sarah Doherty
Phone №	417647498
Special Directions	Jars go to Melbourne, ACM goes to Sydney
Purchase Order	
Quote ID №	200422SLRNT

Project Name: JSS

EDD Format (Estat, EQuIS etc): Esdat & csv

Handed over by:

Email for Results: jsheridan@slrconsulting.com; pturyn@slrconsulting.com; sdoherty@slrconsulting.com

Analyses (Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to direct SUITE pricing)

Containers (Change container type & size if necessary)

Required Turnaround Time (TAT) (Default will be 5 days if not ticked)

*Surcharge will apply

- ☐ Overnight (reporting by 9am)*
- ☑ Same day*
- ☐ 1 day*
- ☐ 2 days*
- ☐ 3 days*
- ☐ 6 days (Standard)
- ☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil charterisation	Hold	Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar charterisation	Rinsate bottles	Sample Comments / Dangerous Goods Hazard Warning
1	ACM3	27/04/20	s					X						1			
2	ACM4	27/04/20	s					X						1			
3	ACM5	27/04/20	s				X					1		1			
4	V33	27/04/20	s								1		1				
5	V34	27/04/20	s	X	X	X					1		1				
6	V35	27/04/20	s								1		1				
7	V36	27/04/20	s	X	X		X				1		1				
8	V37	27/04/20	s								1	1					
9	V38	27/04/20	s	X	X	X					1		1				
10	V39	27/04/20	s								1		1				
11	V40	27/04/20	s								1		1				
12	V41	27/04/20	s	X	X		X				1		1				
13	V42	27/04/20	s	X	X	X					1	1					
14	V43	27/04/20	s								1		1				
15	V44	27/04/20	s	X	X	X					1		1				
16	V45	27/04/20	s								1		1				
17	V46	27/04/20	s	X	X		X				1		1				
18	V47	27/04/20	s	X	X	X					1	1					
19	V48	27/04/20	s								1		1				
20	V49	27/04/20	s	X	X	X					1		1				
21	V50	27/04/20	s								1		1				
22	V51	27/04/20	s	X	X		X				1		1				
23	V52	27/04/20	s	X	X	X					1	1					
24	V53	27/04/20	s								1		1				
25	V54	27/04/20	s								1		1				
26	V55	27/04/20	s	X	X	X					1		1				
27	V56	27/04/20	s	X	X		X				1		1				
28	V57	27/04/20	s	X	X	X					1	1					
29	V58	27/04/20	s								1		1				
30	V59	27/04/20	s	X	X	X					1		1				
31	V60	27/04/20	s								1		1				
32	V61	27/04/20	s	X	X		X				1		1				
33	V62	27/04/20	s	X	X	X					1	1					

Catherine
EF
28/4 9am

716076

eurofins | Environment Testing

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Site # 1254 & 14271

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Phone : +61 8 9251 9600
NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	Same day
Date/Time received:	Apr 28, 2020 9:00 AM
Eurofins reference:	**716056**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Notes

Can't analyse B6 & B14 for V36 as we didn't receive jar

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

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Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716056
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	ACM3	Apr 27, 2020		Building Materials	M20-Ap39978			X				
2	ACM4	Apr 27, 2020		Building Materials	M20-Ap39979			X				
3	ACM5	Apr 27, 2020		Soil	M20-Ap39980		X					
4	V34	Apr 27, 2020		Soil	M20-Ap39981	X				X	X	X
5	V38	Apr 27, 2020		Soil	M20-Ap39982	X				X	X	X
6	V41	Apr 27, 2020		Soil	M20-Ap39983		X			X	X	X
7	V42	Apr 27, 2020		Soil	M20-Ap39984	X				X	X	X
8	V44	Apr 27, 2020		Soil	M20-Ap39985	X				X	X	X
9	V46	Apr 27, 2020		Soil	M20-Ap39986		X			X	X	X

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
10	V47	Apr 27, 2020		Soil	M20-Ap39987	X				X	X	X
11	V49	Apr 27, 2020		Soil	M20-Ap39988	X				X	X	X
12	V51	Apr 27, 2020		Soil	M20-Ap39989		X			X	X	X
13	V52	Apr 27, 2020		Soil	M20-Ap39990	X				X	X	X
14	V55	Apr 27, 2020		Soil	M20-Ap39991	X				X	X	X
15	V56	Apr 27, 2020		Soil	M20-Ap39992		X			X	X	X
16	V57	Apr 27, 2020		Soil	M20-Ap39993	X				X	X	X
17	V59	Apr 27, 2020		Soil	M20-Ap39994	X				X	X	X
18	V61	Apr 27, 2020		Soil	M20-Ap39995		X			X	X	X
19	V62	Apr 27, 2020		Soil	M20-Ap39996	X				X	X	X
20	V33	Apr 27, 2020		Soil	M20-Ap39997				X			
21	V37-A	Apr 27, 2020		Soil	M20-Ap39998				X			
22	V37-B	Apr 27, 2020		Soil	M20-Ap39999				X			

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ABN – 50 005 085 521 web : www.eurofins.com.au e.mail : EnviroSales@eurofins.com

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Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716056
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
23	V39	Apr 27, 2020		Soil	M20-Ap40000				X			
24	V40	Apr 27, 2020		Soil	M20-Ap40001				X			
25	V43	Apr 27, 2020		Soil	M20-Ap40002				X			
26	V45	Apr 27, 2020		Soil	M20-Ap40003				X			
27	V48	Apr 27, 2020		Soil	M20-Ap40004				X			
28	V50	Apr 27, 2020		Soil	M20-Ap40005				X			
29	V53	Apr 27, 2020		Soil	M20-Ap40006				X			
30	V35	Apr 27, 2020		Soil	M20-Ap40007				X			
31	V54	Apr 27, 2020		Soil	M20-Ap40008				X			
32	V58	Apr 27, 2020		Soil	M20-Ap40009				X			
33	V60	Apr 27, 2020		Soil	M20-Ap40010				X			
34	V36	Apr 27, 2020		Soil	M20-Ap40076		X					
Test Counts						11	7	2	14	16	16	16

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention: **Sarah Doherty**

Report **716056-S**
Project name JSS
Received Date Apr 28, 2020

Client Sample ID			**V34**	**V38**	**V41**	**V42**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap39981**	**M20-Ap39982**	**M20-Ap39983**	**M20-Ap39984**
Date Sampled			**Apr 27, 2020**	**Apr 27, 2020**	**Apr 27, 2020**	**Apr 27, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	290	47	45	44
TRH C15-C28	50	mg/kg	560	94	98	110
TRH C29-C36	50	mg/kg	150	< 50	< 50	82
TRH C10-C36 (Total)	50	mg/kg	1000	141	143	236
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	115	103	117	123
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	360	60	58	55
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	360	60	58	55
TRH >C16-C34	100	mg/kg	500	< 100	< 100	140
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	860	< 100	< 100	195
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.2
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	0.13	0.19	0.10
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V34	V38	V41	V42
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39981	M20-Ap39982	M20-Ap39983	M20-Ap39984
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.13	0.19	0.1
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	0.13	0.19	0.35
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.25
Dibutylchlorendate (surr.)	1	%	86	94	149	107
Tetrachloro-m-xylene (surr.)	1	%	117	68	97	60
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	127	78	106	91

Client Sample ID			V34	V38	V41	V42
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39981	M20-Ap39982	M20-Ap39983	M20-Ap39984
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	16	19	14	20
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	230	190	150	220
Copper	5	mg/kg	11	9.8	11	11
Lead	5	mg/kg	24	17	13	18
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	13	13	16
Zinc	5	mg/kg	14	17	28	18
% Moisture	1	%	23	14	4.8	3.5

Client Sample ID			V44	V46	V47	V49
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39985	M20-Ap39986	M20-Ap39987	M20-Ap39988
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	29
TRH C15-C28	50	mg/kg	70	< 50	< 50	63
TRH C29-C36	50	mg/kg	230	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	300	< 50	< 50	92
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	108	107	115	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	200	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	230	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	430	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V44	V46	V47	V49
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39985	M20-Ap39986	M20-Ap39987	M20-Ap39988
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	0.13	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.13	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.13	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	122	67	126	103
Tetrachloro-m-xylene (surr.)	1	%	70	79	78	68
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V44	V46	V47	V49
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39985	M20-Ap39986	M20-Ap39987	M20-Ap39988
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	133	87	72	86
Heavy Metals						
Arsenic	2	mg/kg	14	22	16	46
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	130	190	160	260
Copper	5	mg/kg	30	11	9.0	8.8
Lead	5	mg/kg	80	17	13	280
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	9.3	15	10	12
Zinc	5	mg/kg	120	24	14	13
% Moisture	1	%	3.1	13	11	5.2

Client Sample ID			V51	V52	V55	V56
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39989	M20-Ap39990	M20-Ap39991	M20-Ap39992
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	47	42	47	54
TRH C15-C28	50	mg/kg	95	90	91	110
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	142	132	138	164
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	116	120	101	125
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	60	54	59	69
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	60	54	59	69
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			V51	V52	V55	V56
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39989	M20-Ap39990	M20-Ap39991	M20-Ap39992
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.10	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.1	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	113	88	93	70
Tetrachloro-m-xylene (surr.)	1	%	67	111	145	86
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V51	V52	V55	V56
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39989	M20-Ap39990	M20-Ap39991	M20-Ap39992
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	81	121	133	111
Heavy Metals						
Arsenic	2	mg/kg	23	24	20	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	300	290	200	150
Copper	5	mg/kg	7.8	9.3	12	9.9
Lead	5	mg/kg	18	21	19	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	12	12	14	16
Zinc	5	mg/kg	14	35	19	15
% Moisture	1	%	13	7.5	3.1	10

Client Sample ID			V57	V59	V61	V62
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39993	M20-Ap39994	M20-Ap39995	M20-Ap39996
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	55	55	51	51
TRH C15-C28	50	mg/kg	100	110	110	100
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	155	165	161	151
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	127	123	127	102

Client Sample ID			V57	V59	V61	V62
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39993	M20-Ap39994	M20-Ap39995	M20-Ap39996
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	69	69	66	65
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	69	69	66	65
TRH >C16-C34	100	mg/kg	< 100	100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	169	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	0.09	0.11
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	0.09	0.11
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.19	0.11
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	90	117	84	77
Tetrachloro-m-xylene (surr.)	1	%	146	145	107	116
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V57	V59	V61	V62
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap39993	M20-Ap39994	M20-Ap39995	M20-Ap39996
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	112	120	123	113
Heavy Metals						
Arsenic	2	mg/kg	16	13	22	15
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	240	100	150	140
Copper	5	mg/kg	7.9	10	8.3	9.4
Lead	5	mg/kg	15	12	20	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	11	11	12
Zinc	5	mg/kg	11	35	39	25
% Moisture	1	%	4.1	2.7	2.7	4.2

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 28, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 28, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
% Moisture	Melbourne	Apr 28, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

eurofins | Environment Testing

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NATA # 1261 Site # 18217

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NATA # 1261 Site # 20794

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Rolleston, Christchurch 7675
Phone : 0800 856 450
IANZ # 1290

Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716056
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	ACM3	Apr 27, 2020		Building Materials	M20-Ap39978			X				
2	ACM4	Apr 27, 2020		Building Materials	M20-Ap39979			X				
3	ACM5	Apr 27, 2020		Soil	M20-Ap39980		X					
4	V34	Apr 27, 2020		Soil	M20-Ap39981	X				X	X	X
5	V38	Apr 27, 2020		Soil	M20-Ap39982	X				X	X	X
6	V41	Apr 27, 2020		Soil	M20-Ap39983		X			X	X	X
7	V42	Apr 27, 2020		Soil	M20-Ap39984	X				X	X	X
8	V44	Apr 27, 2020		Soil	M20-Ap39985	X				X	X	X
9	V46	Apr 27, 2020		Soil	M20-Ap39986		X			X	X	X

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Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
10	V47	Apr 27, 2020		Soil	M20-Ap39987	X				X	X	X
11	V49	Apr 27, 2020		Soil	M20-Ap39988	X				X	X	X
12	V51	Apr 27, 2020		Soil	M20-Ap39989		X			X	X	X
13	V52	Apr 27, 2020		Soil	M20-Ap39990	X				X	X	X
14	V55	Apr 27, 2020		Soil	M20-Ap39991	X				X	X	X
15	V56	Apr 27, 2020		Soil	M20-Ap39992		X			X	X	X
16	V57	Apr 27, 2020		Soil	M20-Ap39993	X				X	X	X
17	V59	Apr 27, 2020		Soil	M20-Ap39994	X				X	X	X
18	V61	Apr 27, 2020		Soil	M20-Ap39995		X			X	X	X
19	V62	Apr 27, 2020		Soil	M20-Ap39996	X				X	X	X
20	V33	Apr 27, 2020		Soil	M20-Ap39997				X			
21	V37-A	Apr 27, 2020		Soil	M20-Ap39998				X			
22	V37-B	Apr 27, 2020		Soil	M20-Ap39999				X			

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
23	V39	Apr 27, 2020		Soil	M20-Ap40000				X			
24	V40	Apr 27, 2020		Soil	M20-Ap40001				X			
25	V43	Apr 27, 2020		Soil	M20-Ap40002				X			
26	V45	Apr 27, 2020		Soil	M20-Ap40003				X			
27	V48	Apr 27, 2020		Soil	M20-Ap40004				X			
28	V50	Apr 27, 2020		Soil	M20-Ap40005				X			
29	V53	Apr 27, 2020		Soil	M20-Ap40006				X			
30	V35	Apr 27, 2020		Soil	M20-Ap40007				X			
31	V54	Apr 27, 2020		Soil	M20-Ap40008				X			
32	V58	Apr 27, 2020		Soil	M20-Ap40009				X			
33	V60	Apr 27, 2020		Soil	M20-Ap40010				X			
34	V36	Apr 27, 2020		Soil	M20-Ap40076		X					
Test Counts						11	7	2	14	16	16	16

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	83			70-130	Pass	
TRH C10-C14	%	115			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	83			70-130	Pass	
Toluene	%	122			70-130	Pass	
Ethylbenzene	%	117			70-130	Pass	
m&p-Xylenes	%	113			70-130	Pass	
Xylenes - Total*	%	116			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	119			70-130	Pass	
TRH C6-C10	%	89			70-130	Pass	
TRH >C10-C16	%	130			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	90			70-130	Pass	
4.4'-DDD	%	87			70-130	Pass	
4.4'-DDE	%	73			70-130	Pass	
4.4'-DDT	%	83			70-130	Pass	
a-BHC	%	104			70-130	Pass	
Aldrin	%	75			70-130	Pass	
b-BHC	%	104			70-130	Pass	
d-BHC	%	74			70-130	Pass	
Dieldrin	%	88			70-130	Pass	
Endosulfan I	%	99			70-130	Pass	
Endosulfan II	%	82			70-130	Pass	
Endosulfan sulphate	%	105			70-130	Pass	
Endrin	%	72			70-130	Pass	
Endrin aldehyde	%	88			70-130	Pass	
Endrin ketone	%	72			70-130	Pass	
g-BHC (Lindane)	%	93			70-130	Pass	
Heptachlor	%	91			70-130	Pass	
Heptachlor epoxide	%	92			70-130	Pass	
Hexachlorobenzene	%	101			70-130	Pass	
Methoxychlor	%	83			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	78			70-130	Pass	
Dimethoate	%	93			70-130	Pass	
Ethion	%	96			70-130	Pass	
Fenitrothion	%	84			70-130	Pass	
Methyl parathion	%	81			70-130	Pass	
Mevinphos	%	88			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	110			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	112			80-120	Pass	
Copper	%	113			80-120	Pass	
Lead	%	113			80-120	Pass	
Mercury	%	111			75-125	Pass	
Nickel	%	109			80-120	Pass	
Zinc	%	106			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap36676	NCP	%	119			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap36676	NCP	%	106			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap36526	NCP	%	81			70-130	Pass	
4.4'-DDD	M20-Ap36526	NCP	%	80			70-130	Pass	
4.4'-DDE	M20-Ap36526	NCP	%	112			70-130	Pass	
4.4'-DDT	M20-Ap36526	NCP	%	82			70-130	Pass	
a-BHC	M20-Ap36526	NCP	%	78			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aldrin	M20-Ap36526	NCP	%	112			70-130	Pass	
b-BHC	M20-Ap36526	NCP	%	75			70-130	Pass	
d-BHC	M20-Ap36526	NCP	%	92			70-130	Pass	
Dieldrin	M20-Ap36526	NCP	%	83			70-130	Pass	
Endosulfan I	M20-Ap36526	NCP	%	107			70-130	Pass	
Endosulfan II	M20-Ap36526	NCP	%	107			70-130	Pass	
Endosulfan sulphate	M20-Ap36526	NCP	%	85			70-130	Pass	
Endrin	M20-Ap36526	NCP	%	92			70-130	Pass	
Endrin aldehyde	M20-Ap36526	NCP	%	112			70-130	Pass	
Endrin ketone	M20-Ap36526	NCP	%	112			70-130	Pass	
g-BHC (Lindane)	M20-Ap36526	NCP	%	71			70-130	Pass	
Heptachlor	M20-Ap36526	NCP	%	76			70-130	Pass	
Heptachlor epoxide	M20-Ap36526	NCP	%	102			70-130	Pass	
Hexachlorobenzene	M20-Ap36526	NCP	%	96			70-130	Pass	
Methoxychlor	M20-Ap36526	NCP	%	88			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap39986	CP	%	80			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap39986	CP	%	76			70-130	Pass	
Toluene	M20-Ap39986	CP	%	111			70-130	Pass	
Ethylbenzene	M20-Ap39986	CP	%	123			70-130	Pass	
m&p-Xylenes	M20-Ap39986	CP	%	98			70-130	Pass	
o-Xylene	M20-Ap39986	CP	%	114			70-130	Pass	
Xylenes - Total*	M20-Ap39986	CP	%	103			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap39986	CP	%	105			70-130	Pass	
TRH C6-C10	M20-Ap39986	CP	%	85			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap39986	CP	%	118			75-125	Pass	
Cadmium	M20-Ap39986	CP	%	101			75-125	Pass	
Chromium	M20-Ap39986	CP	%	148			75-125	Fail	Q08
Copper	M20-Ap39986	CP	%	107			75-125	Pass	
Lead	M20-Ap39986	CP	%	106			75-125	Pass	
Mercury	M20-Ap39986	CP	%	109			70-130	Pass	
Nickel	M20-Ap39986	CP	%	101			75-125	Pass	
Zinc	M20-Ap39986	CP	%	89			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap36471	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap36471	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap36471	NCP	mg/kg	130	160	17	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap36471	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap36471	NCP	mg/kg	100	110	8.0	30%	Pass	
TRH >C34-C40	M20-Ap36471	NCP	mg/kg	< 100	110	24	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap37607	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap37607	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap37607	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap37607	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap37607	NCP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Tokuthion	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap37607	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39984	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39984	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39984	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39984	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39984	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39984	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39984	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39984	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39984	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39985	CP	%	3.1	3.1	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap39986	CP	mg/kg	22	22	<1	30%	Pass	
Cadmium	M20-Ap39986	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap39986	CP	mg/kg	190	190	3.0	30%	Pass	
Copper	M20-Ap39986	CP	mg/kg	11	11	<1	30%	Pass	
Lead	M20-Ap39986	CP	mg/kg	17	17	1.0	30%	Pass	
Mercury	M20-Ap39986	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap39986	CP	mg/kg	15	15	<1	30%	Pass	
Zinc	M20-Ap39986	CP	mg/kg	24	25	2.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39989	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39989	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39989	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39989	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39989	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39989	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39989	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39989	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap39995	CP	%	2.7	2.7	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39996	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap39996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap39996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap39996	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap39996	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap39996	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39996	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap39996	CP	mg/kg	< 20	< 20	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

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NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	716056-AID
Project Name	JSS
Received Date	Apr 28, 2020
Date Reported	Apr 29, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name JSS
Project ID
Date Sampled Apr 27, 2020
Report 716056-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
ACM3	20-Ap39978	Apr 27, 2020	Approximate Sample 8g / 80x35x2mm Sample consisted of: Grey weathered fibre cement material	Chrysotile asbestos detected.
ACM4	20-Ap39979	Apr 27, 2020	Approximate Sample 13g / 55x40x3mm Sample consisted of: Grey fibrous plaster cement	No asbestos detected. Organic fibre detected. No trace asbestos detected.
ACM5	20-Ap39980	Apr 27, 2020	Approximate Sample 799g Sample consisted of: Brown coarse-grained soil and rocks	ACM: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of ACM = 13g Total estimated asbestos content in ACM = 1.3g* Total estimated asbestos concentration in ACM = 0.16% w/w* Organic fibre detected. No trace asbestos detected.
V34	20-Ap39981	Apr 27, 2020	Approximate Sample 225g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V38	20-Ap39982	Apr 27, 2020	Approximate Sample 216g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V41	20-Ap39983	Apr 27, 2020	Approximate Sample 594g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V42	20-Ap39984	Apr 27, 2020	Approximate Sample 363g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V44	20-Ap39985	Apr 27, 2020	Approximate Sample 568g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V46	20-Ap39986	Apr 27, 2020	Approximate Sample 696g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V47	20-Ap39987	Apr 27, 2020	Approximate Sample 229g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V49	20-Ap39988	Apr 27, 2020	Approximate Sample 194g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V51	20-Ap39989	Apr 27, 2020	Approximate Sample 633g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V52	20-Ap39990	Apr 27, 2020	Approximate Sample 413g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V55	20-Ap39991	Apr 27, 2020	Approximate Sample 414g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V56	20-Ap39992	Apr 27, 2020	Approximate Sample 575g Sample consisted of: Brown coarse-grained soil, plaster, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V57	20-Ap39993	Apr 27, 2020	Approximate Sample 250g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V59	20-Ap39994	Apr 27, 2020	Approximate Sample 490g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V61	20-Ap39995	Apr 27, 2020	Approximate Sample 738g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V62	20-Ap39996	Apr 27, 2020	Approximate Sample 333g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V36	20-Ap40076	Apr 27, 2020	Approximate Sample 517g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 28, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 28, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 28, 2020	Indefinite

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716056
Phone: +61 2 9428 8100
Fax:

Received: Apr 28, 2020 9:00 AM
Due: Apr 29, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
External Laboratory												
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**							
1	ACM3	Apr 27, 2020		Building Materials	M20-Ap39978			X				
2	ACM4	Apr 27, 2020		Building Materials	M20-Ap39979			X				
3	ACM5	Apr 27, 2020		Soil	M20-Ap39980		X					
4	V34	Apr 27, 2020		Soil	M20-Ap39981	X				X	X	X
5	V38	Apr 27, 2020		Soil	M20-Ap39982	X				X	X	X
6	V41	Apr 27, 2020		Soil	M20-Ap39983		X			X	X	X
7	V42	Apr 27, 2020		Soil	M20-Ap39984	X				X	X	X
8	V44	Apr 27, 2020		Soil	M20-Ap39985	X				X	X	X
9	V46	Apr 27, 2020		Soil	M20-Ap39986		X			X	X	X

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Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
10	V47	Apr 27, 2020		Soil	M20-Ap39987	X				X	X	X
11	V49	Apr 27, 2020		Soil	M20-Ap39988	X				X	X	X
12	V51	Apr 27, 2020		Soil	M20-Ap39989		X			X	X	X
13	V52	Apr 27, 2020		Soil	M20-Ap39990	X				X	X	X
14	V55	Apr 27, 2020		Soil	M20-Ap39991	X				X	X	X
15	V56	Apr 27, 2020		Soil	M20-Ap39992		X			X	X	X
16	V57	Apr 27, 2020		Soil	M20-Ap39993	X				X	X	X
17	V59	Apr 27, 2020		Soil	M20-Ap39994	X				X	X	X
18	V61	Apr 27, 2020		Soil	M20-Ap39995		X			X	X	X
19	V62	Apr 27, 2020		Soil	M20-Ap39996	X				X	X	X
20	V33	Apr 27, 2020		Soil	M20-Ap39997				X			
21	V37-A	Apr 27, 2020		Soil	M20-Ap39998				X			
22	V37-B	Apr 27, 2020		Soil	M20-Ap39999				X			

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	Asbestos Absence /Presence	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271									X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X	X				
Brisbane Laboratory - NATA Site # 20794												
Perth Laboratory - NATA Site # 23736												
23	V39	Apr 27, 2020		Soil	M20-Ap40000				X			
24	V40	Apr 27, 2020		Soil	M20-Ap40001				X			
25	V43	Apr 27, 2020		Soil	M20-Ap40002				X			
26	V45	Apr 27, 2020		Soil	M20-Ap40003				X			
27	V48	Apr 27, 2020		Soil	M20-Ap40004				X			
28	V50	Apr 27, 2020		Soil	M20-Ap40005				X			
29	V53	Apr 27, 2020		Soil	M20-Ap40006				X			
30	V35	Apr 27, 2020		Soil	M20-Ap40007				X			
31	V54	Apr 27, 2020		Soil	M20-Ap40008				X			
32	V58	Apr 27, 2020		Soil	M20-Ap40009				X			
33	V60	Apr 27, 2020		Soil	M20-Ap40010				X			
34	V36	Apr 27, 2020		Soil	M20-Ap40076		X					
Test Counts						11	7	2	14	16	16	16

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

| | | |

| | | |

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ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 29, 2020 8:45 AM
Eurofins reference:	**716332**

Sample information

☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.

☑ All samples have been received as described on the above COC.

☑ COC has been completed correctly.

☑ Attempt to chill was evident.

☑ Appropriately preserved sample containers have been used.

☑ All samples were received in good condition.

☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.

☑ Appropriate sample containers have been used.

☑ Sample containers for volatile analysis received with zero headspace.

☒ Split sample sent to requested external lab.

☒ Some samples have been subcontracted.

N/A Custody Seals intact (if used).

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

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Company Name: SLR Consulting (NT)
Address: GPO Box 654
Darwin
NT 0801

Project Name: JSS

Order No.:
Report #: 716332
Phone: +61 2 9428 8100
Fax:

Received: Apr 29, 2020 8:45 AM
Due: Apr 30, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
External Laboratory											
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**						
1	V63	Apr 27, 2020		Soil	M20-Ap42511	X			X	X	X
2	V65	Apr 27, 2020		Soil	M20-Ap42512	X			X	X	X
3	V66	Apr 27, 2020		Soil	M20-Ap42513		X		X	X	X
4	V68	Apr 27, 2020		Soil	M20-Ap42514	X			X	X	X
5	V70	Apr 27, 2020		Soil	M20-Ap42515	X			X	X	X
6	V71	Apr 27, 2020		Soil	M20-Ap42516		X		X	X	X
7	V74	Apr 27, 2020		Soil	M20-Ap42517	X			X	X	X
8	V76	Apr 27, 2020		Soil	M20-Ap42518		X		X	X	X
9	V77	Apr 27, 2020		Soil	M20-Ap42519	X			X	X	X
10	V79	Apr 27, 2020		Soil	M20-Ap42520	X			X	X	X
11	V81	Apr 27, 2020		Soil	M20-Ap42521		X		X	X	X

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Received: Apr 29, 2020 8:45 AM
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Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
12	V82	Apr 27, 2020		Soil	M20-Ap42522	X			X	X	X
13	V85	Apr 27, 2020		Soil	M20-Ap42523	X			X	X	X
14	V86	Apr 27, 2020		Soil	M20-Ap42524		X		X	X	X
15	V88	Apr 27, 2020		Soil	M20-Ap42525	X			X	X	X
16	V90	Apr 27, 2020		Soil	M20-Ap42526	X			X	X	X
17	V91	Apr 27, 2020		Soil	M20-Ap42527		X		X	X	X
18	V93	Apr 27, 2020		Soil	M20-Ap42528	X			X	X	X
19	V95	Apr 27, 2020		Soil	M20-Ap42529	X			X	X	X
20	V96	Apr 27, 2020		Soil	M20-Ap42530		X		X	X	X
21	V98	Apr 27, 2020		Soil	M20-Ap42531	X			X	X	X
22	V100	Apr 27, 2020		Soil	M20-Ap42532	X			X	X	X
23	V101	Apr 27, 2020		Soil	M20-Ap42533		X		X	X	X
24	V103	Apr 27, 2020		Soil	M20-Ap42534	X			X	X	X

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Project Name: JSS

Order No.:
Report #: 716332
Phone: +61 2 9428 8100
Fax:

Received: Apr 29, 2020 8:45 AM
Due: Apr 30, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
25	V105	Apr 27, 2020		Soil	M20-Ap42535	X			X	X	X
26	V106	Apr 27, 2020		Soil	M20-Ap42536		X		X	X	X
27	V108	Apr 27, 2020		Soil	M20-Ap42537	X			X	X	X
28	R1	Apr 23, 2020		Water	M20-Ap42538				X		X
29	R2	Apr 24, 2020		Water	M20-Ap42539				X		X
30	R3	Apr 25, 2020		Water	M20-Ap42540				X		X
31	R4	Apr 27, 2020		Water	M20-Ap42541				X		X
32	V64	Apr 27, 2020		Soil	M20-Ap42542			X			
33	V67	Apr 27, 2020		Soil	M20-Ap42543			X			
34	V69	Apr 27, 2020		Soil	M20-Ap42544			X			
35	V72	Apr 27, 2020		Soil	M20-Ap42545			X			
36	V73	Apr 27, 2020		Soil	M20-Ap42546			X			
37	V75	Apr 27, 2020		Soil	M20-Ap42547			X			

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Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X				
Brisbane Laboratory - NATA Site # 20794											
Perth Laboratory - NATA Site # 23736											
38	V78	Apr 27, 2020		Soil	M20-Ap42548			X			
39	V80	Apr 27, 2020		Soil	M20-Ap42549			X			
40	V83	Apr 27, 2020		Soil	M20-Ap42550			X			
41	V84	Apr 27, 2020		Soil	M20-Ap42551			X			
42	V87	Apr 27, 2020		Soil	M20-Ap42552			X			
43	V89	Apr 27, 2020		Soil	M20-Ap42553			X			
44	V92	Apr 27, 2020		Soil	M20-Ap42554			X			
45	V94	Apr 27, 2020		Soil	M20-Ap42555			X			
46	V97	Apr 27, 2020		Soil	M20-Ap42556			X			
47	V99	Apr 27, 2020		Soil	M20-Ap42557			X			
48	V102	Apr 27, 2020		Soil	M20-Ap42558			X			
49	V104	Apr 27, 2020		Soil	M20-Ap42559			X			
50	V107	Apr 27, 2020		Soil	M20-Ap42560			X			
						18	9	19	31	27	31

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Project Name: JSS

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Phone: +61 2 9428 8100
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Received: Apr 29, 2020 8:45 AM
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Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail	Asbestos - AS4964	Asbestos - WA guidelines	HOLD	Eurofins | mgt Suite B14	Moisture Set	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271			X	X	X	X
Sydney Laboratory - NATA Site # 18217	X	X				
Brisbane Laboratory - NATA Site # 20794						
Perth Laboratory - NATA Site # 23736						
Test Counts	18	9	19	31	27	31

SLR Consulting (NT)
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Attention: **Sarah Doherty**

Report **716332-S**
Project name JSS
Received Date Apr 29, 2020

Client Sample ID			**V63**	**V65**	**V66**	**V68**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap42511**	**M20-Ap42512**	**M20-Ap42513**	**M20-Ap42514**
Date Sampled			**Apr 27, 2020**	**Apr 27, 2020**	**Apr 27, 2020**	**Apr 27, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	60	76	78	74
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	0.13	0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V63	V65	V66	V68
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42511	M20-Ap42512	M20-Ap42513	M20-Ap42514
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	0.13	0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.13	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	106	123	109	112
Tetrachloro-m-xylene (surr.)	1	%	82	98	80	85
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	93	115	101	99

Client Sample ID			V63	V65	V66	V68
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42511	M20-Ap42512	M20-Ap42513	M20-Ap42514
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	2	mg/kg	17	22	27	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	160	200	300	180
Copper	5	mg/kg	14	18	13	14
Lead	5	mg/kg	21	20	22	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	19	21	27	28
Zinc	5	mg/kg	48	23	16	17
% Moisture	1	%	8.9	3.3	13	6.5

Client Sample ID			V70	V71	V74	V76
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42515	M20-Ap42516	M20-Ap42517	M20-Ap42518
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	85	78	74	87
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V70	V71	V74	V76
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42515	M20-Ap42516	M20-Ap42517	M20-Ap42518
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	< 0.05	0.05	0.13	0.10
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.05	0.13	0.1
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.13	0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	115	111	119	100
Tetrachloro-m-xylene (surr.)	1	%	90	86	82	74
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V70	V71	V74	V76
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42515	M20-Ap42516	M20-Ap42517	M20-Ap42518
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	108	100	88	95
Heavy Metals						
Arsenic	2	mg/kg	15	16	19	32
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	110	150	190	280
Copper	5	mg/kg	14	12	12	12
Lead	5	mg/kg	19	17	19	27
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	24	20	23	24
Zinc	5	mg/kg	28	22	20	32
% Moisture	1	%	6.2	5.0	11	11

Client Sample ID			V77	V79	V81	V82
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42519	M20-Ap42520	M20-Ap42521	M20-Ap42522
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	78	91	51	98
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			V77	V79	V81	V82
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42519	M20-Ap42520	M20-Ap42521	M20-Ap42522
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	0.12	0.10
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	0.12	0.1
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	0.12	0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	110	109	117	124
Tetrachloro-m-xylene (surr.)	1	%	91	83	110	93
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V77	V79	V81	V82
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42519	M20-Ap42520	M20-Ap42521	M20-Ap42522
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	100	94	142	116
Heavy Metals						
Arsenic	2	mg/kg	20	32	25	19
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	190	290	260	180
Copper	5	mg/kg	13	11	12	14
Lead	5	mg/kg	21	26	21	20
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	20	18	21	23
Zinc	5	mg/kg	29	24	20	29
% Moisture	1	%	4.1	11	7.5	7.3

Client Sample ID			V85	V86	V88	V90
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42523	M20-Ap42524	M20-Ap42525	M20-Ap42526
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	52	59	83	52

Client Sample ID			V85	V86	V88	V90
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42523	M20-Ap42524	M20-Ap42525	M20-Ap42526
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.09
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.07	< 0.05	< 0.05	0.32
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.07	< 0.05	< 0.05	0.41
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.41
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	102	113	90	103
Tetrachloro-m-xylene (surr.)	1	%	89	95	76	95
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V85	V86	V88	V90
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42523	M20-Ap42524	M20-Ap42525	M20-Ap42526
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	104	112	85	87
Heavy Metals						
Arsenic	2	mg/kg	24	20	21	25
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	250	240	230	240
Copper	5	mg/kg	11	9.1	11	14
Lead	5	mg/kg	22	21	23	21
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	20	18	20	18
Zinc	5	mg/kg	17	15	35	26
% Moisture	1	%	8.1	14	1.9	4.0

Client Sample ID			V91	V93	V95	V96
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42527	M20-Ap42528	M20-Ap42529	M20-Ap42530
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			V91	V93	V95	V96
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42527	M20-Ap42528	M20-Ap42529	M20-Ap42530
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	125	63	66	77
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.19	0.09	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.46	0.49	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.65	0.58	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.65	0.58	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	121	95	130	114
Tetrachloro-m-xylene (surr.)	1	%	96	65	85	78
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V91	V93	V95	V96
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42527	M20-Ap42528	M20-Ap42529	M20-Ap42530
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	114	88	115	104
Heavy Metals						
Arsenic	2	mg/kg	27	13	19	26
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	230	88	180	220
Copper	5	mg/kg	12	16	12	14
Lead	5	mg/kg	22	16	23	26
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	19	18	18	18
Zinc	5	mg/kg	28	47	34	38
% Moisture	1	%	8.8	6.2	4.7	5.0

Client Sample ID			V98	V100	V101	V103
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42531	M20-Ap42532	M20-Ap42533	M20-Ap42534
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	82	82	87	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.17
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	0.17
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	0.17
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	111	90	107	89
Tetrachloro-m-xylene (surr.)	1	%	73	69	70	71

Client Sample ID			V98	V100	V101	V103
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42531	M20-Ap42532	M20-Ap42533	M20-Ap42534
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	99	84	85	77
Heavy Metals						
Arsenic	2	mg/kg	17	29	17	23
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	160	240	160	220
Copper	5	mg/kg	10	10	11	12
Lead	5	mg/kg	21	23	17	22
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	15	19	19	17
Zinc	5	mg/kg	29	17	20	33
% Moisture	1	%	4.1	12	22	2.6

Client Sample ID			V105	V106	V108
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42535	M20-Ap42536	M20-Ap42537
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions					
TRH C6-C9	20	mg/kg	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50
BTEX					
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	89	76	108
Total Recoverable Hydrocarbons - 2013 NEPM Fractions					
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100
Organochlorine Pesticides					
Chlordanes - Total	0.1	mg/kg	< 0.1	0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	0.20	0.34
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	0.75	0.75
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	0.95	1.09
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	1.05	1.09
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	86	95	91
Tetrachloro-m-xylene (surr.)	1	%	65	71	84

Client Sample ID			V105	V106	V108
Sample Matrix			Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42535	M20-Ap42536	M20-Ap42537
Date Sampled			Apr 27, 2020	Apr 27, 2020	Apr 27, 2020
Test/Reference	LOR	Unit			
Organophosphorus Pesticides					
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	148	86	83
Heavy Metals					
Arsenic	2	mg/kg	26	25	14
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	310	200	130
Copper	5	mg/kg	10.0	12	7.9
Lead	5	mg/kg	25	18	14
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	17	11	13
Zinc	5	mg/kg	15	39	20
% Moisture	1	%	7.7	5.5	6.5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 29, 2020	180 Days
- Method:			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
% Moisture	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	105			70-130	Pass	
TRH C10-C14	%	99			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	108			70-130	Pass	
Toluene	%	97			70-130	Pass	
Ethylbenzene	%	94			70-130	Pass	
m&p-Xylenes	%	93			70-130	Pass	
Xylenes - Total*	%	95			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	125			70-130	Pass	
TRH C6-C10	%	101			70-130	Pass	
TRH >C10-C16	%	95			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	84			70-130	Pass	
4.4'-DDD	%	83			70-130	Pass	
4.4'-DDE	%	85			70-130	Pass	
4.4'-DDT	%	88			70-130	Pass	
a-BHC	%	80			70-130	Pass	
Aldrin	%	83			70-130	Pass	
b-BHC	%	82			70-130	Pass	
d-BHC	%	86			70-130	Pass	
Dieldrin	%	83			70-130	Pass	
Endosulfan I	%	79			70-130	Pass	
Endosulfan II	%	75			70-130	Pass	
Endosulfan sulphate	%	73			70-130	Pass	
Endrin	%	99			70-130	Pass	
Endrin aldehyde	%	81			70-130	Pass	
Endrin ketone	%	85			70-130	Pass	
g-BHC (Lindane)	%	96			70-130	Pass	
Heptachlor	%	99			70-130	Pass	
Heptachlor epoxide	%	74			70-130	Pass	
Hexachlorobenzene	%	82			70-130	Pass	
Methoxychlor	%	81			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	101			70-130	Pass	
Dimethoate	%	102			70-130	Pass	
Ethion	%	80			70-130	Pass	
Fenitrothion	%	86			70-130	Pass	
Methyl parathion	%	81			70-130	Pass	
Mevinphos	%	97			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	109			80-120	Pass	
Cadmium	%	116			80-120	Pass	
Chromium	%	115			80-120	Pass	
Copper	%	113			80-120	Pass	
Lead	%	112			80-120	Pass	
Mercury	%	115			75-125	Pass	
Nickel	%	110			80-120	Pass	
Zinc	%	109			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDT	M20-Ap40589	NCP	%	94			70-130	Pass	
Methoxychlor	M20-Ap40589	NCP	%	95			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap42512	CP	%	122			70-130	Pass	
Dimethoate	M20-Ap42512	CP	%	89			70-130	Pass	
Ethion	M20-Ap42512	CP	%	98			70-130	Pass	
Fenitrothion	M20-Ap42512	CP	%	97			70-130	Pass	
Methyl parathion	M20-Ap42512	CP	%	85			70-130	Pass	
Mevinphos	M20-Ap42512	CP	%	95			70-130	Pass	
Spike - % Recovery									

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Heavy Metals				Result 1					
Arsenic	M20-Ap42515	CP	%	101			75-125	Pass	
Cadmium	M20-Ap42515	CP	%	108			75-125	Pass	
Copper	M20-Ap42515	CP	%	83			75-125	Pass	
Lead	M20-Ap42515	CP	%	97			75-125	Pass	
Mercury	M20-Ap42515	CP	%	124			70-130	Pass	
Nickel	M20-Ap42515	CP	%	83			75-125	Pass	
Zinc	M20-Ap42515	CP	%	75			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap42517	CP	%	88			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap42517	CP	%	79			70-130	Pass	
Toluene	M20-Ap42517	CP	%	82			70-130	Pass	
Ethylbenzene	M20-Ap42517	CP	%	85			70-130	Pass	
m&p-Xylenes	M20-Ap42517	CP	%	84			70-130	Pass	
o-Xylene	M20-Ap42517	CP	%	87			70-130	Pass	
Xylenes - Total*	M20-Ap42517	CP	%	85			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap42517	CP	%	105			70-130	Pass	
TRH C6-C10	M20-Ap42517	CP	%	86			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap42517	CP	%	78			70-130	Pass	
4.4'-DDD	M20-Ap42517	CP	%	104			70-130	Pass	
4.4'-DDE	M20-Ap42517	CP	%	79			70-130	Pass	
a-BHC	M20-Ap42517	CP	%	75			70-130	Pass	
Aldrin	M20-Ap42517	CP	%	72			70-130	Pass	
b-BHC	M20-Ap42517	CP	%	130			70-130	Pass	
d-BHC	M20-Ap42517	CP	%	72			70-130	Pass	
Dieldrin	M20-Ap42517	CP	%	102			70-130	Pass	
Endosulfan I	M20-Ap42517	CP	%	71			70-130	Pass	
Endosulfan II	M20-Ap42517	CP	%	79			70-130	Pass	
Endosulfan sulphate	M20-Ap42517	CP	%	74			70-130	Pass	
Endrin	M20-Ap42517	CP	%	78			70-130	Pass	
Endrin aldehyde	M20-Ap42517	CP	%	95			70-130	Pass	
Endrin ketone	M20-Ap42517	CP	%	81			70-130	Pass	
g-BHC (Lindane)	M20-Ap42517	CP	%	124			70-130	Pass	
Heptachlor epoxide	M20-Ap42517	CP	%	83			70-130	Pass	
Hexachlorobenzene	M20-Ap42517	CP	%	98			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap42522	CP	%	79			70-130	Pass	
Dimethoate	M20-Ap42522	CP	%	93			70-130	Pass	
Ethion	M20-Ap42522	CP	%	89			70-130	Pass	
Fenitrothion	M20-Ap42522	CP	%	101			70-130	Pass	
Methyl parathion	M20-Ap42522	CP	%	80			70-130	Pass	
Mevinphos	M20-Ap42522	CP	%	116			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap42525	CP	%	110			75-125	Pass	
Cadmium	M20-Ap42525	CP	%	113			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Chromium	M20-Ap42525	CP	%	116			75-125	Pass	
Copper	M20-Ap42525	CP	%	115			75-125	Pass	
Lead	M20-Ap42525	CP	%	115			75-125	Pass	
Mercury	M20-Ap42525	CP	%	122			70-130	Pass	
Nickel	M20-Ap42525	CP	%	112			75-125	Pass	
Zinc	M20-Ap42525	CP	%	112			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap42527	CP	%	74			70-130	Pass	
TRH C10-C14	M20-Ap42527	CP	%	113			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap42527	CP	%	103			70-130	Pass	
Toluene	M20-Ap42527	CP	%	72			70-130	Pass	
Ethylbenzene	M20-Ap42527	CP	%	79			70-130	Pass	
m&p-Xylenes	M20-Ap42527	CP	%	71			70-130	Pass	
o-Xylene	M20-Ap42527	CP	%	87			70-130	Pass	
Xylenes - Total*	M20-Ap42527	CP	%	77			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap42527	CP	%	84			70-130	Pass	
TRH C6-C10	M20-Ap42527	CP	%	87			70-130	Pass	
TRH >C10-C16	M20-Ap42527	CP	%	109			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap42527	CP	%	100			70-130	Pass	
4.4'-DDD	M20-Ap42527	CP	%	105			70-130	Pass	
4.4'-DDE	M20-Ap42527	CP	%	101			70-130	Pass	
a-BHC	M20-Ap42527	CP	%	79			70-130	Pass	
Aldrin	M20-Ap42527	CP	%	97			70-130	Pass	
b-BHC	M20-Ap42527	CP	%	82			70-130	Pass	
d-BHC	M20-Ap42527	CP	%	81			70-130	Pass	
Dieldrin	M20-Ap42527	CP	%	98			70-130	Pass	
Endosulfan I	M20-Ap42527	CP	%	98			70-130	Pass	
Endosulfan II	M20-Ap42527	CP	%	74			70-130	Pass	
Endosulfan sulphate	M20-Ap42527	CP	%	87			70-130	Pass	
Endrin	M20-Ap42527	CP	%	74			70-130	Pass	
Endrin aldehyde	M20-Ap42527	CP	%	79			70-130	Pass	
Endrin ketone	M20-Ap42527	CP	%	105			70-130	Pass	
g-BHC (Lindane)	M20-Ap42527	CP	%	96			70-130	Pass	
Heptachlor	M20-Ap42527	CP	%	70			70-130	Pass	
Heptachlor epoxide	M20-Ap42527	CP	%	76			70-130	Pass	
Hexachlorobenzene	M20-Ap42527	CP	%	92			70-130	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap42511	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42511	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42511	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap42511	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42511	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42511	CP	mg/kg	< 100	< 100	<1	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42511	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42511	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42511	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42511	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42511	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Tokuthion	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42511	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42514	CP	mg/kg	16	21	25	30%	Pass	
Cadmium	M20-Ap42514	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42514	CP	mg/kg	180	220	19	30%	Pass	
Copper	M20-Ap42514	CP	mg/kg	14	11	25	30%	Pass	
Lead	M20-Ap42514	CP	mg/kg	19	19	1.0	30%	Pass	
Mercury	M20-Ap42514	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42514	CP	mg/kg	28	22	21	30%	Pass	
Zinc	M20-Ap42514	CP	mg/kg	17	13	32	30%	Fail	Q15
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42515	CP	mg/kg	15	14	1.0	30%	Pass	
Cadmium	M20-Ap42515	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42515	CP	mg/kg	110	110	1.0	30%	Pass	
Copper	M20-Ap42515	CP	mg/kg	14	15	4.0	30%	Pass	
Lead	M20-Ap42515	CP	mg/kg	19	19	2.0	30%	Pass	
Mercury	M20-Ap42515	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42515	CP	mg/kg	24	24	1.0	30%	Pass	
Zinc	M20-Ap42515	CP	mg/kg	28	28	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42516	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap42516	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42516	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42516	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42516	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42516	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42516	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap42516	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42516	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42516	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42516	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42516	CP	mg/kg	0.05	0.06	20	30%	Pass	

Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Endosulfan I	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42516	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42516	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42516	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42516	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42516	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42517	CP	%	11	11	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap42521	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42521	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42521	CP	mg/kg	< 50	< 50	<1	30%	Pass	

Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap42521	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42521	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42521	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42521	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42521	CP	mg/kg	0.12	0.09	39	30%	Fail	Q15
Endosulfan I	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42521	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42521	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42521	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42521	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Pirimiphos-methyl	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42521	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42524	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42524	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42524	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42524	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42524	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42524	CP	mg/kg	20	22	10	30%	Pass	
Cadmium	M20-Ap42524	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42524	CP	mg/kg	240	220	8.0	30%	Pass	
Copper	M20-Ap42524	CP	mg/kg	9.1	11	21	30%	Pass	
Lead	M20-Ap42524	CP	mg/kg	21	23	8.0	30%	Pass	
Mercury	M20-Ap42524	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42524	CP	mg/kg	18	24	25	30%	Pass	
Zinc	M20-Ap42524	CP	mg/kg	15	17	15	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42525	CP	mg/kg	21	22	8.0	30%	Pass	
Cadmium	M20-Ap42525	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42525	CP	mg/kg	230	250	9.0	30%	Pass	
Copper	M20-Ap42525	CP	mg/kg	11	12	9.0	30%	Pass	
Lead	M20-Ap42525	CP	mg/kg	23	26	10	30%	Pass	
Mercury	M20-Ap42525	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42525	CP	mg/kg	20	22	9.0	30%	Pass	
Zinc	M20-Ap42525	CP	mg/kg	35	38	8.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42526	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap42526	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42526	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42526	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
o-Xylene	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42526	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42526	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42526	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap42526	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42526	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42526	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42526	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42526	CP	mg/kg	0.09	0.06	29	30%	Pass	
b-BHC	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42526	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42526	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Mevinphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42526	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42526	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42526	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42527	CP	%	8.8	8.6	2.0	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42534	CP	mg/kg	23	21	10	30%	Pass	
Cadmium	M20-Ap42534	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42534	CP	mg/kg	220	220	<1	30%	Pass	
Copper	M20-Ap42534	CP	mg/kg	12	12	<1	30%	Pass	
Lead	M20-Ap42534	CP	mg/kg	22	22	2.0	30%	Pass	
Mercury	M20-Ap42534	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42534	CP	mg/kg	17	18	5.0	30%	Pass	
Zinc	M20-Ap42534	CP	mg/kg	33	33	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42537	CP	%	6.5	6.5	1.0	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	716332-AID
Project Name	JSS
Received Date	Apr 29, 2020
Date Reported	Apr 30, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name JSS
Project ID
Date Sampled Apr 27, 2020
Report 716332-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V63	20-Ap42511	Apr 27, 2020	Approximate Sample 263g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V65	20-Ap42512	Apr 27, 2020	Approximate Sample 192g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V66	20-Ap42513	Apr 27, 2020	Approximate Sample 539g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V68	20-Ap42514	Apr 27, 2020	Approximate Sample 263g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V70	20-Ap42515	Apr 27, 2020	Approximate Sample 255g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V71	20-Ap42516	Apr 27, 2020	Approximate Sample 675g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V74	20-Ap42517	Apr 27, 2020	Approximate Sample 178g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V76	20-Ap42518	Apr 27, 2020	Approximate Sample 623g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V77	20-Ap42519	Apr 27, 2020	Approximate Sample 173g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V79	20-Ap42520	Apr 27, 2020	Approximate Sample 177g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V81	20-Ap42521	Apr 27, 2020	Approximate Sample 532g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V82	20-Ap42522	Apr 27, 2020	Approximate Sample 110g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V85	20-Ap42523	Apr 27, 2020	Approximate Sample 155g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V86	20-Ap42524	Apr 27, 2020	Approximate Sample 503g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V88	20-Ap42525	Apr 27, 2020	Approximate Sample 312g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V90	20-Ap42526	Apr 27, 2020	Approximate Sample 391g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V91	20-Ap42527	Apr 27, 2020	Approximate Sample 574g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V93	20-Ap42528	Apr 27, 2020	Approximate Sample 374g Sample consisted of: Red brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V95	20-Ap42529	Apr 27, 2020	Approximate Sample 347g Sample consisted of: Brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V96	20-Ap42530	Apr 27, 2020	Approximate Sample 656g Sample consisted of: Red brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V98	20-Ap42531	Apr 27, 2020	Approximate Sample 405g Sample consisted of: Red brown coarse-grained soil, cement, plaster and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V100	20-Ap42532	Apr 27, 2020	Approximate Sample 268g Sample consisted of: Red brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V101	20-Ap42533	Apr 27, 2020	Approximate Sample 705g Sample consisted of: Red brown fine-grained clayey soil, cement, plaster and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V103	20-Ap42534	Apr 27, 2020	Approximate Sample 332g Sample consisted of: Red brown coarse-grained soil, fragments of ceramic tile, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V105	20-Ap42535	Apr 27, 2020	Approximate Sample 415g Sample consisted of: Red brown coarse-grained soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V106	20-Ap42536	Apr 27, 2020	Approximate Sample 658g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V108	20-Ap42537	Apr 27, 2020	Approximate Sample 388g Sample consisted of: Brown fine-grained clayey soil, cement and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 29, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 29, 2020	Indefinite

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
5. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis	grams per kilogram
Filter loading:	fibres/100 graticule areas
Reported Concentration:	fibres/mL
Flowrate:	L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to “non-bonded / friable”.
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory’s remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Laxman Dias	Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **716332-W**
Project name JSS
Received Date Apr 29, 2020

Client Sample ID			**R1**	**R2**	**R3**	**R4**
Sample Matrix			**Water**	**Water**	**Water**	**Water**
Eurofins Sample No.			**M20-Ap42538**	**M20-Ap42539**	**M20-Ap42540**	**M20-Ap42541**
Date Sampled			**Apr 23, 2020**	**Apr 24, 2020**	**Apr 25, 2020**	**Apr 27, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C10-C14	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH C15-C28	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C29-C36	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH C10-C36 (Total)	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
BTEX						
Benzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Toluene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Ethylbenzene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
m&p-Xylenes	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
o-Xylene	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Xylenes - Total*	0.003	mg/L	< 0.003	< 0.003	< 0.003	< 0.003
4-Bromofluorobenzene (surr.)	1	%	112	98	116	80
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
TRH C6-C10	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH C6-C10 less BTEX (F1)[N04]	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
TRH >C10-C16	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C10-C16 less Naphthalene (F2)[N01]	0.05	mg/L	< 0.05	< 0.05	< 0.05	< 0.05
TRH >C16-C34	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C34-C40	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
TRH >C10-C40 (total)*	0.1	mg/L	< 0.1	< 0.1	< 0.1	< 0.1
Organochlorine Pesticides						
Chlordanes - Total	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
4.4'-DDD	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDE	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
4.4'-DDT	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
a-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Aldrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
b-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
d-BHC	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Dieldrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan I	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan II	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endosulfan sulphate	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001

Client Sample ID			R1	R2	R3	R4
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M20-Ap42538	M20-Ap42539	M20-Ap42540	M20-Ap42541
Date Sampled			Apr 23, 2020	Apr 24, 2020	Apr 25, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Endrin ketone	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
g-BHC (Lindane)	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Heptachlor epoxide	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Hexachlorobenzene	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Methoxychlor	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Toxaphene	0.01	mg/L	< 0.01	< 0.01	< 0.01	< 0.01
Aldrin and Dieldrin (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
DDT + DDE + DDD (Total)*	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Vic EPA IWRG 621 OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Vic EPA IWRG 621 Other OCP (Total)*	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Dibutylchlorendate (surr.)	1	%	97	128	64	98
Tetrachloro-m-xylene (surr.)	1	%	93	83	89	107
Organophosphorus Pesticides						
Azinphos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Bolstar	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorfenvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Chlorpyrifos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Chlorpyrifos-methyl	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Coumaphos	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-S	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Demeton-O	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Diazinon	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dichlorvos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Dimethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Disulfoton	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
EPN	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethoprop	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ethyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenitrothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fensulfothion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Fenthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Malathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Merphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Methyl parathion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Mevinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Monocrotophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Naled	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Omethoate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Phorate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Pirimiphos-methyl	0.02	mg/L	< 0.02	< 0.02	< 0.02	< 0.02
Pyrazophos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Ronnel	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Terbufos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tetrachlorvinphos	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Tokuthion	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Trichloronate	0.002	mg/L	< 0.002	< 0.002	< 0.002	< 0.002
Triphenylphosphate (surr.)	1	%	96	128	75	66

Client Sample ID			R1	R2	R3	R4
Sample Matrix			Water	Water	Water	Water
Eurofins Sample No.			M20-Ap42538	M20-Ap42539	M20-Ap42540	M20-Ap42541
Date Sampled			Apr 23, 2020	Apr 24, 2020	Apr 25, 2020	Apr 27, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Arsenic	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Cadmium	0.0002	mg/L	< 0.0002	< 0.0002	< 0.0002	< 0.0002
Chromium	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Copper	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Lead	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Mercury	0.0001	mg/L	< 0.0001	< 0.0001	< 0.0001	< 0.0001
Nickel	0.001	mg/L	< 0.001	< 0.001	< 0.001	< 0.001
Zinc	0.005	mg/L	< 0.005	< 0.005	< 0.005	< 0.005

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 29, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure 1999, as amended May 2013 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. Information identified on this report with blue colour, indicates data provided by customer, that may have an impact on the results.
9. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram | **mg/L:** milligrams per litre | **ug/L:** micrograms per litre

ppm: Parts per million | **ppb:** Parts per billion | **%:** Percentage

org/100mL: Organisms per 100 millilitres | **NTU:** Nephelometric Turbidity Units | **MPN/100mL:** Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.3
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 20-130% Phenols & 50-150% PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.3 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling.Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " -" in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/L	< 0.02			0.02	Pass	
TRH C10-C14	mg/L	< 0.05			0.05	Pass	
TRH C15-C28	mg/L	< 0.1			0.1	Pass	
TRH C29-C36	mg/L	< 0.1			0.1	Pass	
Method Blank							
BTEX							
Benzene	mg/L	< 0.001			0.001	Pass	
Toluene	mg/L	< 0.001			0.001	Pass	
Ethylbenzene	mg/L	< 0.001			0.001	Pass	
m&p-Xylenes	mg/L	< 0.002			0.002	Pass	
o-Xylene	mg/L	< 0.001			0.001	Pass	
Xylenes - Total*	mg/L	< 0.003			0.003	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/L	< 0.01			0.01	Pass	
TRH C6-C10	mg/L	< 0.02			0.02	Pass	
TRH >C10-C16	mg/L	< 0.05			0.05	Pass	
TRH >C16-C34	mg/L	< 0.1			0.1	Pass	
TRH >C34-C40	mg/L	< 0.1			0.1	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/L	< 0.001			0.001	Pass	
4.4'-DDD	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDE	mg/L	< 0.0001			0.0001	Pass	
4.4'-DDT	mg/L	< 0.0001			0.0001	Pass	
a-BHC	mg/L	< 0.0001			0.0001	Pass	
Aldrin	mg/L	< 0.0001			0.0001	Pass	
b-BHC	mg/L	< 0.0001			0.0001	Pass	
d-BHC	mg/L	< 0.0001			0.0001	Pass	
Dieldrin	mg/L	< 0.0001			0.0001	Pass	
Endosulfan I	mg/L	< 0.0001			0.0001	Pass	
Endosulfan II	mg/L	< 0.0001			0.0001	Pass	
Endosulfan sulphate	mg/L	< 0.0001			0.0001	Pass	
Endrin	mg/L	< 0.0001			0.0001	Pass	
Endrin aldehyde	mg/L	< 0.0001			0.0001	Pass	
Endrin ketone	mg/L	< 0.0001			0.0001	Pass	
g-BHC (Lindane)	mg/L	< 0.0001			0.0001	Pass	
Heptachlor	mg/L	< 0.0001			0.0001	Pass	
Heptachlor epoxide	mg/L	< 0.0001			0.0001	Pass	
Hexachlorobenzene	mg/L	< 0.0001			0.0001	Pass	
Methoxychlor	mg/L	< 0.0001			0.0001	Pass	
Toxaphene	mg/L	< 0.01			0.01	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/L	< 0.002			0.002	Pass	
Bolstar	mg/L	< 0.002			0.002	Pass	
Chlorfenvinphos	mg/L	< 0.002			0.002	Pass	
Chlorpyrifos	mg/L	< 0.02			0.02	Pass	
Chlorpyrifos-methyl	mg/L	< 0.002			0.002	Pass	
Coumaphos	mg/L	< 0.02			0.02	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/L	< 0.02			0.02	Pass	
Demeton-O	mg/L	< 0.002			0.002	Pass	
Diazinon	mg/L	< 0.002			0.002	Pass	
Dichlorvos	mg/L	< 0.002			0.002	Pass	
Dimethoate	mg/L	< 0.002			0.002	Pass	
Disulfoton	mg/L	< 0.002			0.002	Pass	
EPN	mg/L	< 0.002			0.002	Pass	
Ethion	mg/L	< 0.002			0.002	Pass	
Ethoprop	mg/L	< 0.002			0.002	Pass	
Ethyl parathion	mg/L	< 0.002			0.002	Pass	
Fenitrothion	mg/L	< 0.002			0.002	Pass	
Fensulfothion	mg/L	< 0.002			0.002	Pass	
Fenthion	mg/L	< 0.002			0.002	Pass	
Malathion	mg/L	< 0.002			0.002	Pass	
Merphos	mg/L	< 0.002			0.002	Pass	
Methyl parathion	mg/L	< 0.002			0.002	Pass	
Mevinphos	mg/L	< 0.002			0.002	Pass	
Monocrotophos	mg/L	< 0.002			0.002	Pass	
Naled	mg/L	< 0.002			0.002	Pass	
Omethoate	mg/L	< 0.002			0.002	Pass	
Phorate	mg/L	< 0.002			0.002	Pass	
Pirimiphos-methyl	mg/L	< 0.02			0.02	Pass	
Pyrazophos	mg/L	< 0.002			0.002	Pass	
Ronnel	mg/L	< 0.002			0.002	Pass	
Terbufos	mg/L	< 0.002			0.002	Pass	
Tetrachlorvinphos	mg/L	< 0.002			0.002	Pass	
Tokuthion	mg/L	< 0.002			0.002	Pass	
Trichloronate	mg/L	< 0.002			0.002	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/L	< 0.001			0.001	Pass	
Cadmium	mg/L	< 0.0002			0.0002	Pass	
Chromium	mg/L	< 0.001			0.001	Pass	
Copper	mg/L	< 0.001			0.001	Pass	
Lead	mg/L	< 0.001			0.001	Pass	
Mercury	mg/L	< 0.0001			0.0001	Pass	
Nickel	mg/L	< 0.001			0.001	Pass	
Zinc	mg/L	< 0.005			0.005	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	106			70-130	Pass	
TRH C10-C14	%	102			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	113			70-130	Pass	
Toluene	%	110			70-130	Pass	
Ethylbenzene	%	112			70-130	Pass	
m&p-Xylenes	%	110			70-130	Pass	
Xylenes - Total*	%	111			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	109			70-130	Pass	
TRH C6-C10	%	104			70-130	Pass	
TRH >C10-C16	%	97			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	94			70-130	Pass	
4.4'-DDD	%	85			70-130	Pass	
4.4'-DDE	%	96			70-130	Pass	
4.4'-DDT	%	83			70-130	Pass	
a-BHC	%	93			70-130	Pass	
Aldrin	%	86			70-130	Pass	
b-BHC	%	100			70-130	Pass	
d-BHC	%	92			70-130	Pass	
Dieldrin	%	78			70-130	Pass	
Endosulfan I	%	101			70-130	Pass	
Endosulfan II	%	82			70-130	Pass	
Endosulfan sulphate	%	80			70-130	Pass	
Endrin	%	81			70-130	Pass	
Endrin aldehyde	%	101			70-130	Pass	
Endrin ketone	%	98			70-130	Pass	
g-BHC (Lindane)	%	111			70-130	Pass	
Heptachlor	%	89			70-130	Pass	
Heptachlor epoxide	%	93			70-130	Pass	
Hexachlorobenzene	%	113			70-130	Pass	
Methoxychlor	%	76			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	110			70-130	Pass	
Dimethoate	%	84			70-130	Pass	
Ethion	%	101			70-130	Pass	
Fenitrothion	%	89			70-130	Pass	
Methyl parathion	%	93			70-130	Pass	
Mevinphos	%	73			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	96			80-120	Pass	
Cadmium	%	98			80-120	Pass	
Chromium	%	94			80-120	Pass	
Copper	%	95			80-120	Pass	
Lead	%	98			80-120	Pass	
Mercury	%	93			75-125	Pass	
Nickel	%	95			80-120	Pass	
Zinc	%	98			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap21090	NCP	%	93			70-130	Pass	
Dimethoate	M20-Ap21090	NCP	%	72			70-130	Pass	
Ethion	M20-Ap21090	NCP	%	71			70-130	Pass	
Fenitrothion	M20-Ap21090	NCP	%	79			70-130	Pass	
Methyl parathion	M20-Ap21090	NCP	%	101			70-130	Pass	
Mevinphos	M20-Ap21090	NCP	%	79			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap41210	NCP	%	90			75-125	Pass	
Cadmium	M20-Ap41210	NCP	%	96			75-125	Pass	
Chromium	M20-Ap41210	NCP	%	95			75-125	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Copper	M20-Ap41210	NCP	%	92			75-125	Pass	
Lead	M20-Ap41210	NCP	%	93			75-125	Pass	
Mercury	M20-Ap41210	NCP	%	88			70-130	Pass	
Nickel	M20-Ap41210	NCP	%	93			75-125	Pass	
Zinc	M20-Ap41210	NCP	%	89			75-125	Pass	
Test	**Lab Sample ID**	**QA Source**	**Units**	**Result 1**			**Acceptance Limits**	**Pass Limits**	**Qualifying Code**
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap39822	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH C10-C14	M20-Ap35295	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH C15-C28	M20-Ap35295	NCP	mg/L	0.5	0.6	16	30%	Pass	
TRH C29-C36	M20-Ap35295	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Toluene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Ethylbenzene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
m&p-Xylenes	M20-Ap39822	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
o-Xylene	M20-Ap39822	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
Xylenes - Total*	M20-Ap39822	NCP	mg/L	< 0.003	< 0.003	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap39822	NCP	mg/L	< 0.01	< 0.01	<1	30%	Pass	
TRH C6-C10	M20-Ap39822	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
TRH >C10-C16	M20-Ap35295	NCP	mg/L	< 0.05	< 0.05	<1	30%	Pass	
TRH >C16-C34	M20-Ap35295	NCP	mg/L	0.5	0.6	20	30%	Pass	
TRH >C34-C40	M20-Ap35295	NCP	mg/L	< 0.1	< 0.1	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap21089	NCP	mg/L	< 0.001	< 0.001	<1	30%	Pass	
4.4'-DDD	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDE	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
4.4'-DDT	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
a-BHC	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Aldrin	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
b-BHC	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
d-BHC	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Dieldrin	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan I	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan II	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endosulfan sulphate	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin aldehyde	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Endrin ketone	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Heptachlor epoxide	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Hexachlorobenzene	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	
Methoxychlor	M20-Ap21089	NCP	mg/L	< 0.0001	< 0.0001	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Bolstar	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorfenvinphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Chlorpyrifos	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Coumaphos	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-S	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Demeton-O	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Diazinon	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dichlorvos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Dimethoate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Disulfoton	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
EPN	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethoprop	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ethyl parathion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenitrothion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fensulfothion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Fenthion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Malathion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Merphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Methyl parathion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Mevinphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Monocrotophos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Naled	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Omethoate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Phorate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap21089	NCP	mg/L	< 0.02	< 0.02	<1	30%	Pass	
Pyrazophos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Ronnel	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Terbufos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Tokuthion	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Trichloronate	M20-Ap21089	NCP	mg/L	< 0.002	< 0.002	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap41210	NCP	mg/L	0.10	0.10	1.0	30%	Pass	
Cadmium	M20-Ap41210	NCP	mg/L	< 0.0002	< 0.0002	<1	30%	Pass	
Chromium	M20-Ap41210	NCP	mg/L	0.002	0.002	1.0	30%	Pass	
Copper	M20-Ap41210	NCP	mg/L	0.005	0.005	<1	30%	Pass	
Lead	M20-Ap41210	NCP	mg/L	0.014	0.014	<1	30%	Pass	
Mercury	M20-Ap41210	NCP	mg/L	0.0003	< 0.0001	110	30%	Fail	Q15
Nickel	M20-Ap41210	NCP	mg/L	0.003	0.004	3.0	30%	Pass	
Zinc	M20-Ap41210	NCP	mg/L	0.039	0.039	<1	30%	Pass	

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

CHAIN OF CUSTODY RECORD

Eurofins | mgt ABN 50 005 085 521

☐ **Sydney Laboratory** Unit F3 Bld F 16 Mars Road Lane Cove West NSW 2066 02 9900 8400 EnviroSampleNSW@eurofins.com

☐ **Brisbane Laboratory** Unit 1 21 Smallwood Place Murarrie QLD 4172 07 3902 4600 EnviroSampleQLD@eurofins.com

☐ **Perth Laboratory** Unit 2 91 Leach Highway Kewdale WA 6105 08 9251 9600 EnviroSampleWA@eurofins.com

☐ **Melbourne Laboratory** 6 Monterey Road Dandenong South VIC 3175 03 8564 5000 EnviroSampleVic@eurofins.com

Company	SLR Consulting (NT)	Project №		Project Manager	Sarah Doherty
Address	5/21 Parap Rd Parap NT 0820	Project Name	JSS	EDD Format ESdat, EQuIS etc	Esdat & csv
Contact Name	Sarah Doherty				
Phone №	417647498				
Special Directions	Jars go to Melbourne, ACM goes to Sydney				
Purchase Order					
Quote ID №	200422SLRNT				

Sampler(s)	Sarah Doherty
Handed over by	
Email for Results	gsheridan@slrconsulting.com; pturyn@slrconsulting.com; sdoherty@slrconsulting.com

Analyses Where metals are requested, please specify "Total" or "Filtered". SUITE code must be used to attract SUITE pricing

Containers Change container type & size if necessary.

Required Turnaround Time (TAT) Default will be 5 days if not ticked.

♦Surcharge will apply

☐ Overnight (reporting by 9am)♦
☑ Same day♦ ☐ 1 day♦
☐ 2 days♦ ☐ 3 days♦
☐ 5 days (Standard)
☐ Other( )

№	Client Sample ID	Sampled Date/Time dd/mm/yy hh:mm	Matrix Solid (S) Water (W)	B14: OCP/OPP	B6: TRH, BTEXN, Metals	Asbestos presence/absence grab sample	Asbestos NEPM & WA Guidelines	Asbestos Bulk ID	R21: soil charterisation	Hold	Glass soil Jar	Asbestos DOH bag of soil	Asbestos grab sample P/A	Asbestos bag of fragments	Glass jar charterisation	Rinsate bottles	Sample Comments / Dangerous Goods Hazard Warning
1	V109	28/04/20	S														
2	V110	28/04/20	S														
3	V111	28/04/20	S	X	X		X				1	1					
4	V112	28/04/20	S	X	X	X											
5	V113	28/04/20	S	X	X	X											
6	V114	28/04/20	S	X	X	X											
7	V115	28/04/20	S	X	X	X											
8	V116	28/04/20	S	X	X		X				1	1					
9	V117	28/04/20	S														
10	V118	28/04/20	S														
11	V119	28/04/20	S														
12	V120	28/04/20	S														
13	V121	28/04/20	S	X	X		X				1	1					
14	V122	28/04/20	S														

| | | |

40	QC8	28/04/20	S	X	X		X														1	1									
41	QC9	28/04/20	S	X	X	X																									
42	QC10	28/04/20	S	X	X	X																									
43	Val_A	28/04/20	S				X															1									
44	QC12	28/04/20	S	X	X	X																									
45	Char_Val	28/04/20	S						X																1						
46	Rin5	28/04/20	w	X	X																					4					
47	STP4_N	28/04/20	S	X	X		X														1	1									
48	STP4_E	28/04/20	S	X	X		X														1	1									
49	STP4_S	28/04/20	S	X	X		X														1	1									
50	STP4_W	28/04/20	S	X	X		X														1	1									
Add new rows			Total Counts	25	25	12	13		1												12	13			1	4					

Method of Shipment	Courier (#)	Hand Delivered	Postal	Name		Signature	Date	Time
Eurofins | mgt Laboratory Use Only	Received By	Jake	SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date 27/4	Time 2 00	Temperature
	Received By		SYD | BNE | MEL | PER | ADL | NTL | DRW	Signature		Date	Time	Report № 716374

Eurofins Environment Testing Australia Pty Ltd trading as Eurofins | mgt

Submission of samples to the laboratory will be deemed as acceptance of Eurofins | mgt Standard Terms and Conditions unless agreed otherwise. A copy of Eurofins | mgt Standard Terms and Conditions is available on request

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NATA # 1261 Site # 23736

ABN – 50 005 085 521 e.mail : EnviroSales@eurofins.com web : www.eurofins.com.au

Sample Receipt Advice

Company name:	**SLR Consulting (NT)**
Contact name:	Sarah Doherty
Project name:	JSS
COC number:	Not provided
Turn around time:	1 Day
Date/Time received:	Apr 29, 2020
Eurofins reference:	**716374**

Sample information

- ☑ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☑ All samples have been received as described on the above COC.
- ☑ COC has been completed correctly.
- ☑ Attempt to chill was evident.
- ☑ Appropriately preserved sample containers have been used.
- ☑ All samples were received in good condition.
- ☑ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☑ Appropriate sample containers have been used.
- ☑ Sample containers for volatile analysis received with zero headspace.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Extra sample QC11, Rin5 not received in Melb.

Contact notes

If you have any questions with respect to these samples please contact:

Michael Morrison on Phone : 03 8564 5933 or by e.mail: MichaelMorrison@eurofins.com

Results will be delivered electronically via e.mail to Sarah Doherty - sdoherty@slrconsulting.com.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

NATA Accredited
Accreditation Number 1261
Site Number 1254

Accredited for compliance with ISO/IEC 17025 – Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Attention: **Sarah Doherty**

Report **716374-S-V2**
Project name JSS
Received Date Apr 29, 2020

Client Sample ID			**V111**	**V112**	**V113**	**V114**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**
Eurofins Sample No.			**M20-Ap42963**	**M20-Ap42964**	**M20-Ap42965**	**M20-Ap42966**
Date Sampled			**Apr 28, 2020**	**Apr 28, 2020**	**Apr 28, 2020**	**Apr 28, 2020**
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	142	89	91	96
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.50	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	1.6	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V111	V112	V113	V114
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42963	M20-Ap42964	M20-Ap42965	M20-Ap42966
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	2.1	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	2.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	80	69	77	66
Tetrachloro-m-xylene (surr.)	1	%	86	81	85	81
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	79	69	70	61

Client Sample ID			V111	V112	V113	V114
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42963	M20-Ap42964	M20-Ap42965	M20-Ap42966
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
% Moisture	1	%	4.6	6.2	4.6	3.8
Heavy Metals						
Arsenic	2	mg/kg	13	18	22	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	140	220	230	180
Copper	5	mg/kg	5.6	7.8	9.9	8.6
Lead	5	mg/kg	14	19	23	17
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	6.3	13	16	12
Zinc	5	mg/kg	11	28	33	15

Client Sample ID			V115	V116	V121	V126
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42967	M20-Ap42968	M20-Ap42969	M20-Ap42970
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	57	54	61	99
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	0.30	< 0.05	0.07
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05

Client Sample ID			V115	V116	V121	V126
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42967	M20-Ap42968	M20-Ap42969	M20-Ap42970
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Dieldrin	0.05	mg/kg	0.16	2.4	< 0.05	0.43
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.16	2.7	< 0.05	0.5
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.16	2.7	< 0.1	0.5
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	94	69	91	75
Tetrachloro-m-xylene (surr.)	1	%	86	84	84	84
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V115	V116	V121	V126
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42967	M20-Ap42968	M20-Ap42969	M20-Ap42970
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	85	64	83	70
% Moisture	1	%	2.2	6.3	6.7	5.9
Heavy Metals						
Arsenic	2	mg/kg	20	13	10	23
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	220	160	87	250
Copper	5	mg/kg	7.0	6.3	5.8	11
Lead	5	mg/kg	18	14	8.4	23
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	11	10	8.4	16
Zinc	5	mg/kg	11	14	17	140

Client Sample ID			V129	V130	V131	V136
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42971	M20-Ap42972	M20-Ap42973	M20-Ap42974
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	57	90	105	102
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100

Client Sample ID			V129	V130	V131	V136
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42971	M20-Ap42972	M20-Ap42973	M20-Ap42974
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	76	98	99	98
Tetrachloro-m-xylene (surr.)	1	%	85	66	72	70
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V129	V130	V131	V136
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42971	M20-Ap42972	M20-Ap42973	M20-Ap42974
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	71	79	88	83
% Moisture	1	%	4.3	2.4	6.3	8.7
Heavy Metals						
Arsenic	2	mg/kg	23	17	24	31
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	230	200	240	320
Copper	5	mg/kg	8.0	11	11	9.4
Lead	5	mg/kg	19	19	22	32
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	13	17	17	16
Zinc	5	mg/kg	22	23	22	26

Client Sample ID			V141	QC5	QC6	QC7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42975	M20-Ap42976	M20-Ap42977	M20-Ap42978
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	83	76	97	84

Client Sample ID			V141	QC5	QC6	QC7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42975	M20-Ap42976	M20-Ap42977	M20-Ap42978
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	0.07	0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	0.08	0.44	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.15	0.49	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.15	0.49	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	99	114	103	107
Tetrachloro-m-xylene (surr.)	1	%	67	68	65	67
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			V141	QC5	QC6	QC7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42975	M20-Ap42976	M20-Ap42977	M20-Ap42978
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	78	90	90	88
% Moisture	1	%	9.0	2.6	3.9	3.7
Heavy Metals						
Arsenic	2	mg/kg	19	15	16	23
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	200	130	170	240
Copper	5	mg/kg	18	11	9.3	10
Lead	5	mg/kg	21	14	15	23
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	17	17	14	17
Zinc	5	mg/kg	29	29	21	26

Client Sample ID			QC8	QC9	QC10	QC12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42979	M20-Ap42980	M20-Ap42981	M20-Ap42983
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50

Client Sample ID			QC8	QC9	QC10	QC12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42979	M20-Ap42980	M20-Ap42981	M20-Ap42983
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	92	107	89	82
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	98	106	106	79
Tetrachloro-m-xylene (surr.)	1	%	65	68	69	84
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			QC8	QC9	QC10	QC12
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42979	M20-Ap42980	M20-Ap42981	M20-Ap42983
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	80	85	87	70
% Moisture	1	%	4.3	2.5	4.9	5.2
Heavy Metals						
Arsenic	2	mg/kg	30	25	22	16
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	320	240	230	220
Copper	5	mg/kg	9.4	11	11	8.4
Lead	5	mg/kg	26	22	23	19
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	14	15	17	14
Zinc	5	mg/kg	21	22	29	27

Client Sample ID			Char_Val	STP4_N	STP4_E	STP4_S
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42984	M20-Ap42986	M20-Ap42987	M20-Ap42988
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	-	< 20	< 20	< 20
TRH C10-C14	20	mg/kg	-	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	-	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	-	< 50	< 50	< 50
TRH C10-C36 (Total)	50	mg/kg	-	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Toluene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Ethylbenzene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
m&p-Xylenes	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
o-Xylene	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Xylenes - Total*	0.3	mg/kg	-	< 0.3	< 0.3	< 0.3
4-Bromofluorobenzene (surr.)	1	%	-	83	99	84
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene[N02]	0.5	mg/kg	-	< 0.5	< 0.5	< 0.5
TRH C6-C10	20	mg/kg	-	< 20	< 20	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	-	< 20	< 20	< 20
TRH >C10-C16	50	mg/kg	-	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	-	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	-	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	-	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	-	< 100	< 100	< 100
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
4.4'-DDD	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDE	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
4.4'-DDT	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	-	0.37	0.16	0.16
Endosulfan I	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	-	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	-	0.37	0.16	0.16
DDT + DDE + DDD (Total)*	0.05	mg/kg	-	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	-	0.37	0.16	0.16
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	-	78	84	82
Tetrachloro-m-xylene (surr.)	1	%	-	81	83	84

Client Sample ID			Char_Val	STP4_N	STP4_E	STP4_S
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42984	M20-Ap42986	M20-Ap42987	M20-Ap42988
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	-	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	-	< 2	< 2	< 2
Naled	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	-	< 2	< 2	< 2
Phorate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	-	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	-	76	77	80
% Clay	1	%	14	-	-	-
Conductivity (1:5 aqueous extract at 25°C as rec.)	10	uS/cm	60	-	-	-
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	0.1	pH Units	6.5	-	-	-
Total Organic Carbon	0.1	%	1.7	-	-	-
% Moisture	1	%	6.0	13	9.0	11
Heavy Metals						
Arsenic	2	mg/kg	-	20	20	21
Cadmium	0.4	mg/kg	-	< 0.4	0.7	< 0.4
Chromium	5	mg/kg	-	180	170	240
Copper	5	mg/kg	-	13	14	12
Iron	20	mg/kg	74000	-	-	-
Lead	5	mg/kg	-	19	19	18
Mercury	0.1	mg/kg	-	< 0.1	< 0.1	< 0.1

Client Sample ID			Char_Val	STP4_N	STP4_E	STP4_S
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins Sample No.			M20-Ap42984	M20-Ap42986	M20-Ap42987	M20-Ap42988
Date Sampled			Apr 28, 2020	Apr 28, 2020	Apr 28, 2020	Apr 28, 2020
Test/Reference	LOR	Unit				
Heavy Metals						
Nickel	5	mg/kg	-	19	17	16
Zinc	5	mg/kg	-	25	29	27
Heavy Metals						
Iron (%)	0.01	%	7.4	-	-	-
Cation Exchange Capacity						
Cation Exchange Capacity	0.05	meq/100g	3.7	-	-	-

Client Sample ID			STP4_W
Sample Matrix			Soil
Eurofins Sample No.			M20-Ap42989
Date Sampled			Apr 28, 2020
Test/Reference	LOR	Unit	
Total Recoverable Hydrocarbons - 1999 NEPM Fractions			
TRH C6-C9	20	mg/kg	< 20
TRH C10-C14	20	mg/kg	< 20
TRH C15-C28	50	mg/kg	< 50
TRH C29-C36	50	mg/kg	< 50
TRH C10-C36 (Total)	50	mg/kg	< 50
BTEX			
Benzene	0.1	mg/kg	< 0.1
Toluene	0.1	mg/kg	< 0.1
Ethylbenzene	0.1	mg/kg	< 0.1
m&p-Xylenes	0.2	mg/kg	< 0.2
o-Xylene	0.1	mg/kg	< 0.1
Xylenes - Total*	0.3	mg/kg	< 0.3
4-Bromofluorobenzene (surr.)	1	%	91
Total Recoverable Hydrocarbons - 2013 NEPM Fractions			
Naphthalene[N02]	0.5	mg/kg	< 0.5
TRH C6-C10	20	mg/kg	< 20
TRH C6-C10 less BTEX (F1)[N04]	20	mg/kg	< 20
TRH >C10-C16	50	mg/kg	< 50
TRH >C10-C16 less Naphthalene (F2)[N01]	50	mg/kg	< 50
TRH >C16-C34	100	mg/kg	< 100
TRH >C34-C40	100	mg/kg	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100
Organochlorine Pesticides			
Chlordanes - Total	0.1	mg/kg	< 0.1
4.4'-DDD	0.05	mg/kg	< 0.05
4.4'-DDE	0.05	mg/kg	< 0.05
4.4'-DDT	0.05	mg/kg	< 0.05
a-BHC	0.05	mg/kg	< 0.05
Aldrin	0.05	mg/kg	0.06
b-BHC	0.05	mg/kg	< 0.05
d-BHC	0.05	mg/kg	< 0.05
Dieldrin	0.05	mg/kg	0.48
Endosulfan I	0.05	mg/kg	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05

Client Sample ID			STP4_W
Sample Matrix			Soil
Eurofins Sample No.			M20-Ap42989
Date Sampled			Apr 28, 2020
Test/Reference	LOR	Unit	
Organochlorine Pesticides			
Endosulfan sulphate	0.05	mg/kg	< 0.05
Endrin	0.05	mg/kg	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05
Heptachlor	0.05	mg/kg	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05
Toxaphene	1	mg/kg	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	0.54
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	0.54
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1
Dibutylchlorendate (surr.)	1	%	81
Tetrachloro-m-xylene (surr.)	1	%	84
Organophosphorus Pesticides			
Azinphos-methyl	0.2	mg/kg	< 0.2
Bolstar	0.2	mg/kg	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2
Coumaphos	2	mg/kg	< 2
Demeton-S	0.2	mg/kg	< 0.2
Demeton-O	0.2	mg/kg	< 0.2
Diazinon	0.2	mg/kg	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2
Dimethoate	0.2	mg/kg	< 0.2
Disulfoton	0.2	mg/kg	< 0.2
EPN	0.2	mg/kg	< 0.2
Ethion	0.2	mg/kg	< 0.2
Ethoprop	0.2	mg/kg	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2
Fenthion	0.2	mg/kg	< 0.2
Malathion	0.2	mg/kg	< 0.2
Merphos	0.2	mg/kg	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2
Mevinphos	0.2	mg/kg	< 0.2
Monocrotophos	2	mg/kg	< 2
Naled	0.2	mg/kg	< 0.2
Omethoate	2	mg/kg	< 2
Phorate	0.2	mg/kg	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2
Ronnel	0.2	mg/kg	< 0.2
Terbufos	0.2	mg/kg	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2

Client Sample ID			STP4_W
Sample Matrix			**Soil**
Eurofins Sample No.			**M20-Ap42989**
Date Sampled			**Apr 28, 2020**
Test/Reference	LOR	Unit	
Organophosphorus Pesticides			
Tokuthion	0.2	mg/kg	< 0.2
Trichloronate	0.2	mg/kg	< 0.2
Triphenylphosphate (surr.)	1	%	77
% Moisture	1	%	12
Heavy Metals			
Arsenic	2	mg/kg	23
Cadmium	0.4	mg/kg	< 0.4
Chromium	5	mg/kg	160
Copper	5	mg/kg	13
Lead	5	mg/kg	21
Mercury	0.1	mg/kg	< 0.1
Nickel	5	mg/kg	14
Zinc	5	mg/kg	23

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins | mgt Suite B6			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
BTEX	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2010 TRH C6-C40			
Total Recoverable Hydrocarbons - 2013 NEPM Fractions	Melbourne	Apr 29, 2020	
- Method: LTM-ORG-2010 TRH C6-C40			
Metals M8	Melbourne	Apr 29, 2020	180 Days
- Method:			
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Eurofins | mgt Suite B14			
Organochlorine Pesticides	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2220 OCP & PCB in Soil and Water (USEPA 8270)			
Organophosphorus Pesticides	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS (USEPA 8081)			
NEPM Screen for Soil Classification			
% Clay	Brisbane	May 05, 2020	0 Days
- Method: LTM-GEN-7040			
Conductivity (1:5 aqueous extract at 25°C as rec.)	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-INO-4030 Conductivity			
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	Melbourne	Apr 29, 2020	7 Days
- Method: LTM-GEN-7090 pH in soil by ISE			
Total Organic Carbon	Melbourne	Apr 30, 2020	28 Days
- Method: LTM-INO-4060 Total Organic Carbon in water and soil			
Heavy Metals	Melbourne	Apr 29, 2020	180 Days
- Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS			
Cation Exchange Capacity	Melbourne	Apr 30, 2020	180 Days
- Method: LTM-MET-3060 Cation Exchange Capacity by bases & Exchangeable Sodium Percentage			
% Moisture	Melbourne	Apr 29, 2020	14 Days
- Method: LTM-GEN-7080 Moisture			

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total*	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4.4'-DDD	mg/kg	< 0.05			0.05	Pass	
4.4'-DDE	mg/kg	< 0.05			0.05	Pass	
4.4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Conductivity (1:5 aqueous extract at 25°C as rec.)	uS/cm	< 10			10	Pass	
Total Organic Carbon	%	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Iron	mg/kg	< 20			20	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
Method Blank							
Cation Exchange Capacity							
Cation Exchange Capacity	meq/100g	< 0.05			0.05	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	125			70-130	Pass	
TRH C10-C14	%	122			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	108			70-130	Pass	
Toluene	%	106			70-130	Pass	
Ethylbenzene	%	111			70-130	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
m&p-Xylenes	%	110			70-130	Pass	
Xylenes - Total*	%	112			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	104			70-130	Pass	
TRH C6-C10	%	120			70-130	Pass	
TRH >C10-C16	%	109			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	78			70-130	Pass	
4.4'-DDD	%	75			70-130	Pass	
4.4'-DDE	%	85			70-130	Pass	
4.4'-DDT	%	79			70-130	Pass	
a-BHC	%	74			70-130	Pass	
Aldrin	%	74			70-130	Pass	
b-BHC	%	73			70-130	Pass	
d-BHC	%	71			70-130	Pass	
Dieldrin	%	70			70-130	Pass	
Endosulfan I	%	86			70-130	Pass	
Endosulfan II	%	75			70-130	Pass	
Endosulfan sulphate	%	76			70-130	Pass	
Endrin	%	83			70-130	Pass	
Endrin aldehyde	%	82			70-130	Pass	
Endrin ketone	%	86			70-130	Pass	
g-BHC (Lindane)	%	77			70-130	Pass	
Heptachlor	%	70			70-130	Pass	
Heptachlor epoxide	%	71			70-130	Pass	
Hexachlorobenzene	%	75			70-130	Pass	
Methoxychlor	%	70			70-130	Pass	
LCS - % Recovery							
Organophosphorus Pesticides							
Diazinon	%	91			70-130	Pass	
Dimethoate	%	87			70-130	Pass	
Ethion	%	70			70-130	Pass	
Fenitrothion	%	78			70-130	Pass	
Methyl parathion	%	86			70-130	Pass	
Mevinphos	%	77			70-130	Pass	
LCS - % Recovery							
% Clay	%	113			70-130	Pass	
Total Organic Carbon	%	103			70-130	Pass	
LCS - % Recovery							
Heavy Metals							
Arsenic	%	103			80-120	Pass	
Cadmium	%	102			80-120	Pass	
Chromium	%	107			80-120	Pass	
Copper	%	106			80-120	Pass	
Iron	%	113			80-120	Pass	
Lead	%	104			80-120	Pass	
Mercury	%	109			75-125	Pass	
Nickel	%	104			80-120	Pass	
Zinc	%	101			80-120	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4.4'-DDT	M20-Ap36618	NCP	%	75			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap42967	CP	%	106			70-130	Pass	
Dimethoate	M20-Ap42967	CP	%	80			70-130	Pass	
Ethion	M20-Ap42967	CP	%	83			70-130	Pass	
Fenitrothion	M20-Ap42967	CP	%	78			70-130	Pass	
Methyl parathion	M20-Ap42967	CP	%	83			70-130	Pass	
Mevinphos	M20-Ap42967	CP	%	74			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap42970	CP	%	62			75-125	Fail	Q08
Cadmium	M20-Ap42970	CP	%	100			75-125	Pass	
Copper	M20-Ap42970	CP	%	76			75-125	Pass	
Lead	M20-Ap42970	CP	%	91			75-125	Pass	
Mercury	M20-Ap42970	CP	%	115			70-130	Pass	
Nickel	M20-Ap42970	CP	%	77			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap42971	CP	%	111			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap42971	CP	%	125			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C6-C9	M20-Ap42972	CP	%	117			70-130	Pass	
Spike - % Recovery									
BTEX				Result 1					
Benzene	M20-Ap42972	CP	%	116			70-130	Pass	
Toluene	M20-Ap42972	CP	%	111			70-130	Pass	
Ethylbenzene	M20-Ap42972	CP	%	109			70-130	Pass	
m&p-Xylenes	M20-Ap42972	CP	%	107			70-130	Pass	
o-Xylene	M20-Ap42972	CP	%	111			70-130	Pass	
Xylenes - Total*	M20-Ap42972	CP	%	108			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
Naphthalene	M20-Ap42972	CP	%	112			70-130	Pass	
TRH C6-C10	M20-Ap42972	CP	%	113			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap42972	CP	%	84			70-130	Pass	
4.4'-DDD	M20-Ap42972	CP	%	101			70-130	Pass	
4.4'-DDE	M20-Ap42972	CP	%	74			70-130	Pass	
a-BHC	M20-Ap42972	CP	%	76			70-130	Pass	
Aldrin	M20-Ap42972	CP	%	79			70-130	Pass	
b-BHC	M20-Ap42972	CP	%	129			70-130	Pass	
d-BHC	M20-Ap42972	CP	%	85			70-130	Pass	
Dieldrin	M20-Ap42972	CP	%	81			70-130	Pass	
Endosulfan I	M20-Ap42972	CP	%	73			70-130	Pass	
Endosulfan II	M20-Ap42972	CP	%	82			70-130	Pass	
Endosulfan sulphate	M20-Ap42972	CP	%	73			70-130	Pass	
Endrin	M20-Ap42972	CP	%	92			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endrin aldehyde	M20-Ap42972	CP	%	92			70-130	Pass	
Endrin ketone	M20-Ap42972	CP	%	94			70-130	Pass	
g-BHC (Lindane)	M20-Ap42972	CP	%	108			70-130	Pass	
Heptachlor	M20-Ap42972	CP	%	76			70-130	Pass	
Heptachlor epoxide	M20-Ap42972	CP	%	71			70-130	Pass	
Hexachlorobenzene	M20-Ap42972	CP	%	94			70-130	Pass	
Spike - % Recovery									
Organophosphorus Pesticides				Result 1					
Diazinon	M20-Ap42977	CP	%	105			70-130	Pass	
Dimethoate	M20-Ap42977	CP	%	76			70-130	Pass	
Ethion	M20-Ap42977	CP	%	85			70-130	Pass	
Fenitrothion	M20-Ap42977	CP	%	84			70-130	Pass	
Methyl parathion	M20-Ap42977	CP	%	92			70-130	Pass	
Mevinphos	M20-Ap42977	CP	%	73			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	M20-Ap42980	CP	%	93			75-125	Pass	
Cadmium	M20-Ap42980	CP	%	110			75-125	Pass	
Chromium	M20-Ap42980	CP	%	75			75-125	Pass	
Copper	M20-Ap42980	CP	%	96			75-125	Pass	
Lead	M20-Ap42980	CP	%	92			75-125	Pass	
Mercury	M20-Ap42980	CP	%	110			70-130	Pass	
Nickel	M20-Ap42980	CP	%	99			75-125	Pass	
Zinc	M20-Ap42980	CP	%	86			75-125	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1					
TRH C10-C14	M20-Ap42981	CP	%	97			70-130	Pass	
Spike - % Recovery									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1					
TRH >C10-C16	M20-Ap42981	CP	%	93			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M20-Ap42983	CP	%	81			70-130	Pass	
4.4'-DDD	M20-Ap42983	CP	%	71			70-130	Pass	
4.4'-DDE	M20-Ap42983	CP	%	88			70-130	Pass	
a-BHC	M20-Ap42983	CP	%	77			70-130	Pass	
Aldrin	M20-Ap42983	CP	%	73			70-130	Pass	
b-BHC	M20-Ap42983	CP	%	75			70-130	Pass	
d-BHC	M20-Ap42983	CP	%	82			70-130	Pass	
Dieldrin	M20-Ap42983	CP	%	91			70-130	Pass	
Endosulfan I	M20-Ap42983	CP	%	94			70-130	Pass	
Endosulfan II	M20-Ap42983	CP	%	96			70-130	Pass	
Endosulfan sulphate	M20-Ap42983	CP	%	85			70-130	Pass	
Endrin	M20-Ap42983	CP	%	92			70-130	Pass	
Endrin aldehyde	M20-Ap42983	CP	%	72			70-130	Pass	
Endrin ketone	M20-Ap42983	CP	%	80			70-130	Pass	
g-BHC (Lindane)	M20-Ap42983	CP	%	76			70-130	Pass	
Heptachlor	M20-Ap42983	CP	%	94			70-130	Pass	
Heptachlor epoxide	M20-Ap42983	CP	%	96			70-130	Pass	
Hexachlorobenzene	M20-Ap42983	CP	%	100			70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42966	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42966	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42966	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42966	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42966	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Terbufos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42966	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42969	CP	mg/kg	10	13	24	30%	Pass	
Cadmium	M20-Ap42969	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42969	CP	mg/kg	87	110	26	30%	Pass	
Copper	M20-Ap42969	CP	mg/kg	5.8	6.8	16	30%	Pass	
Mercury	M20-Ap42969	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42969	CP	mg/kg	8.4	11	24	30%	Pass	
Zinc	M20-Ap42969	CP	mg/kg	17	11	39	30%	Fail	Q15
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42970	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M20-Ap42970	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42970	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42970	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42970	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42970	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42970	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42970	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap42970	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42970	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42970	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42970	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH >C10-C16	M20-Ap42970	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42970	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42970	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42970	CP	mg/kg	23	24	2.0	30%	Pass	
Cadmium	M20-Ap42970	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42970	CP	mg/kg	250	260	2.0	30%	Pass	
Copper	M20-Ap42970	CP	mg/kg	11	11	1.0	30%	Pass	
Lead	M20-Ap42970	CP	mg/kg	23	23	<1	30%	Pass	
Mercury	M20-Ap42970	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42970	CP	mg/kg	16	17	3.0	30%	Pass	
Zinc	M20-Ap42970	CP	mg/kg	140	150	2.0	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42971	CP	%	4.3	3.6	17	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42979	CP	mg/kg	30	29	2.0	30%	Pass	
Cadmium	M20-Ap42979	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42979	CP	mg/kg	320	350	10	30%	Pass	
Copper	M20-Ap42979	CP	mg/kg	9.4	11	13	30%	Pass	
Lead	M20-Ap42979	CP	mg/kg	26	24	5.0	30%	Pass	

Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Mercury	M20-Ap42979	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42979	CP	mg/kg	14	17	22	30%	Pass	
Zinc	M20-Ap42979	CP	mg/kg	21	20	8.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C10-C14	M20-Ap42980	CP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M20-Ap42980	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M20-Ap42980	CP	mg/kg	< 50	< 50	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
TRH >C10-C16	M20-Ap42980	CP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH >C16-C34	M20-Ap42980	CP	mg/kg	< 100	< 100	<1	30%	Pass	
TRH >C34-C40	M20-Ap42980	CP	mg/kg	< 100	< 100	<1	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42980	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
b-BHC	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Dieldrin	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42980	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42980	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenitrothion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Fensulfothion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42980	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42980	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42980	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Arsenic	M20-Ap42980	CP	mg/kg	25	24	2.0	30%	Pass	
Cadmium	M20-Ap42980	CP	mg/kg	< 0.4	< 0.4	<1	30%	Pass	
Chromium	M20-Ap42980	CP	mg/kg	240	250	2.0	30%	Pass	
Copper	M20-Ap42980	CP	mg/kg	11	11	<1	30%	Pass	
Lead	M20-Ap42980	CP	mg/kg	22	22	2.0	30%	Pass	
Mercury	M20-Ap42980	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Nickel	M20-Ap42980	CP	mg/kg	15	15	<1	30%	Pass	
Zinc	M20-Ap42980	CP	mg/kg	22	22	1.0	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42981	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42981	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42981	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42981	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42981	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
o-Xylene	M20-Ap42981	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42981	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42981	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42981	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
% Moisture	M20-Ap42981	CP	%	4.9	3.7	28	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M20-Ap42983	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
BTEX				Result 1	Result 2	RPD			
Benzene	M20-Ap42983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Toluene	M20-Ap42983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Ethylbenzene	M20-Ap42983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
m&p-Xylenes	M20-Ap42983	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
BTEX				Result 1	Result 2	RPD			
o-Xylene	M20-Ap42983	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
Xylenes - Total*	M20-Ap42983	CP	mg/kg	< 0.3	< 0.3	<1	30%	Pass	
Duplicate									
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD			
Naphthalene	M20-Ap42983	CP	mg/kg	< 0.5	< 0.5	<1	30%	Pass	
TRH C6-C10	M20-Ap42983	CP	mg/kg	< 20	< 20	<1	30%	Pass	
Duplicate									
				Result 1	Result 2	RPD			
Conductivity (1:5 aqueous extract at 25°C as rec.)	M20-Ap42984	CP	uS/cm	60	91	40	30%	Fail	Q15
pH (units)(1:5 soil:CaCl2 extract at 25°C as rec.)	M20-Ap42984	CP	pH Units	6.5	6.4	pass	30%	Pass	
Total Organic Carbon	S20-Ma27434	NCP	%	0.8	1.0	16	30%	Pass	
Duplicate									
Heavy Metals				Result 1	Result 2	RPD			
Iron	M20-Ap41367	NCP	mg/kg	35000	35000	1.0	30%	Pass	
Duplicate									
Organochlorine Pesticides				Result 1	Result 2	RPD			
Chlordanes - Total	M20-Ap42989	CP	mg/kg	< 0.1	< 0.1	<1	30%	Pass	
4.4'-DDD	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDE	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
4.4'-DDT	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
a-BHC	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Aldrin	M20-Ap42989	CP	mg/kg	0.06	< 0.05	120	30%	Fail	Q15
b-BHC	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
d-BHC	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan I	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan II	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endosulfan sulphate	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin aldehyde	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Endrin ketone	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
g-BHC (Lindane)	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Heptachlor epoxide	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Hexachlorobenzene	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Methoxychlor	M20-Ap42989	CP	mg/kg	< 0.05	< 0.05	<1	30%	Pass	
Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Azinphos-methyl	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Bolstar	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorfenvinphos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Chlorpyrifos-methyl	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Coumaphos	M20-Ap42989	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Demeton-S	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Demeton-O	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Diazinon	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dichlorvos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Dimethoate	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Disulfoton	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
EPN	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethoprop	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ethyl parathion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Duplicate									
Organophosphorus Pesticides				Result 1	Result 2	RPD			
Fenitrothion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fensulfothion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Fenthion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Malathion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Merphos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Methyl parathion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Mevinphos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Monocrotophos	M20-Ap42989	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Naled	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Omethoate	M20-Ap42989	CP	mg/kg	< 2	< 2	<1	30%	Pass	
Phorate	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pirimiphos-methyl	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Pyrazophos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Ronnel	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Terbufos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tetrachlorvinphos	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Tokuthion	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	
Trichloronate	M20-Ap42989	CP	mg/kg	< 0.2	< 0.2	<1	30%	Pass	

Comments

V2: This report has been amended to include % clay results.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
Q08	The matrix spike recovery is outside of the recommended acceptance criteria. An acceptable recovery was obtained for the laboratory control sample indicating a sample matrix interference.
Q15	The RPD reported passes Eurofins Environment Testing's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Michael Morrison	Analytical Services Manager
Emily Rosenberg	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Jonathon Angell	Senior Analyst-Inorganic (QLD)
Joseph Edouard	Senior Analyst-Organic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)
Scott Beddoes	Senior Analyst-Inorganic (VIC)



Glenn Jackson

General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

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Certificate of Analysis

eurofins | Environment Testing

NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025–Testing
The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

SLR Consulting (NT)
GPO Box 654
Darwin
NT 0801

Attention:	Sarah Doherty
Report	716374-V5-AID
Project Name	JSS
Received Date	Apr 29, 2020
Date Reported	May 05, 2020

Methodology:

Asbestos Fibre Identification	Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques. *NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.*
Unknown Mineral Fibres	Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity. *NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.*
Subsampling Soil Samples	The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed. *NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.*
Bonded asbestos-containing material (ACM)	The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination.The resultant material is then further examined in accordance with AS 4964 - 2004. *NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.*
Limit of Reporting	The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w). The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk). *NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos".This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.*

Project Name JSS
Project ID
Date Sampled Apr 28, 2020
Report 716374-V5-AID

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V111	20-Ap42963	Apr 28, 2020	Approximate Sample 1000g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V112	20-Ap42964	Apr 28, 2020	Approximate Sample 201g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V113	20-Ap42965	Apr 28, 2020	Approximate Sample 211g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V114	20-Ap42966	Apr 28, 2020	Approximate Sample 308g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V115	20-Ap42967	Apr 28, 2020	Approximate Sample 424g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V116	20-Ap42968	Apr 28, 2020	Approximate Sample 829g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V121	20-Ap42969	Apr 28, 2020	Approximate Sample 791g Sample consisted of: Brown coarse-grained soil, rocks, cement fragments and plaster-like material	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V126	20-Ap42970	Apr 28, 2020	Approximate Sample 895g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
V129	20-Ap42971	Apr 28, 2020	Approximate Sample 354g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V130	20-Ap42972	Apr 28, 2020	Approximate Sample 359g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
V131	20-Ap42973	Apr 28, 2020	Approximate Sample 856g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V136	20-Ap42974	Apr 28, 2020	Approximate Sample 839g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
V141	20-Ap42975	Apr 28, 2020	Approximate Sample 808g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC5	20-Ap42976	Apr 28, 2020	Approximate Sample 322g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
QC6	20-Ap42977	Apr 28, 2020	Approximate Sample 319g Sample consisted of: Brown coarse-grained clayey soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
QC7	20-Ap42978	Apr 28, 2020	Approximate Sample 283g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
QC8	20-Ap42979	Apr 28, 2020	Approximate Sample 924g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC9	20-Ap42980	Apr 28, 2020	Approximate Sample 337g Sample consisted of: Brown coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
QC10	20-Ap42981	Apr 28, 2020	Approximate Sample 179g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.
Val_A	20-Ap42982	Apr 28, 2020	Approximate Sample 561g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
QC12	20-Ap42983	Apr 28, 2020	Approximate Sample 234g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No trace asbestos detected.

Client Sample ID	Eurofins Sample No.	Date Sampled	Sample Description	Result
STP4_N	20-Ap42986	Apr 28, 2020	Approximate Sample 851g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP4_E	20-Ap42987	Apr 28, 2020	Approximate Sample 941g Sample consisted of: Brown coarse-grained soil and rocks	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP4_S	20-Ap42988	Apr 28, 2020	Approximate Sample 697g Sample consisted of: Brown coarse-grained soil and rocks	AF: Chrysotile asbestos detected in fibre cement fragments. Approximate raw weight of AF = 0.056g Estimated asbestos content in AF = 0.0056g* Total estimated asbestos concentration in AF = 0.00080% w/w* No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.
STP4_W	20-Ap42989	Apr 28, 2020	Approximate Sample 933g Sample consisted of: Brown coarse-grained soil, rocks and cement fragments	No asbestos detected at the reporting limit of 0.001% w/w.* Organic fibre detected. No trace asbestos detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results.

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Apr 29, 2020	Indefinite
Asbestos - LTM-ASB-8020	Sydney	Apr 29, 2020	Indefinite

Comments

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Chamath JHM Annakkage	Senior Analyst-Asbestos (NSW)

Authorised by:

Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please click here.

Eurofins shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

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Company Name: SLR Consulting (NT)
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Project Name: JSS

Order No.:
Report #: 716374
Phone: +61 2 9428 8100
Fax:

Received: Apr 29, 2020 12:00 AM
Due: Apr 30, 2020
Priority: 1 Day
Contact Name: Sarah Doherty

Eurofins Analytical Services Manager : Michael Morrison

Sample Detail						Asbestos - AS4964	Asbestos - WA guidelines	CANCELLED	HOLD	Eurofins | mgt Suite B14	Moisture Set	NEPM Screen for Soil Classification	Eurofins | mgt Suite B6
Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X						
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
External Laboratory													
No	**Sample ID**	**Sample Date**	**Sampling Time**	**Matrix**	**LAB ID**								
1	V111	Apr 28, 2020		Soil	M20-Ap42963		X			X	X		X
2	V112	Apr 28, 2020		Soil	M20-Ap42964	X				X	X		X
3	V113	Apr 28, 2020		Soil	M20-Ap42965	X				X	X		X
4	V114	Apr 28, 2020		Soil	M20-Ap42966	X				X	X		X
5	V115	Apr 28, 2020		Soil	M20-Ap42967	X				X	X		X
6	V116	Apr 28, 2020		Soil	M20-Ap42968		X			X	X		X
7	V121	Apr 28, 2020		Soil	M20-Ap42969		X			X	X		X
8	V126	Apr 28, 2020		Soil	M20-Ap42970		X			X	X		X
9	V129	Apr 28, 2020		Soil	M20-Ap42971	X				X	X		X
10	V130	Apr 28, 2020		Soil	M20-Ap42972	X				X	X		X
11	V131	Apr 28, 2020		Soil	M20-Ap42973		X			X	X		X

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X						
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
12	V136	Apr 28, 2020		Soil	M20-Ap42974		X			X	X		X
13	V141	Apr 28, 2020		Soil	M20-Ap42975		X			X	X		X
14	QC5	Apr 28, 2020		Soil	M20-Ap42976	X				X	X		X
15	QC6	Apr 28, 2020		Soil	M20-Ap42977	X				X	X		X
16	QC7	Apr 28, 2020		Soil	M20-Ap42978	X				X	X		X
17	QC8	Apr 28, 2020		Soil	M20-Ap42979		X			X	X		X
18	QC9	Apr 28, 2020		Soil	M20-Ap42980	X				X	X		X
19	QC10	Apr 28, 2020		Soil	M20-Ap42981	X				X	X		X
20	Val_A	Apr 28, 2020		Soil	M20-Ap42982		X						
21	QC12	Apr 28, 2020		Soil	M20-Ap42983	X				X	X		X
22	Char_Val	Apr 28, 2020		Soil	M20-Ap42984						X	X	
23	Rin5	Apr 28, 2020		Water	M20-Ap42985			X					
24	STP4_N	Apr 28, 2020		Soil	M20-Ap42986		X			X	X		X

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X						
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
25	STP4_E	Apr 28, 2020		Soil	M20-Ap42987		X			X	X		X
26	STP4_S	Apr 28, 2020		Soil	M20-Ap42988		X			X	X		X
27	STP4_W	Apr 28, 2020		Soil	M20-Ap42989		X			X	X		X
28	V109	Apr 28, 2020		Soil	M20-Ap42990				X				
29	V110	Apr 28, 2020		Soil	M20-Ap42991				X				
30	V117	Apr 28, 2020		Soil	M20-Ap42992				X				
31	V118	Apr 28, 2020		Soil	M20-Ap42993				X				
32	V119	Apr 28, 2020		Soil	M20-Ap42994				X				
33	V120	Apr 28, 2020		Soil	M20-Ap42995				X				
34	V122	Apr 28, 2020		Soil	M20-Ap42996				X				
35	V123	Apr 28, 2020		Soil	M20-Ap42997				X				
36	V124	Apr 28, 2020		Soil	M20-Ap42998				X				
37	V125	Apr 28, 2020		Soil	M20-Ap42999				X				

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X						
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
38	V127	Apr 28, 2020		Soil	M20-Ap43000				X				
39	V128	Apr 28, 2020		Soil	M20-Ap43001				X				
40	V132	Apr 28, 2020		Soil	M20-Ap43002				X				
41	V133	Apr 28, 2020		Soil	M20-Ap43003				X				
42	V134	Apr 28, 2020		Soil	M20-Ap43004				X				
43	V135	Apr 28, 2020		Soil	M20-Ap43005				X				
44	V137	Apr 28, 2020		Soil	M20-Ap43006				X				
45	V138	Apr 28, 2020		Soil	M20-Ap43007				X				
46	V139	Apr 28, 2020		Soil	M20-Ap43008				X				
47	V140	Apr 28, 2020		Soil	M20-Ap43009				X				
48	V142	Apr 28, 2020		Soil	M20-Ap43010				X				
49	V143	Apr 28, 2020		Soil	M20-Ap43011				X				
50	V144	Apr 28, 2020		Soil	M20-Ap43012				X				

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Melbourne Laboratory - NATA Site # 1254 & 14271								X	X	X	X	X	X
Sydney Laboratory - NATA Site # 18217						X	X						
Brisbane Laboratory - NATA Site # 20794												X	
Perth Laboratory - NATA Site # 23736													
51	QC11	Apr 28, 2020		Soil	M20-Ap43080				X				
Test Counts						12	13	1	24	24	25	1	24

APPENDIX H

Imported Fill Memorandums

AECOM Imagine it. Delivered.

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Memorandum

To	Neil Young	Page	1
CC	Steve Shenfield		
Subject	Temporary Base Entry Stockpile Analytical Results		
From	Alana Court		
File/Ref No.	60517252_TM_TempBaseEntryStockpile_0_190212	Date	08-Feb-2019

1.0 Introduction

As part of the Larrakeyah Barracks Redevelopment (LBR) Temporary Base Entry works soil material is required to be assessed for contaminants of concern prior to determining the proposed end use.

AECOM collected samples from stockpiled material on 30 January 2019 and submitted samples to a NATA accredited laboratory -ALS Laboratories (Sydney) for analysis. Samples were compared against adopted criteria presented in Section 2.0 with a summary of results presented in Section 3.0.

2.0 Adopted Criteria

Soil analytical results are assessed against the following relevant guidance:

- Department of Defence *Per- and Poly-Fluroalkyl Substances (PFAS) Framework – Construction and Maintenance Projects*
- CRC Care 2011 *Commercial and Industrial Vapour Intrusion (HSL-D) for Soil – Sand (<15cm)*
- *National Environment Protection Measure Health Investigation Levels (HILs) for Residential A Soils*
- *National Environment Protection Measure Health Investigation Levels (HILs) for Commercial/Industrial D Soils.*

3.0 Summary of Results

Soil analytical results were compared to adopted criteria and are presented in Table 1 and summarised below:

- No PFAS compounds were detected above analytical limits of reporting.
- No asbestos was detected above analytical limits of reporting.
- No benzene, toluene, ethylbenzene or xylene (BTEX) were detected above analytical limits of reporting.
- No total recoverable hydrocarbons (TRH) were detected above analytical limits of reporting.
- No polycyclic aromatic hydrocarbons (PAH) or Phenols were detected above analytical limits of reporting.
- Lead, arsenic, chromium and zinc were detected above the analytical limits of reporting but were below all guideline values by an approximate order of magnitude. All other metals were below the limits of detection.

Yours sincerely

Alana Court
Principal Environmental Scientist
alana.court@aecom.com
Mobile: +61 427 610 558

Table 1
Analytical Results - Temporary Base Entry Stockpile
Larrakeyah Barracks Redevelopment
Laing O'Rourke - Larrakeyah Barracks

AECOM

									Location	SP1	SP10	SP2	SP3	SP4	SP5	SP6	SP7	SP7	SP8	SP9
									Sample_Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary
									Sampled_Date_Time	30/01/2019	30/01/2019	30/01/2019	30/01/2019	30/01/2019	30/01/2019	30/01/2019	30/01/2019	30/01/2019	30/01/2019	30/01/2019
			CRC CARE 2011 - Commercial/Industrial (HSL-D) - Vapour (Soil - Sand <15cm)	DOD PFAS Material ReUse - Category 1	DOD PFAS Material ReUse - Category 2	DOD PFAS Material ReUse - Category 3	NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil	NEPM 2013 Table 1A(1) HILs Res A Soil												
Analyte	**Units**	**LOR**																		
PFAS Full Suite																				
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005							<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005							<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer Sulfonate (6:2 FtS)	mg/kg	0.0005							<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005							<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005							<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoacetic acid (Et	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE	mg/kg	0.0005							<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005							<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (M	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE) (24448-09-7)	mg/kg	0.0005							<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorobutanoic acid (PFBA)	mg/kg	0.001							<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005							<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sum of PFAS	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sum of PFOS and PFHxS	mg/kg	0.0002		20	0.14	0			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002					100	4	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002							<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Asbestos																				
Asbestos (Trace)	Fibres	5							Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Asbestos fibres	g/kg	0.1							0	0	0	0	0	0	0	0	0	0	0	0
BTEX																				
Benzene	mg/kg	0.2	3.25|3.55						<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	0.5	949						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	0.5	335						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene (m & p)	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene (o)	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Xylene Total	mg/kg	0.5	235						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total BTEX	mg/kg	0.2							<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
C6-C10 less BTEX (F1)	mg/kg	10							<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Lead																				
Lead	mg/kg	5					1500	300	12	20	16	10	11	8	9	<5	<5	8	16	
Metals																				
Arsenic	mg/kg	5					3000	100	7	6	6	<5	<5	<5	<5	<5	<5	<5	5	
Cadmium	mg/kg	1					900	20	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Chromium (III+VI)	mg/kg	2							101	64	41	28	47	21	25	5	10	29	47	
Copper	mg/kg	5					240000	6000	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	
Mercury	mg/kg	0.1					730	40	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Nickel	mg/kg	2					6000	400	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	<2	
Zinc	mg/kg	5					400000	7400	<5	9	12	9	12	<5	<5	<5	<5	<5	14	
PAH																				
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5					40	3	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5					40	3	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(b+j)fluoranthene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5					40	3	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
PAH/Phenols																				
Acenaphthene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Acenaphthylene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Anthracene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benz(a)anthracene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a) pyrene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(g,h,i)perylene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(k)fluoranthene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chrysene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Dibenz(a,h)anthracene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Fluoranthene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Fluorene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Naphthalene	mg/kg	0.5	12.1						<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PAHs (Sum of total)	mg/kg	0.5					4000	300	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Phenanthrene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Pyrene	mg/kg	0.5							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
TPH																				
C10-C16	mg/kg	50							<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
F2-NAPHTHALENE	mg/kg	50							<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
C16-C34	mg/kg	100							<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
C34-C40	mg/kg	100							<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
C6 - C9	mg/kg	10							<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C14	mg/kg	50							<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
C15 - C28	mg/kg	100							<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
C29-C36	mg/kg	100							<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
+C10 - C36 (Sum of total)	mg/kg	50							<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
C10 - C40 (Sum of total)	mg/kg	50							<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
C6-C10	mg/kg	10							<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	

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Memorandum

To	Neil Young	Page	1
CC	Steve Shenfield		
Subject	Temporary Base Entry Stockpile Analytical Results		
From	Alana Court		
File/Ref No.	60517252	Date	14-Mar-2019

1.0 Introduction

As part of the Larrakeyah Barracks Redevelopment (LBR) Temporary Base Entry works soil material is required to be assessed for contaminants of concern prior to determining the proposed end use.

AECOM collected eight primary and four duplicate samples from stockpiled material on 14 February 2019 and submitted samples to a NATA accredited laboratory -ALS Laboratories (Sydney) for analysis. Samples were compared against adopted criteria presented in Section 2.0 with a summary of results presented in Section 3.0.

Additional samples were collected and are currently on hold by the analysing laboratory. The sample locations are presented in Figure 1.

2.0 Adopted Criteria

Soil analytical results are assessed against the following relevant guidance:

- Department of Defence *Per- and Poly-Fluroalkyl Substances (PFAS) Framework – Construction and Maintenance Projects*
- CRC Care 2011 *Commercial and Industrial Vapour Intrusion (HSL-D) for Soil – Sand (<15cm)*
- *National Environment Protection Measure Health Investigation Levels (HILs) for Residential A Soils*
- *National Environment Protection Measure Health Investigation Levels (HILs) for Commercial/Industrial D Soils.*

3.0 Summary of Results

Soil analytical results were compared to adopted criteria and are presented in **Table 1** and summarised below:

- PFAS compounds (PFOS) were detected slightly above analytical limits of reporting (<0.0002 mg/kg) at three locations (TBE_SP12, TBE_SP22 and TBE_SP24) with reported concentrations having a range of 0.0002 - 0.0006 mg/kg. Samples which reported PFAS detections were re-analysed by the laboratory (TBE_SP12, TBE_SP22 and TBE_SP24) and the original reported results were verified.

  Reported concentrations at the three locations fall within Category 3 soils (<0.14 mg/kg) as presented by the Defence PFAS criteria presented in the *Per- and Poly-Fluroalkyl Substances (PFAS) Framework – Construction and Maintenance Projects*. Category 3 soils with PFOS ≤ 0.14 mg/kg do not require any additional mitigation procedures for on-site use. However they cannot be removed from the Defence Base.

- No asbestos was detected above analytical limits of reporting.
- No benzene, toluene, ethylbenzene or xylene (BTEX) were detected above analytical limits of reporting.

- No total recoverable hydrocarbons (TRH) were detected above analytical limits of reporting.
- No polycyclic aromatic hydrocarbons (PAH) or Phenols were detected above analytical limits of reporting.
- Lead, arsenic, chromium, and zinc were detected above the analytical limits of reporting but were below all guideline values by an approximate order of magnitude. All other metals were below the limits of detection.

4.0 Recommendations

The following recommendations are made based on the reported concentrations:

- Soil from TBE_SP12, TBE_SP22 and TBE_SP24 should remain on site for re-use and be managed as a Category 3 material under current defence guidance. A buffer of approximately 2.5 metre either side of the sampling location is recommended.
- All other soil is suitable to be removed from site as clean-fill.

Should you have any queries in relation to the advice, please don't hesitate to contact the undersigned.



Yours sincerely

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Figure 1 – Sample Location



AECOM does not warrant the accuracy or completeness of information displayed in this map and any person using it does so at their own risk. AECOM shall bear no responsibility or liability for any errors, faults, defects, or omissions in the information.

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DATUM GDA 1994, PROJECTION MGA ZONE XX

0 15 30 60
metres

1:2,000 (when printed at A4)

LEGEND

Soil Stockpile Samples
- Non-Detection
- PFAS Detection

- Laing O'rourke Offices
- Cadastral Boundary

Data sources:

Base Data: (c) MapInfo Streetpro
Aerial: Nearmaps © 2016

LARRAKEYAH BARRACKS REDEVELOPMENT

Soil Stockpiles

PROJECT ID	60517252
CREATED BY	jace.emberg
LAST MODIFIED	12-Mar-2019
VERSION	1

Filename: \\audwn1fp001\Projects\605x\60517252\4. Tech Work Area\4.99 GIS\02_MXDs\Soil Stockpiles\G60517252_SoilSampling Sites_20160921_A4.mxd

A4 size

Table 1 – Analytical Results

Table 1
Analytical Results - Temporary Base Entry Stockpile
Larrakeyah Barracks Redevelopment
Laing O'Rourke - Larrakeyah Barracks

AECOM

									Location	TBE_SP11	TBE_SP12			TBE_SP16	TBE_SP18				TBE_SP21	TBE_SP22	TBE_SP24	TBE_SP27
									Field ID	SP11	SP12	QAQC01	QAQC02	SP16	SP18	QAQC03	QAQC04	SP21	SP22	SP24	SP27
									Sample Type	Primary	Primary	Duplicate	Duplicate	Primary	Primary	Field_D	Field_D	Primary	Primary	Primary	Primary
									Sampled Date	14/02/2019	14/02/2019	14/02/2019	14/02/2019	14/02/2019	14/02/2019	14/02/2019	14/02/2019	14/02/2019	14/02/2019	14/02/2019	14/02/2019
Analytle	**Units**	**LOR**	**CRC CARE 2011 - Commercial/Industrial (HSL-D) - Vapour (Soil - Sand <15cm)**	**DOD PFAS Material ReUse - Category 1**	**DOD PFAS Material ReUse - Category 2**	**DOD PFAS Material ReUse - Category 3**	**NEPM 2013 Table 1A(1) HILs Comm/Ind D Soil**	**NEPM 2013 Table 1A(1) HILs Res A Soil**															
PFAS Full Suite																							
10:2 Fluorotelomer sulfonic acid (10:2 FTS)	mg/kg	0.0005								<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
4:2 Fluorotelomer sulfonic acid (4:2 FTS)	mg/kg	0.0005								<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6:2 Fluorotelomer Sulfonate (6:2 FtS)	mg/kg	0.0005								<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
8:2 Fluorotelomer sulfonic acid (8:2 FTS)	mg/kg	0.0005								<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamide (EtFOSA)	mg/kg	0.0005								<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Ethyl perfluorooctane sulfonamidoacetic acid (Et	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Ethyl perfluorooctane sulfonamidoethanol (EtFOSE	mg/kg	0.0005								<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamide (MeFOSA)	mg/kg	0.0005								<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
N-Methyl perfluorooctane sulfonamidoacetic acid (M	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
N-Methyl perfluorooctane sulfonamidoethanol (MeFOSE) (24448-09-7)	mg/kg	0.0005								<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorobutane sulfonic acid (PFBS)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorobutanoic acid (PFBA)	mg/kg	0.001								<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Perfluorodecanesulfonic acid (PFDS)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorodecanoic acid (PFDA)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorododecanoic acid (PFDoDA)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptane sulfonic acid (PFHpS)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroheptanoic acid (PFHpA)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorohexanoic acid (PFHxA)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorononanoic acid (PFNA)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorooctane sulfonamide (FOSA)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentane sulfonic acid (PFPeS)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoropentanoic acid (PFPeA)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluorotetradecanoic acid (PFTeDA)	mg/kg	0.0005								<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Perfluorotridecanoic acid (PFTrDA)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Perfluoroundecanoic acid (PFUnDA)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Sum of PFAS	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	0.0006	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	0.0003	<0.0002	
Sum of PFOS and PFHxS	mg/kg	0.0002		20	0.14	0				<0.0002	<0.0002	<0.0002	**0.0006**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0002**	**0.0003**	<0.0002	
Perfluorooctane sulfonic acid (PFOS)	mg/kg	0.0002					100	4		<0.0002	<0.0002	<0.0002	**0.0006**	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	**0.0002**	**0.0003**	<0.0002	
Perfluorooctanoic Acid (PFOA)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Perfluorohexane sulfonic acid (PFHxS)	mg/kg	0.0002								<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	
Asbestos																							
Asbestos in soil (>7mm ACM)	g	0.0004								<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	
Bonded Asbestos	g	0.1								<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Bonded Asbestos (Potential %)	% (w/w)	0.01								<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Asbestos (Trace)	Fibres	5								**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	**1**	
Asbestos (Fines and Fibrous <7mm)	g	0.0004								<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	<0.0004	0.0054	<0.0004	<0.0004	
Asbestos sample weight for % calculation	kg	0.0001								**0.0569**	**0.0675**	**0.0622**	**0.0512**	**0.0542**	**0.057**	**0.0773**	**0.0736**	**0.0532**	**0.061**	**0.0655**	**0.0692**	
Asbestos fibres	g/kg	0.1								0	0	0	0	0	0	0	0	0	1	0	0	
BTEX																							
Benzene	mg/kg	0.2	**3.25|3.55**							<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
Toluene	mg/kg	0.5	**949**							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Ethylbenzene	mg/kg	0.5	**335**							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Xylene (m & p)	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Xylene (o)	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Xylene Total	mg/kg	0.5	**235**							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Total BTEX	mg/kg	0.2								<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	
C6-C10 less BTEX (F1)	mg/kg	10								<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
Metals																							
Arsenic	mg/kg	5					3000	100		**6**	**6**	<5	<5	**8**	<5	<5	<5	**6**	**6**	**8**	**7**	
Cadmium	mg/kg	1					900	20		<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	
Chromium (III+VI)	mg/kg	2								**60**	**34**	**28**	**30**	**72**	**27**	**20**	**29**	**29**	**36**	**43**	**71**	
Copper	mg/kg	5					240000	6000		<5	<5	<5	<5	<5	**7**	**8**	**7**	**<5**	**6**	**11**	<5	
Mercury	mg/kg	0.1					730	40		<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	
Nickel	mg/kg	2					6000	400		<2	**2**	**3**	**3**	<2	**3**	**3**	**3**	**2**	<2	**2**	<2	
Zinc	mg/kg	5					400000	7400		<5	**7**	**5**	**7**	<5	**14**	**14**	**13**	**15**	**28**	**57**	**22**	
Lead	mg/kg	5					1500	300		**10**	**15**	**30**	**22**	**10**	**11**	**11**	**11**	**14**	**23**	**45**	**22**	
PAH																							
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.5					40	3		**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	**0.6**	
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.5					40	3		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(b+j)fluoranthene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a)pyrene TEQ (LOR)	mg/kg	0.5					40	3		**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	
PAH/Phenols																							
Acenaphthene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Acenaphthylene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Anthracene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benz(a)anthracene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(a) pyrene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(g,h,i)perylene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Benzo(k)fluoranthene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Chrysene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Dibenz(a,h)anthracene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Fluoranthene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Fluorene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Indeno(1,2,3-c,d)pyrene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Naphthalene	mg/kg	0.5	**12.1**							<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
PAHs (Sum of total)	mg/kg	0.5					4000	300		<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Phenanthrene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
Pyrene	mg/kg	0.5								<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
TPH																							
C10-C16	mg/kg	50								<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
F2-NAPHTHALENE	mg/kg	50								<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
C16-C34	mg/kg	100								<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
C34-C40	mg/kg	100								<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
C6 - C9	mg/kg	10								<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	
C10 - C14	mg/kg	50								<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
C15 - C28	mg/kg	100								<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
C29-C36	mg/kg	100								<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	
+C10 - C36 (Sum of total)	mg/kg	50								<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
C10 - C40 (Sum of total)	mg/kg	50								<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	
C6-C10	mg/kg	10								<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	

AECOM Imagine it. Delivered.

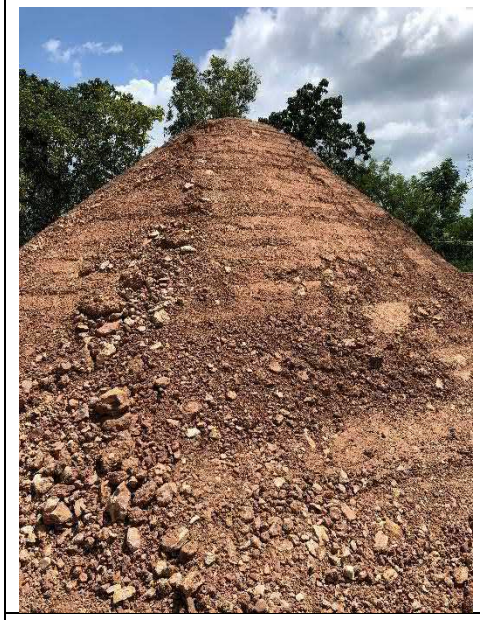
Soil Testing Plates (19 Feb 2019)

		
SP11 Sample Medium	SP12 Sample Medium	SP13 Sample Medium
		
SP14 Sample Medium	SP15 Sample Medium	SP16 Sample Medium

		
SP17 Sample Medium	SP18 Sample Medium	SP19 Sample Medium
		
SP20 Sample Medium	SP21 Sample Medium	SP21 Close up of Sample Medium

		
SP22 Sample Medium	SP23 Sample Medium	SP24 Sample Medium
		
SP25 Sample Medium	SP23 to SP25 Stockpile Area	SP23 to SP25 Stockpile Area

		
SP26 Sample Medium	SP27 Sample Medium	SP28 Sample Medium
		
SP29 Sample Medium	SP30 Sample Medium	SP31 Sample Medium

		
SP32 Sample Medium		

APPENDIX I

Air Quality Monitoring Reports

SLR Consulting Australia Laboratory Services - Darwin Office
ABN: 29 001 584 612
http://www.slrconsulting.com

Unit 5 21 Parap Road NT 0820
T: 61 8 8998 0100 F: 61 2 9427 8200

Airborne Asbestos Monitoring Report

Test method in accordance with NOHSC:3003(2005) AP-01.03, AP-02.01, 02.03, 02.04 & AP-03

Reference: 680.10679.00100-JLP-2
Date of Issue: Thursday, 23 April 2020
Removal Contractor: N/A
Job Location: John Stokes Square 47 Progress Drive Nightcliff NT 0810
Field Lab Address:

Client: HK Solutions
Unit 3, 29 Miles Road
Berrimah
NT 0828

Date of Test	Sample Code	Type	Mon Loc'n	Airflow (L/min)			TIME			Count		CONC'N	REM
				ON	OFF	AVGE	ON	OFF	TOTAL(min)	Fields	Fibres	(fibres/mL)	
23/04/2020	**Blank**		0				N/A	N/A		100	0	N/A	
23/04/2020	JLP-1	10	1	1.00	.90	.95	06:41	17:22	641	100	0	<0.01	
23/04/2020	JLP-2	10	2	1.00	.90	.95	06:43	17:20	637	100	1	<0.01	
23/04/2020	JLP-3	10	3	1.00	1.00	1.00	06:41	17:11	630	100	0	<0.01	
23/04/2020	JLP-4	10	3	1.00	.90	.95	06:45	17:10	625	100	0	<0.01	

Monitoring Locations :

0 Blank
1 North Boundary of Site
2 East Boundary of Site
3 South Boundary of Site

Sample Types:

10 Control

Remarks:

Notes On Sampling:

The above results only relate to the samples tested. This report confirms preliminary report _N/A

NATA ACCREDITED LABORATORY NUMBER:3130

Accredited for compliance with ISO/IEC 17025 - Testing.
This report cannot be reproduced except in full.

Approved Fibre Counter: Liam Munro

Approved Fibre Signatory: Liam Munro

SLR Consulting Australia Laboratory Services - Darwin Office
ABN: 29 001 584 612
http://www.slrconsulting.com

Unit 5 21 Parap Road NT 0820
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Airborne Asbestos Monitoring Report

Test method in accordance with NOHSC:3003(2005) AP-01.03, AP-02.01, 02.03, 02.04 & AP-03

Reference: 680.10679.00100-JLP-3
Date of Issue: Friday, 24 April 2020
Removal Contractor: N/A
Job Location: John Stokes Square 47 Progress Drive Nightcliff NT 0810
Field Lab Address:

Client: HK Solutions
Unit 3, 29 Miles Road
Berrimah
NT 0828

Date of Test	Sample Code	Type	Mon Loc'n	Airflow (L/min)			TIME			Count		CONC'N	REM
				ON	OFF	AVGE	ON	OFF	TOTAL(min)	Fields	Fibres	(fibres/mL)	
24/04/2020	**Blank**		0				N/A	N/A		100	0	N/A	
24/04/2020	JLP-5	10	1	1.00	1.00	1.00	06:51	17:15	624	100	0	<0.01	
24/04/2020	JLP-6	10	2	1.00	1.00	1.00	06:55	17:10	615	100	0	<0.01	
24/04/2020	JLP-7	10	3	1.00	1.00	1.00	06:50	17:11	621	100	0	<0.01	
24/04/2020	JLP-8	10	4	1.00	.95	.98	06:48	17:20	632	100	0	<0.01	

Monitoring Locations :

0 Blank
1 North Boundary of Site
2 East Boundary of Site
3 South Boundary of Site
4 West Boundary of Site

Sample Types:

10 Control

Remarks:

Notes On Sampling:

The above results only relate to the samples tested. This report confirms preliminary report _N/A

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Airborne Asbestos Monitoring Report

Test method in accordance with NOHSC:3003(2005) AP-01.03, AP-02.01, 02.03, 02.04 & AP-03

Reference: 680.10679.00100-JLP-4
Date of Issue: Saturday, 25 April 2020
Removal Contractor: N/A
Job Location: John Stokes Square 47 Progress Drive Nightcliff NT 0810
Field Lab Address:

Client: HK Solutions
Unit 3, 29 Miles Road
Berrimah
NT 0828

Date of Test	Sample Code	Type	Mon Loc'n	Airflow (L/min)			TIME			Count		CONC'N	REM
				ON	OFF	AVGE	ON	OFF	TOTAL(min)	Fields	Fibres	(fibres/mL)	
25/04/2020	**Blank**		0				N/A	N/A		100	0	N/A	
25/04/2020	JLP-9	10	1	2.00	2.00	2.00	07:37	14:13	396	100	0	<0.01	
25/04/2020	JLP-10	10	2	2.00	2.00	2.00	07:40	14:10	390	100	0	<0.01	
25/04/2020	JLP-11	10	3	2.00	2.00	2.00	07:41	14:07	386	100	0	<0.01	
25/04/2020	JLP-12	10	4	2.00	2.00	2.00	07:43	14:17	394	100	0	<0.01	

Monitoring Locations :

0 Blank
1 North Boundary of Site
2 East Boundary of Site
3 South Boundary of Site
4 West Boundary of Site

Sample Types:

10 Control

Remarks:

Notes On Sampling:

The above results only relate to the samples tested. This report confirms preliminary report _N/A

NATA ACCREDITED LABORATORY NUMBER:3130

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Airborne Asbestos Monitoring Report

Test method in accordance with NOHSC:3003(2005) AP-01.03, AP-02.01, 02.03, 02.04 & AP-03

Reference: 680.10679.00100-JLP-5
Date of Issue: Monday, 27 April 2020
Removal Contractor: N/A
Job Location: John Stokes Square 47 Progress Drive Nightcliff NT 0810
Field Lab Address:

Client: HK Solutions
Unit 3, 29 Miles Road
Berrimah
NT 0828

Date of Test	Sample Code	Type	Mon Loc'n	Airflow (L/min)			TIME			Count		CONC'N	REM
				ON	OFF	AVGE	ON	OFF	TOTAL(min)	Fields	Fibres	(fibres/mL)	
27/04/2020	**Blank**		0				N/A	N/A		100	0	N/A	
27/04/2020	JLP-13	10	1	1.00	1.00	1.00	06:43	17:01	618	100	1	<0.01	
27/04/2020	JLP-14	10	2	1.00	1.00	1.00	06:40	17:00	620	100	2	<0.01	
27/04/2020	JLP-15	10	3	1.00	1.00	1.00	06:42	17:03	621	100	1	<0.01	
27/04/2020	JLP-16	10	4	1.00	.95	.98	06:43	17:05	622	100	0	<0.01	

Monitoring Locations :

0 Blank
1 North Boundary of Site
2 East Boundary of Site
3 South Boundary of Site
4 West Boundary of Site

Sample Types:

10 Control

Remarks:

Notes On Sampling:

The above results only relate to the samples tested. This report confirms preliminary report _N/A

NATA ACCREDITED LABORATORY NUMBER:3130

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Unit 5 21 Parap Road NT 0820
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Airborne Asbestos Monitoring Report

Test method in accordance with NOHSC:3003(2005) AP-01.03, AP-02.01, 02.03, 02.04 & AP-03

Reference: 680.10679.00100-JLP-6
Date of Issue: Tuesday, 28 April 2020
Removal Contractor: N/A
Job Location: John Stokes Square 47 Progress Drive Nightcliff NT 0810
Field Lab Address:

Client: HK Solutions
Unit 3, 29 Miles Road
Berrimah
NT 0828

Date of Test	Sample Code	Type	Mon Loc'n	Airflow (L/min)			TIME			Count		CONC'N	REM
				ON	OFF	AVGE	ON	OFF	TOTAL(min)	Fields	Fibres	(fibres/mL)	
28/04/2020	**Blank**		0				N/A	N/A		100	0	N/A	
28/04/2020	JLP-17	10	1	1.00	1.00	1.00	06:42	17:00	618	100	1	<0.01	
28/04/2020	JLP-18	10	2	1.00	1.00	1.00	06:43	17:00	617	100	0	<0.01	
28/04/2020	JLP-19	10	3	1.00	1.00	1.00	06:43	17:01	618	100	1	<0.01	
28/04/2020	JLP-20	10	4	1.00	1.00	1.00	06:41	17:02	621	100	0	<0.01	

Monitoring Locations :

0 Blank
1 North Boundary of Site
2 East Boundary of Site
3 South Boundary of Site
4 West Boundary of Site

Sample Types:

10 Control

Remarks:

Notes On Sampling:

The above results only relate to the samples tested. This report confirms preliminary report _N/A

NATA ACCREDITED LABORATORY NUMBER:3130

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Approved Fibre Counter: Liam Munro

Approved Fibre Signatory: Liam Munro

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Airborne Asbestos Monitoring Report

Test method in accordance with NOHSC:3003(2005) AP-01.03, AP-02.01, 02.03, 02.04 & AP-03

Reference: 680.10679.00100-JLP-7
Date of Issue: Wednesday, 29 April 2020
Removal Contractor: N/A
Job Location: John Stokes Square 47 Progress Drive Nightcliff NT 0810
Field Lab Address:

Client: HK Solutions
Unit 3, 29 Miles Road
Berrimah
NT 0828

Date of Test	Sample Code	Type	Mon Loc'n	Airflow (L/min)			TIME			Count		CONC'N	REM
				ON	OFF	AVGE	ON	OFF	TOTAL(min)	Fields	Fibres	(fibres/mL)	
29/04/2020	**Blank**		0				N/A	N/A		100	0	N/A	
29/04/2020	JLP-21	10	1	1.00	1.00	1.00	06:50	14:45	475	100	0	<0.01	107566
29/04/2020	JLP-22	10	2	1.00	1.10	1.05	06:52	14:46	474	100	1	<0.01	
29/04/2020	JLP-23	10	3	1.00	1.00	1.00	06:53	14:44	471	100	0	<0.01	
29/04/2020	JLP-24	10	4	1.00	1.10	1.05	06:49	14:41	472	100	0	<0.01	

Monitoring Locations :

0 Blank
1 North Boundary of Site
2 East Boundary of Site
3 South Boundary of Site
4 West Boundary of Site

Sample Types:

10 Control

Remarks:

107566 Reject sample - pump failure

Notes On Sampling:

The above results only relate to the samples tested. This report confirms preliminary report _N/A

NATA ACCREDITED LABORATORY NUMBER:3130

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SLR Consulting Australia Laboratory Services - Darwin Office
ABN: 29 001 584 612
http://www.slrconsulting.com

Unit 5 21 Parap Road NT 0820
T: 61 8 8998 0100 F: 61 2 9427 8200

Airborne Asbestos Monitoring Report

Test method in accordance with NOHSC:3003(2005) AP-01.03, AP-02.01, 02.03, 02.04 & AP-03

Reference: 680.10679.00100-JLP-8
Date of Issue: Thursday, 30 April 2020
Removal Contractor: N/A
Job Location: John Stokes Square 47 Progress Drive Nightcliff NT 0810
Field Lab Address:

Client: HK Solutions
Unit 3, 29 Miles Road
Berrimah
NT 0828

Date of Test	Sample Code	Type	Mon Loc'n	Airflow (L/min)			TIME			Count		CONC'N	REM
				ON	OFF	AVGE	ON	OFF	TOTAL(min)	Fields	Fibres	(fibres/mL)	
30/04/2020	**Blank**		0				N/A	N/A		100	0	N/A	
30/04/2020	JLP-25	10	1	2.00	2.00	2.00	08:30	15:09	399	100	0	<0.01	
30/04/2020	JLP-26	10	2	2.00	2.00	2.00	08:28	15:04	396	100	0	<0.01	107571
30/04/2020	JLP-27	10	3	2.00	2.10	2.05	08:26	15:05	399	100	0	<0.01	
30/04/2020	JLP-28	10	4	2.00	1.95	1.98	08:24	15:31	427	100	2	<0.01	

Monitoring Locations :

0 Blank
1 North Boundary of Site
2 East Boundary of Site
3 South Boundary of Site
4 West Boundary of Site

Sample Types:

10 Control

Remarks:

107571 Pump on ground

Notes On Sampling:

The above results only relate to the samples tested. This report confirms preliminary report _N/A

NATA ACCREDITED LABORATORY NUMBER:3130

Accredited for compliance with ISO/IEC 17025 - Testing.
This report cannot be reproduced except in full.

Approved Fibre Counter: Gemma Sheridan

Approved Fibre Signatory: Liam Munro

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Appendix D
Client and Consultant Correspondence

AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C1 16 March 2020

Ms Sinead Redmond
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics

Email: sinead.redmond@hksolutions.com.au

Auditor advice
John Stokes Square Redevelopment
47 Progress Drive, Nightcliff, Northern Territory

Dear Sinead,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

The following documents were reviewed:

- Agon Environmental (29 February 2020) Detailed Site Investigation, John Stokes Square, 47 Progress Drive, Nightcliff (ref. JF1006.DSI)

This letter details the main areas of works that require additional information or clarification. There will likely be additional minor editorial comments to be provided at a later date, however these items were considered a priority.

1) Source of ACM and AF/FA
   a) Previous discussions identified the source of the ACM to be formwork from the building foundations. Greencap report identified that this was not likely to be source as ACM was not observed adhered to the concrete. During inspection of the concrete stockpiles, was ACM observed adhering to the concrete?
   b) Testpits located away from the buildings also contaminated ACM. Is it possible that the ACM is from both imported contaminated fill and formwork from the building foundations?
   c) AF/FA has been identified by Greencap in the soil across the site. A review of the data has found that almost all samples were identified by the laboratory to be weathered cement sheeting, including >7mm, 2-7mm, and <2mm. Two samples of vinyl tiles were also identified. No other asbestos fines or fibrous asbestos has been identified in the laboratory reports; therefore the source of the asbestos is likely to be weathered and degraded ACM.
2) Appendix A1:
   a) The Greencap asbestos in soil calculations were done using a variety of 30%, 80% and 100% asbestos content, though no justification was given other than "based on laboratory assessment" though the laboratory certificates do not mention anything about asbestos content. The standard asbestos content for fibre cement is 15%. When the Greencap data is adjusted to reflect the standard 15% asbestos content (and 25% for vinyl tile as per Health and Safety Executive 'Asbestos: The survey guide, HSG264) only 1 sample exceeds the relevant criteria for AF (TP20, 0.0047%w/w). However, ACM was found in the following test pit logs but was not analysed at the laboratory or

reported as containing asbestos in the text of the report (TP36, TP46, TP55 and TP57) and may therefore also contain asbestos exceeding allowable levels. These areas will require inspection during civil works and then addressed under the unexpected finds process in the CEMP.

3) Section 9.5.1 (asbestos in soil remediation works)
   a) Please identify the 'three locations containing friable asbestos materials' that were disposed to landfill as asbestos contaminated waste, show on a figure, provide volume of soil disposed from each location, landfill dockets and observations during remediation (i.e. was there anything unique about this area or material to explain the contamination?).
   b) Please provide details of the lateral and vertical validation sampling or multiple lines of evidence justifying why this was not considered necessary.
4) Section 9.5.1 (Concrete crushing works)
   a) Please provide details of the segregation and clearance process of the material prior to crushing. For example, were only solid pieces of concrete crushed or were smaller pieces also crushed.
   b) Previous discussions identified old ACM formwork as a source of the ACM contamination of the site. What was done to ensure this material was not crushed or damaged in the mechanical sieve?
   c) Following crushing, the material was stockpiled and sampled. Please provide details of the volumes involved and sampling rates to assess if the sampling density met WA DoH validation density (1 per $70m^3$). Please provide details of the stockpiling and sampling methods to assess if representative samples were collected.
   d) 4 of 67 samples reportedly failed validation sampling. Was this material unique in any way? How was this material kept separate to avoid cross contamination? Please provide the calculation methodology for the samples 'Stockpile 2 Validation 17/10'
   e) The crushed concrete that passed validation sampling was reused in the commercial area. Was this material inspected when spread across the commercial area and if so, can a clearance certificate be provided?
   f) Where were the four uncrushed concrete stockpiles located and was the ground surface validated after their removal?
   g) Where was the mechanical sieve, concrete crusher and stockpiles located and has the ground surface been validated?
5) Road and reserve sampling
   a) Please clarify the extent of the road and reserve and area to be handed back to council. For example, does it include the substation, pedestrian areas, car park in the south west corner, etc. Showing the boundaries of this area on a figure with the sampling locations would assist.
   b) A high density of sampling has been undertaken across the site, but this has focused on areas outside of the road and road reserve with no samples collected from the road. Samples from within the road reserve (TP54) and immediately adjacent (TP39, TP40, TP42, TP43) have identified ACM, though all below acceptable levels. Therefore, if this area is to be handed back to City of Darwin unencumbered, it will require close supervision of civil works (down to natural soils) by a suitably qualified asbestos specialist and remediation and validation when asbestos is identified. The remediation will need to also remove locations of previously identified ACM.
   c) The proposed use of an asbestos unexpected finds protocol within a CEMP may be effective in meeting the previous point provided there is sufficient close supervision of civil works by a suitably qualified asbestos specialist to identify when ACM is observed. A copy of this protocol will need to be provided for review.
   d) If the above strategy is implemented successfully, it may be sufficient to ensure the area is free of known ACM and suitable for the proposed use without a post audit management plan or condition requiring the area capped. However, the only way to guarantee the area is completely free of ACM is for all fill materials to be removed, but I do not require this.
6) ACM has been identified in multiple locations across the site both on the surface and within the fill material. The ACM appears to be weathered, resulting in smaller fragments of ACM and release of

asbestos fibres. Over time, the ACM will continue to weather and potentially result in concentrations above allowance levels. As a precautionary measure, all areas not subject to the close supervision as per item 5c will need to be capped (i.e. permanent hardstand such as paving or building or cleanfill layer) or the fill removed.

7) As there is potential for ACM to be present within the fill across the site, a simple procedure will also be required during occupancy to identify the potential for encountering ACM when undertaking excavation works and what to do if asbestos is encountered. This would be written as a condition or recommendation in the audit report and audit statement rather than a management plan.

Please contact me if you have any questions regarding this letter.

Regards,

Australian Environmental Auditors



Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C2

24 April 2020

Ms Sinead Redmond
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics

Email: sinead.redmond@hksolutions.com.au

Auditor advice
John Stokes Square Redevelopment
47 Progress Drive, Nightcliff, Northern Territory

Dear Sinead,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

I previously approved a strategy regarding the management of the construction works on Lot A (the police stations site). Following discussions with DIPL we understand that due to the identification of geotechnically unsuitable material during excavations and with the aim of further reducing the level of residual contamination, the proposed strategy has changed. I am supportive of undertaking additional works which will result in a lower level of long term risk to the community.

The following documents were reviewed:

- SLR (22 April 2020) Memorandum: Remediation Strategy, John Stokes Square – Lot A (ref. 680.30002.00000 Remediation Strategy 20200422.docx); and
- Email from SLR (23 April 2020) proposing changes to the sampling strategy due to material types being observed onsite and changes to the depth of excavation.

I provide the following comments:

1. General. Please note that weathered ACM and AF/FA has been identified in previous investigations at the site. How will this material be identified and managed, including risks to onsite workers and if mechanical screening is being used?
2. Section 5.2: Please provide additional detail on the proposed site supervision and how this ties into the objectives of the works. For example, if the objective is to ensure the fill is as completely free of asbestos as possible, then a higher level of supervision would be necessary than if the objective is to remove geotechnically unsuitable material and any asbestos observed with risks from any residual asbestos observed managed via capping, etc.
3. Section 5.3, Table 2:
   a) The sampling density is supported, but please note that EPA Publication IWRG702 also supports lower sampling densities in some circumstances.
   b) Please verify what 'substantial variability' means in terms of decision making on additional analysis.
   c) Where possible, please track and incorporate existing insitu data or include justification why this is not proposed.

d) Is it proposed to sample the existing crushed concrete? If not, it is recommended that some sampling for asbestos would be beneficial to verify the material is free of asbestos as previously reported.
e) Presume that standard NEPM/AS4482.1 QA/QC requirements will be complied with (i.e. duplicate sampling, etc).

4. Section 5.4. Will a broader analyte suite be necessary to facilitate waste classification and offsite disposal? Based on previous sampling, asbestos and OCPs are the key contaminants of concern and any further reduction in analysis should not apply to these contaminants.
5. Section 5.5. Please specify the criteria for ACM (this is specific to land use) and AF/FA.
6. Section 5.6. Please provide additional details regarding the airborne asbestos fibre monitoring such as the locations of monitors, duration of monitoring per day and flow rates to ensure compliance with NOHSC method, and whether personal or static.
7. If static monitoring at site boundaries, then it should be compliant with the DoH public health criteria of 0.01 f/mL.
8. How will the decision regarding material reuse on-site/reuse off-site/disposal be reported?
9. Will the footprint of the stockpile locations be validated?

Please contact me if you have any questions regarding this letter.

Regards,

Australian Environmental Auditors



Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C3 27 May 2020

Ms Sinead Redmond
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics

Email: sinead.redmond@hksolutions.com.au

Auditor advice
John Stokes Square Redevelopment
47 Progress Drive, Nightcliff, Northern Territory

Dear Sinead,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

I have been requested to review the proposed remediation strategy for the management of the remediation and construction works on Lot B1, B2 and B3 (the residential sites). Following discussions with DIPL we understand that due to the identification of geotechnically unsuitable material during excavations on the commercial lot (Lot A), and with the aim of further reducing the level of residual contamination, the original strategy was changed. I am supportive of undertaking additional works which will result in a lower level of long-term risk to the community.

The following documents were reviewed:

- SLR (14 May 2020) Memorandum: Remediation Strategy, John Stokes Square – Residential Lots (Lots B1, B2 and B3) (ref. Appendix J - DRAFT Remediation Strategy.docx); and
- Halikos Construction (May 2020) Construction Environmental Management Plan Revision 2.0, John Stokes Square, Broad Scale Site Remediation and Construction Preparation Works (ref. Broad Scale Remediation).

I provide the following comments:

Remediation Strategy

1. Section 1, last paragraph. The Agon reports have been reviewed and considered reliable with a note that we are resolving a minor issue regarding the crushed concrete stockpile sampling, reuse and disposal
2. Section 4. Please include NT EPA publications
3. Section 5.1,
   a) Paragraph 2. It should be noted that there is an increased risk of ACM in this material.
   b) Will SLR be inspecting the oversize screened material for ACM?
   c) Tracking of material should be documented and reported by SLR.
   d) Final paragraph. Given the previous identification of ACM and asbestos fines, these controls should be implemented from the start unless additional justification is provided.

4. Section 5.3. As per previous advice, please provide additional detail on the proposed site supervision and how this ties into the objectives of the works. For example, if the objective is to ensure the fill is as completely free of asbestos as possible, then a higher level of supervision would be necessary than if the objective is to remove geotechnically unsuitable material and any asbestos observed with risks from any residual asbestos observed managed via capping, etc.
5. Section 5.7. Air monitoring criteria should be public health (<0.01 f/mL) as monitoring is proposed on the site boundary, the occupational criteria (<0.1 f/mL) is only appropriate for workers.
6. The reuse of soil onsite is understood to be placed down in layers for compaction purposes and each lift is to be inspected for ACM by SLR with a clearance certificate issued for each lift. If ACM is observed, it will need to be removed and validated. Please note that this was the agreed approach for the commercial area, but we understand that this was not undertaken. This process provides an important extra check for ACM and needs to be undertaken for the residential allotments.
7. How will the decision regarding material reuse on-site/reuse off-site/disposal be reported?
8. Due to current COVID-19 travel restrictions, please include photographic record of the works.
9. If unexpected contamination is identified, please call to discuss the management strategy.

Construction Environmental Management Plan (CEMP)

The CEMP details the objectives, key performance indicators and targets, and environmental management measures to be implemented during the remediation and construction works. This includes erosion and sedimentation, dust and air quality, soil, waste, and asbestos management amongst other things. It also details training, including induction training for workers.

1. Due to the presence of asbestos please ensure the site is fenced if this is not already done.
2. Please include an unexpected finds protocol.
3. Appendix I.
    a. The investigations to date have identified asbestos in soil which is understood to remain onsite. The AMP should be revised to reflect this and any other associated implications.
    b. Section 8 proposes a weekly 2 hours inspection for asbestos, this is not consistent with the remediation strategy.

Please contact me if you have any questions regarding this letter.

Regards,

Australian Environmental Auditors



Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C4 1 June 2020

Ms Sinead Redmond
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics

Email: sinead.redmond@hksolutions.com.au

Auditor advice
John Stokes Square Redevelopment
47 Progress Drive, Nightcliff, Northern Territory

Dear Sinead,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

I have been requested to review the proposed sampling and analysis quality plan for the road reserve and Lot C as documented in:

- SLR (22 May 2020) Sampling, Analysis and Quality Plan, Detailed Site Investigation, John Stokes Square (ref. 680.10679-R01-v2.0).

The SAQP is accepted, subject to inclusion of the following comments:

1. Section 5 states that test pits will be excavated to mechanical refusal (estimated to be approximately 1 mbgl), though Table 4 states "samples will be collected …surface, 0.5mbgl, 1.0 mbgl, and every metre thereafter until target depth, intersected groundwater or auger/excavator refusal". Please note that all sampling locations should extend a minimum of 0.5m in to natural soils;
2. Section 8.5, 3rd and 4th dot points. Please ensure ACM identified during field sieving is to be weighed to enable a concentration calculations;
3. Table 5. 1. Due to identified ACM at the site, the fill at each location should be sieved and tested for ACM. Please include pH, CEC, etc to allow for calculation of EIL/ESLs;
4. Section 10. Please include data from relevant sampling locations by Agon and Greencap; and
5. General. Please photograph each test pit and include in the report as we currently can not travel to observe the investigation works.

Please contact me if you have any questions regarding this letter.

Regards,

Australian Environmental Auditors

Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C5

4 June 2020

Ms Sinead Redmond
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics
Email: sinead.redmond@hksolutions.com.au

Auditor advice
John Stokes Square Redevelopment
47 Progress Drive, Nightcliff, Northern Territory

Dear Sinead,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

I have been requested to review the following revised documents:

- SLR (3 June 2020) Memorandum: Remediation Strategy, John Stokes Square – Residential Lots (Lots B1, B2 and B3) (ref. 680.10679.00000-M04-v2.0);
- Halikos Construction (June 2020) Construction Environmental Management Plan Revision 3.0, John Stokes Square, Broad Scale Site Remediation and Construction Preparation Works (ref. Broad Scale Remediation v3.0); and
- SLR (3 June 2020) Sampling, Analysis and Quality Plan, Detailed Site Investigation, John Stokes Square (ref. 680.10679-R01-v3.0).. If no a

The above documents have been revised based on comments provided in audit review letter C3 (dated 27 May 2020) and C4 (dated 1 June 2020). The revised reports have addressed the comments and are considered acceptable with the following notes:

- SLR SAQP - Note that Figure 3 is missing and should be included when; and
- SLR SAQP – If no asbestos is observed within the fill materials, please still continue to collect a jar sample for potential asbestos analysis but hold off analysis as proposed. This will provide us the opportunity to undertake the analysis should it be necessary at a later date.

Please contact me if you have any questions regarding this letter.

Regards,

Australian Environmental Auditors



Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C6

19 August 2020

Ms Sinead Redmond
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics
Email: sinead.redmond@hksolutions.com.au

Auditor advice
John Stokes Square Redevelopment
47 Progress Drive, Nightcliff, Northern Territory

Dear Sinead,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

I have been requested to review the following document:

- SLR (14 July 2020) Detailed Site Investigation, John Stokes Square Development – Road Reserve and Lot C (ref. 680.10679-R03-v1.0);

The road reserve and Lot C sampling program appears to have been implemented in accordance with the approved SAQP. I provide the following notes for inclusion in the final report:

- Appendix D – laboratory certificate of analysis are missing for samples from TP25 to TP35.
- Appendix E – Sample results are missing for TP26 from Table 1, several sample results are missing from Table 5.

In either the RAP, a revised DSI or overall completion report for the site, we will need figures and tables consolidated all of the data from the various site investigations along with details of samples characterising the final site condition upon which we will base our opinion of site suitability.

Please contact me if you have any questions regarding this letter.

Regards,

Australian Environmental Auditors

Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C7 19 August 2020

Ms Sinead Redmond
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics
Email: sinead.redmond@hksolutions.com.au

Auditor Advice
John Stokes Square Redevelopment
47 Progress Drive, Nightcliff, Northern Territory

Dear Sinead,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

I have been requested to review the following document:

- SLR (7 August 2020) Remediation Action Plan, John Stokes Square Redevelopment, Road Reserve and Lot C (ref. 680.10679-R04-v4.0).

The RAP was discussed at a teleconference between SLR, DIPL, HK Solutions and AEA on 17 August 2020, with further details to be provided. The RAP details the remedial strategy for the remediation of the identified 'known asbestos impact area' which covers a small portion of the overall road reserve and Lot C area. The RAP also covers the removal of services. It is understood from the teleconference that the asbestos impacted area and all services will be dug up under asbestos conditions. During removal of all existing services, the excavation trenches will be inspected to determine if any asbestos is present within the material. To ensure adequate characterisation has been achieved, the extent of the services removed will be mapped against the previous investigation locations. If there are any areas that have not been assessed, additional investigation trenches will be completed, and the material inspected. Where any asbestos is identified, this material will be removed under asbestos remediation conditions.

Our current understanding of the site is that the asbestos within the road reserve and Lot C is isolated to the known asbestos impacted area. If during the above works, asbestos is found to be more widespread, then additional remediation works would be necessary, such as the excavation and abatement/disposal of all fill materials within this area.

If further widespread asbestos is not found, then it would be appropriate to proceed with the civil works.

The civil works within the road reserve and Lot C will need to be undertaken under a Construction Environmental Management Plan (CEMP) with appropriate controls in place to protect the site workers from asbestos and unexpected finds protocol.

As discussed at the meeting, there is an element of risk to the project that some asbestos within the road reserve and Lot C may not be identified during the remedial and investigative works and that asbestos may be encountered during civil works. If asbestos is identified during civil works, it is understood that the works in that area will cease, and a suitably experienced environmental consultant/hygienist will be

engaged to advise the process. If asbestos is identified in multiple areas during civil works a strategy may need to be formulated to address the removal, such as further removal of fill materials.

A separate environmental audit report and accompanying statement/certificate will be provided for the road reserve and Lot C following completion of the civil works to allow the auditor to provide ongoing audit services in case of unexpected finds during civil works.

Please update the remediation plan to reflect the above or give us a call to discuss.

Please contact me if you have any questions regarding this letter.

Regards,

Australian Environmental Auditors



Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C15 28 April 2021

Mr Tony Hopkinson
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics
Email: tony.hopkinson@hksolutions.com.au

Auditor advice
John Stokes Square Redevelopment
47 Progress Drive, Nightcliff, Northern Territory

Dear Tony,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

I have been requested to review the following document:

- SLR (25 February 2021) Validation Report, John Stokes Square Redevelopment – Lot A (ref. 680.10679-R02-v1.0).

The report is well written and appears reliable for the work undertaken, subject to addressing the following comments:

1. Please include an executive summary.
2. When analysing soil for asbestos (AF/FA) in line with WA DoH guidelines a 500mL (minimum) sample should be provided to the laboratory analysis. It appears that this may not have always been done. Please provide lines of evidence as to why this is acceptable.
3. Previous environmental investigations have been briefly summarised. However, I need consolidated data from all investigations (where sample locations remain following remediation, including historical, validation, stockpiles, imported fill), with details of samples characterising the final site condition. It should also include a table of all suspected material remaining onsite if there is residual uncertainty - i.e. fate of some stockpiles, etc. The other areas may be able to avoid this requirement due to the extensive remediation works undertaken, but as this area has had less remediation completed, incorporation of previous environmental data may be necessary.
4. The deviations to the proposed remediation strategy identified some residual issues regarding the reuse of crushed concrete and potential reuse of impacted soil, and lack of documentation regarding the methodology of reuse or inspection. Please clarify the level of involvement by SLR. As SLR was not present during reinstatement of the screened spoil, additional information will be required by the contractor detailing the inspection and observations of potential ACM during the reinstatement of the screened material.
5. Section 4.1. Was the excavated surface still fill material or natural soil? Was the base and walls of the excavation inspected prior to backfill? Were any underground services encountered or removed and what is the likelihood of any remaining? Please provide additional detail regarding the removal and backfill of any trenches.
6. Section 4.2. Please show 'VAL-A' on a figure.

7. Section 4.3. Additional information is required to determine if the soil stockpiles that reported asbestos concentrations were reused onsite. Therefore documentation regarding any material disposed to landfill, dates and volumes of disposal and disposal dockets and a reconciliation against the impacted stockpiles and volumes would assist in determining if any impacted material was reused.
8. Section 4.3. What volume of material was imported to site?
9. Section 4.3. Imported fill was sourced from a defence site without the auditors knowledge and without the ability to conduct sampling to verify the presence/absence if PFAS contamination. Therefore the PFAS may potentially be present in this material and if the material is to be removed from the site, the material will need to be assessed as per waste characterisation requirements, though the analyte suite will need to include PFAS. The risk to human health and the environment from the PFAS is unlikely to present a risk to proposed site use.
10. Figure – please include a conceptual site model with hydrogeological cross section characterising the final site condition. Either a single plan for the entire site would be sufficient or a CSM for each area.

Please contact me if you have any questions regarding this letter.

Regards,

Australian Environmental Auditors



Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C15a 16 September 2021

Mr Tony Hopkinson
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics
Email: tony.hopkinson@hksolutions.com.au

Auditor advice
John Stokes Square Redevelopment
47 Progress Drive, Nightcliff, Northern Territory

Dear Tony,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

I have been requested to review the following revised report and spreadsheet in response to Auditor review letter C15 (dated 28 April 2021):

- SLR (24 August 2021) Validation Report, John Stokes Square Redevelopment – Lot A (ref. 680.10679-R02-v2.0); and
- Response spreadsheet (ref. 680.10679.00100-R02-v1.0 Response to Auditor Comments).

The revised report has addressed the majority of our previous comments with the following comments requiring resolution split between those applicable to SLR and those applicable to the Contractor.

Contractor

Previous Comments:

- *The deviations to the proposed remediation strategy identified some residual issues regarding the reuse of crushed concrete and potential reuse of impacted soil, and lack of documentation regarding the methodology of reuse or inspection. Please clarify the level of involvement by SLR. As SLR was not present during reinstatement of the screened spoil, additional information will be required by the contractor detailing the inspection and observations of potential ACM during the reinstatement of the screened material.*
- *Section 4.3. Additional information is required to determine if the soil stockpiles that reported asbestos concentrations were reused onsite. Therefore documentation regarding any material disposed to landfill, dates and volumes of disposal and disposal dockets and a reconciliation against the impacted stockpiles and volumes would assist in determining if any impacted material was reused.*
- *Section 4.3. What volume of material was imported to site?*

SLR has reported on items that they were involved in which is acceptable. However, we require resolution of the following from the Contractor:

1. SLR Exec Summary: *The Civil Contractor reinstated and compacted the excavated areas at the Site without the presence of a SLR Consultant as required in the remediation strategy. Subsequently visual clearance of the surface of each compacted lift during reinstatement of the excavated areas could not be provided.* Did the contractor observe any demolition waste or potential asbestos containing material during their works that were not subsequently removed and how attentive was the contractor during this process?
2. SLR Exec Summary: *Further assessment was recommended by SLR to determine if stockpiled crushed concrete could be reused onsite from a contamination perspective, or at least receive advice/endorsement from the CLA that previous investigation works conducted on this material was sufficient to enable its reuse. The material was reused at the Site without being resampled, prior to CLA advice or endorsement being received. Based on the stockpile characterisation results, SLR recommended further segregation works be undertaken for three stockpiles to ensure their suitability for reuse on Site. As SLR did not receive information from the Civil Contractor on the methodology that they used to reinstate the excavations using stockpiled spoil and/or crushed concrete, it is unclear if the recommended further segregation works were completed.* Contractor to advise if segregation occurred and the location and depth (below base on concrete slab) the material was reused.
3. Please advise of the approximate volume of imported soil from the Larrakeyah Defence Base and the location/depth used.

SLR

Previous Comment: *Section 4.1. Was the excavated surface still fill material or natural soil? Was the base and walls of the excavation inspected prior to backfill? Were any underground services encountered or removed and what is the likelihood of any remaining? Please provide additional detail regarding the removal and backfill of any trenches.* SLR Response: *The final excavation at the Site had an area of approximately 3,620 m2 and generally extended down into the natural red soils to a maximum depth of 0.3 m.*

A. Given Lot A has an area of 3,619 m^2 – the entire footprint was Lot A was excavated. Is this correct?
B. Was the entire Lot A excavated to natural or were there residual fill materials in the base and if so, did the fill materials contain asbestos or construction and demolition wastes? From our discussions with SLR, the geotechnically unsuitable fill material contained the vast majority of the asbestos and all of this fill was removed from Lot A. The final surface comprised the red natural soils which would be a combination of reworked natural and virgin natural soils with no known residual asbestos within these soils. If this is correct, please amend to provide this type of clarification within the report.
C. When the excavation face around the boundary of Lot A was inspected, were any asbestos or construction and demolition wastes observed?
D. Are there any known or potential residual underground services beneath Lot A that could contain asbestos within the fill or asbestos containing services (water pipes, Telstra pits, etc)?

SLR Exec Summary: *Due to deviations from the remediation strategy, SLR does not have sufficient evidence to provide comment on the suitability of material blended and used to backfill the excavated areas within Lot A.*

E. Please calculate the weighted average for the stockpiles assuming the material was reused onsite without removal of the asbestos to help demonstrate the quantum of risk involved for future workers.

SLR Exec Summary: *Likewise, any persons conducting future excavations at the Site (Lot A) may encounter asbestos impacted soils or fragments of ACM debris, if asbestos impacted material was used to*

backfill/reinstate excavated areas within Lot A. As a precautionary measure the following should be included in the workplans of any persons/contractor conducting excavation works at the Site (Lot A) to ensure appropriate controls are implemented in the event unexpected asbestos is encountered.

· Asbestos management plan

· Unexpected finds protocol

· Associated training.

F. Is SLR recommending an asbestos management plan for the site or for the contractor undertaken excavation works to prepare the plan for their specific works? I.e. is it a 'Site' asbestos management plan or a 'Contractor's" asbestos management plan? In your response, please advise how this aligns with WA DOH Asbestos Guidelines and WH&S requirements.

Please contact me if you have any questions regarding this letter.

Regards,

Australian Environmental Auditors



Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C16 28 April 2021

Mr Tony Hopkinson
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics
Email: tony.hopkinson@hksolutions.com.au

DRAFT Auditor advice
John Stokes Square Redevelopment
Lot A
47 Progress Drive, Nightcliff, Northern Territory

Dear Tony,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

As part of my role as auditor, I have reviewed the characterisation, remediation and validation of Lot A (the site), being developed at John Stokes Square. Several phases of investigation were completed which identified asbestos within fill material across the site. The majority of the fill material on the site was progressively excavated, inspected during excavation for asbestos. The soil was screened and stockpiled and any material containing asbestos was to be removed from the site an accredited landfill facility. The reporting provided by SLR has left some uncertainty whether the asbestos impacted material was removed or reinstated with the validated fill material. Additionally, the reinstatement was not inspected by an environmental consultant to provide any clearance that asbestos was not placed back down onto the site. Therefore I am not able to verify if any asbestos remains at the site. However, assuming some asbestos was reinstated, I believe the risk of any human receptors being exposed to this material being is likely to be low if covered by the presence of permanent hardstand or 0.5m of verified asbestos free material. Please confirm the final built form/site coverings, clean fill thickness, etc.

Although there is no known asbestos onsite, there is the potential for residual asbestos to be present as noted above and within the SLR report. It is therefore warranted that an unexpected find protocol be implemented for any subsurface works, to say that asbestos may be encountered if digging. I will likely need to make a notation to this effect in the audit determinations/conditions.

Imported fill was sourced from a defence site without the auditors knowledge and without the ability to conduct verification sampling to determine if PFAS was present, acknowledging the waste classification report noted that known PFAS contamination was segregated. Therefore, PFAS may potentially be present in this material, but at levels that are unlikely to present a risk to human health or the environment at the site. As the imported fill may contain PFAS, any soil removed from this portion of the site may need to include PFAS within the waste classification sampling. This does not apply to other areas of the site (i.e. Road Reserve) unless the imported fill was reused in other areas of the site – please advise.

Regarding my determination of site suitability, I am only permitted to provide this determination within my Environmental Audit Report and accompanying Certificate or Statement of Environmental Audit. However, based on current information and subject to review of the updated SLR report, I am not aware of

contamination issues that would preclude the proposed development, subject to maintaining the surface covering noted above. Due to the uncertainty around the material reinstated following the remediation and validation activities that were completed, specifically the uncertainty around the placement of fill material potentially impacted with asbestos, the site may not be suitable for residential development without additional assessment. The need for these restrictions will be reviewed based on the updated SLR report.

Please contact me if you have any questions regarding this letter.

Regards,

Australian Environmental Auditors

Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

AUSTRALIAN
ENVIRONMENTAL AUDITORS

AEA Ref: EA0729-C17 3 November 2021

Mr Tony Hopkinson
Project Management Lead, HK Solutions
On behalf of Department of Infrastructure, Planning and Logistics
Email: tony.hopkinson@hksolutions.com.au

Auditor advice
John Stokes Square Redevelopment
Lot A and completed portion of Road Reserve
47 Progress Drive, Nightcliff, Northern Territory

Dear Tony,

I have been commissioned to conduct an environmental audit of the abovementioned site in accordance with Section 53X of the Environment Protection Act 1970 (Vic), pursuant to Part 6 of the Northern Territory's Waste Management and Pollution Control Act.

The audit is in the process of completion with the site investigation and remediation works completed, but awaiting finalisation of your consultants reports before we can complete population of our environmental audit report and statement of environmental audit/

I understand that the police station (Lot A) and the completed northern portion of the road reserve will be utilised prior to completion of the audit. Whilst this is unusual and use is not at our risk, I consider the risk to be minimal for the following reasons:

- The site investigations have identified that the key contaminant of concern is limited to asbestos within fill materials and former underground services (pipes and pits).
- Within Lot A, the majority of the asbestos contaminated fill has been excavated and disposed of offsite. However, there is potential for asbestos to remain within residual reworked natural soils, redundant underground services, and potentially within the backfill material. Based on the environmental works undertaken during investigation and remediation of the site, the potential for residual asbestos is considered low, however as the removal of asbestos within the stockpiles can not be verified it is considered that there is potential for asbestos in the form of ACM and AF/FA to remain within soils and infrastructure onsite. The entire site is covered by concrete, as such there is no exposure risk to site users (i.e. visitors and workers) while this concrete is in place. In the event that subsurface works are required below the concrete, then controls should be implemented on the basis that the workers may encounter ACM in the soils or ACM infrastructure.
- Within the northern portion of the road reserve, all known asbestos has been excavated and disposed of offsite. We have been advised that all of the fill materials within the entire road reserve have been excavated and any identified asbestos removed from site along with removal of all asbestos underground services, with documentation to demonstrate this yet to be finalised. The potential for residual unknown asbestos is therefore considered low. The road reserve comprises bitumen road, concrete foot path and pockets of inground gardens (with at least 0.5m of clean fill present above residual soils), as such there is no exposure risk to site users (i.e. visitors and workers) while these are in place. In the event that subsurface works are required, then controls

should be implemented on the basis that the workers may encounter ACM in the soils or ACM infrastructure, until such time as the Auditor consider documentation proves that this is not necessary.

Please note that this is not a determination of site suitability, as I am only permitted to provide this determination within my Environmental Audit Report and accompanying Certificate or Statement of Environmental Audit. Rather, this is an opinion on the human health risk from site contamination.

Please contact me if you have any questions regarding this letter.

Regards,



Australian Environmental Auditors

Jean Paul Pearce

EPA Appointed Environmental Auditor (Contaminated Land)

NOTIFICATION OF REQUEST TO ISSUE A CERTIFICATE OF ENVIRONMENTAL AUDIT

21 November 2019
Manager – Environmental Audit
NT EPA
GPO Box 3675
Darwin NT 0801
c/o Christopher.coombes@nt.gov.au

I, Jean Paul Pearce, a person appointed as an environmental auditor (contaminated land) by the Environment Protection Authority under s. 53S of the *Environment Protection Act 1970* (Vic.) and in accordance with Part 6 of the Northern Territory's Waste Management and Pollution Control Act, have been requested to issue a certificate of environmental audit for the site; 47 Progress Drive, Nightcliff; Northern Territory. Details are as follows.

Auditor	Jean Paul PEARCE
Auditor account number	101292
Auditor appointment end date	26 November 2022
Auditor's appointment category	CL
Audit Type	53X (site suitability audit)
Name of person requesting audit	Ms Sinead Redmond Project Management Lead Northern Territory Department of Infrastructure, Planning and Logistics Land Development Unit sinead.redmond@hksolutions EPA customer account number (if available). – n/a
Relationship of person requesting audit to site	Authorised representative of site owner
Name of premises owner	DIPL Representative Project Manager
Date of auditor engagement	20/11/2019
Proposed completion date of the audit	1/04/2020
Reason for audit	Due to the identified pesticide and asbestos contamination, we understand EPA has required an Auditor to determine the site is suitable for use;
Audit categorisation	Risk
Environmental Segments	Air, Land, Groundwater, Surface water
If the audit was required by an EPA notice, licence or other, please provide EPA service order number	n/a
Current land use zoning	Zone MR (Medium Density Residential)
EPA Region	Darwin
Municipality	Nightcliff
Dominant Lot on title plan	Lot 9077 Town of Nightcliff
Additional Lot on title plan(s)	
Site/Premises name	John Stokes Square Nightcliff Development
Building/complex sub-unit/Lot No.	--
Street/Lot – Lower No.	47
Street/Lot – Upper No.	
Street Name	Progress,
Street type (road, court, etc)	Drive

Street suffix (North, South etc)	--
Suburb	Nightcliff
Postcode	0810
GIS Coordinate of Site centroid[1] Latitude (GDA94)	-12.388587°
Longitude (GDA94)	130.850751°
Site area (in square metres)	18,900 m^2
Plan of site/premises showing the audit site boundary attached	Yes
Plan of site/premises showing the audit site boundary attached in a spatial data format	No
Proposed support team	Shandel Coleman (internal audit support).
Is this audit report a combined audit and site assessment report?	No

In notifying NT EPA of this request to perform a Contaminated Land Audit, I state that:

- I am not aware of any conflict of interest, which would preclude me from issuing a Certificate or Statement of Environmental Audit for the above site.
- I have not had prior involvement in any assessment or clean-up works at the site, which would preclude me from issuing a Statement of Environmental Audit for the site.

Yours sincerely,

Signed: _____

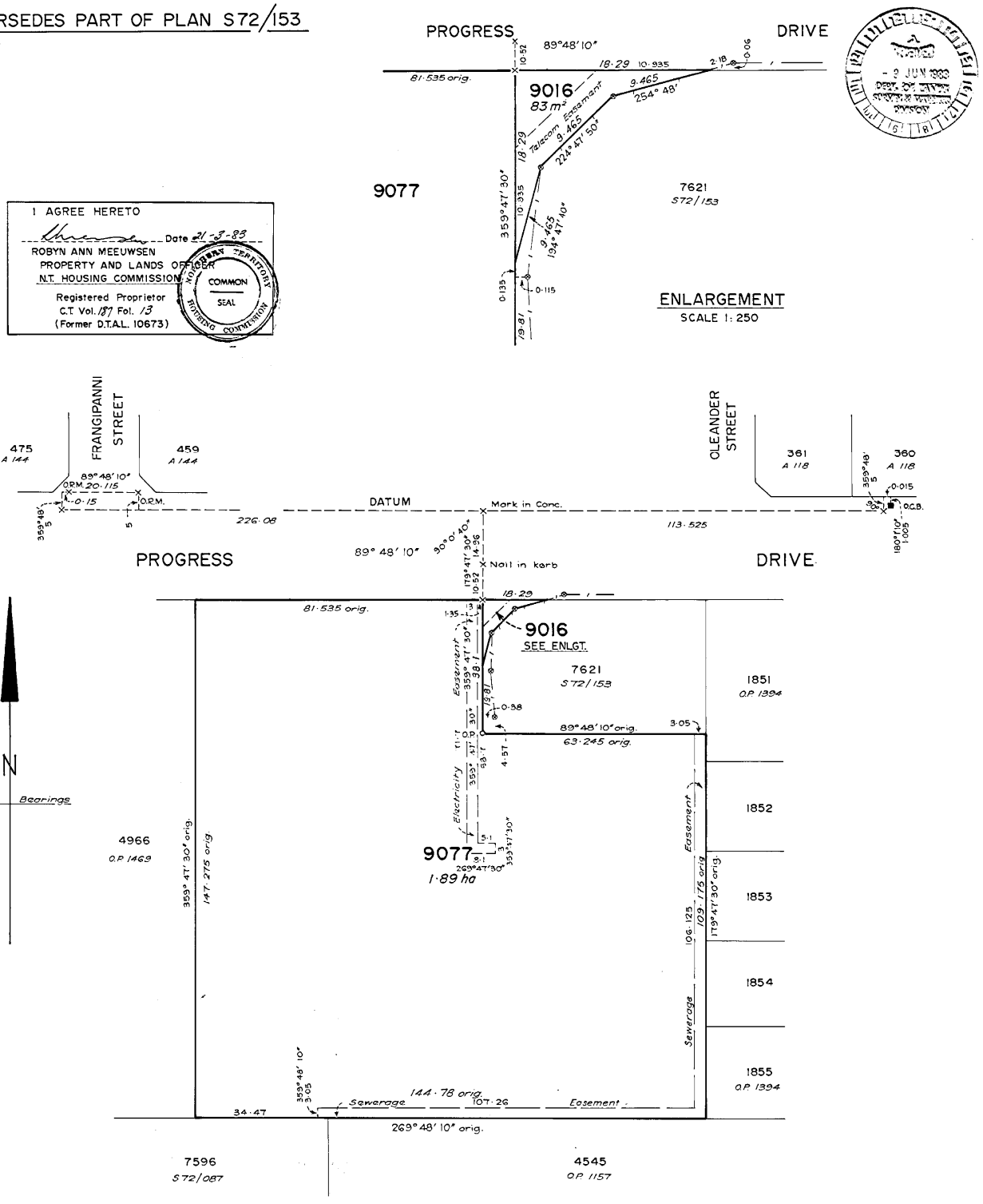
Jean Paul PEARCE

ENVIRONMENTAL AUDITOR

(APPOINTED PURSUANT TO *THE ENVIRONMENT PROTECTION ACT 1970*)

[1] Longitude and latitude (decimal degrees) coordinates in the 1994 Geocentric Datum of Australia (GDA94) is required to six decimal places.

SUPERSEDES PART OF PLAN S72/153



Note : Sewerage Easement shown hereon is in favour of the Northern Territory of Australia.
Electricity Easement shown hereon is in favour of the Northern Territory Electricity Commission.
Telecom Easement shown hereon is in favour of the Australian Telecommunications Commission.

METRES 20 0 20 40 60 80

No	REFERENCE	DETAILS	APPROVED	DATE
2	File LTO 83/10 folio 27	Telecom Easement added to Lot 9016		23/9/83
1	File LTO 83/10 folio 27	Electricity Easement added to Lot 9077		23/9/83

AMENDMENTS

SURVEYOR'S CERTIFICATE

I, COLIN JOHN JONES hereby certify that the survey represented on this plan was carried out by me or under my immediate supervision and was completed on 2 February 1983 and that this survey has been executed in accordance with the Licensed Surveyors Act and the Regulations thereunder.

Licensed Surveyor 28/2/83 Date

File No L.T.O. 83/10
Field Book No L.T.O. 83/10
Drawn by S.M. Willshire 9-2-83
Charted on I.P. DARWIN 2500, SHEET 30-27
Examined by W Schneider 14-7-83
Charted on P.P. DARWIN 2500, SHEET 30-27

SURVEY APPROVED

Surveyor-General 11·8·1983 Date

PASSED

CHIEF DRAFTSMAN (T) 11·8·83 Date

SURVEY MAPPING

LOTS 9016 AND 9077
SUBDIVISION OF LOT 7622
TOWN OF NIGHTCLIFF

HUNDRED OF BAGOT COUNTY OF PALMERSTON

LEGEND
Concrete Block ■
Concrete Post □
Wooden Post, Peg or Stake O
Reference Mark X
Lockspit ⊢
Fence Post ⊗

AZIMUTH
A. Assumed from S72/153
B. Observed at
Latitude Datum

SCALE
1 : 750

L.T.O. 83/10

COPY TO L.T.O. 12-8-83 AMENDED COPY TO LTO 30-9-83

N/N 2254

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+61 8 7918 7807
enquiries@agonenviro.com.au
A.B.N. 29 167 746 063

13 August 2021

Jean-Paul Pearce

Contaminated Sites Auditor

Australian Environmental Auditors

Dear Jean-Paul,

RE: Inspection of John Stokes Square Development Site, 12 August 2021

The following presents a photolog and notes collected during the Site Inspection of the John Stokes Square redevelopment, on 12 August 2021, undertaken on behalf of Australian Environmental Auditors.

The inspection focussed on the non-residential areas, comprising the Police Station, Road Reserve (Open Space), and Parking Area.

POLICE STATION

The Police Station development is 99% complete, with commissioning and connection of services, and Progress Drive frontage landscaping (external to the audit area) the only outstanding works.

The entire Site is sealed, with external concrete apron surrounding the entire building within the compound, with no internal landscaping features/ exposed soils.



Plate 1 **Police Station frontage along Progress Drive, with exposed soils for frontage landscaping (understood to be external to the audit area).**



Plate 2 **Police Station frontage along Progress Drive, with sealed concrete surfaces extending south through compound along western portion.**



Plate 3 **View looking west into Police Station compound, with sealed concrete surfaces along southern portion.**

ROAD RESERVE

Key observations:

- The majority of the underground infrastructure/ services (stormwater, electrical, etc.) have been installed, with most connection points still exposed pending connections, pit/ manhole install.
- The construction of road along the eastern portion is underway, with a large portion of the ground improvement works complete in the area, and spreading and compaction of imported aggregate base course underway. Appeared significant soil removal works had occurred along the road alignment to reach design levels (with levels below the adjacent landscaping area along the eastern strip).
- Ground works, comprising excavation to box out for landscaping, is still progressing along the western portion. Inspection of a boxed out area observed:
    - A fill layer of approximately 150mm.
    - No foreign materials observed within the in-situ fill excavation side profile of the boxed out area.
    - Inspection of the boxed out spoil however identified foreign inclusions including ceramic tile, concrete fragments, bitumen fragments, PVC, and terracotta pipe.
    - A area that was being excavated at the time of inspection, connected to and extending south from the inspected boxed out area, was subject of an unexpected find (occurred immediately prior to the inspection) with numerous large fragments of cement sheet exposed/ identified from the fill layer.



Plate 4 **View looking south from Progress Drive through the Road Reserve (showing boxing out for landscaping along western verge, and aggregate base course laying along the eastern verge).**



Plate 5 **View looking north, north-east across road construction zone, and spreading/ compaction of base course underway.**



Plate 6 **Boxing out works for landscaping along western portion of Road Reserve (view looking south). Note cordoned off area associated with asbestos unexpected find.**



Plate 7 **Soil profile of boxed out area (north-west portion of Road Reserve) with approx. 150mm surface fill layer.**



Plate 8 **Spoil from boxing out landscape area, with concrete, bitumen, ceramic tile, terracotta pipe, and PVC observed foreign inclusions.**



Plate 9 **Area of unexpected find, during excavation extending south from boxed out area. The find was numerous large fragments of cement sheet (refer to next Plate).**



Plate 10 **Unexpected find, numerous large fragments of cement sheet. Unexpected Find protocols implemented including stop works, cordoning off, awaiting assessment by engaged LAA.**



Plate 11 **Reworked soil profile along western boundary of Road Reserve and the western housing development block.**

PARKING AREA

The parking area has been boxed out in preparation for the install of a large stormwater retention tank. Majority of spoil was excess to Project needs and has been disposed offsite. Reportedly the fill across this zone had largely been removed prior to Head Works, with no unexpected finds encountered, evidenced by the soil profile observed which was natural.



Plate 12 **View looking west from southern portion of Road Reserve across the Parking Area that has been boxed out in prep for the stormwater retention tank install.**

GENERAL

Discussions with DIPL Site personnel revealed around 5 to 7 asbestos related unexpected finds had occurred within the subject sites (Police Station and Road Reserve) during redevelopment works. DIPL can provide the details upon request.

For any further information, please do not hesitate to contact the undersigned on 0408 018 788 or chris.gamble@agonenviro.com.au.

Yours Sincerely,



Chris Gamble

Agon NT Manager

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