25 January 2013
Project No. 42213719

Darwin Waterfront Corporation
Ground Floor
Level 5, 7 Kitchener Dr
Darwin NT 0800

Attention: John Kassaras

Dear John

Subject: Classification of Stockpiled Excavated Material for Potential On-Site Reuse or Off-Site Disposal – Stage 2A – Earthworks 19 December 2012 to 7 January 2013

Introduction

URS Australia Pty Ltd (URS) has been requested by Darwin Waterfront Corporation (DWC) to provide a letter report on the status of material excavated during the construction works at Darwin Waterfront Stage 2A (the Site).

URS undertook sampling of the stockpile of spoil from the Stage 2A basement excavation at the Darwin Waterfront Precinct on 7 January 2013. As part of the environmental assessment works undertaken by URS, this material was sampled with the purpose of classification for potential on-site reuse as per site specific acceptance criteria or off-site disposal as per Northern Territory Waste Classification Guidelines.

Methodology

It is estimated that approximately 12,000 m^3 of spoil material has been excavated from the Stage 2A Site and stockpiled in the stockpile management area. A total of 120 primary samples (1 sample per 100 m^3 of bulked out spoil), four field duplicate and three field triplicate samples were taken from the excavated spoil material, of the samples collected 52 primary samples, two field duplicate and two field triplicate samples were analysed at a rate of not less than 1 sample per 250 m^3 of bulked out spoil in keeping with Victorian EPA Industrial Waste Resource Guidelines, IWRG 702 sampling density for stockpiles >5000m^3 when using 95% UCL average.

All samples were collected with the assistance of a 5 T excavator to cut representative cross sections through the stockpile profile. Samples were collected by hand from the excavated spoil, using dedicated nitrile gloves for each sample, and placed into laboratory supplied jars for transport to the laboratory. Standard environmental protocols were followed with respect to sample collection, and laboratory analyses included quality assurance/quality control samples to enable URS' assessment of the suitability of the data for interpretive use.

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Soil analytical results have been compared against the following guidelines for assessment of material for off-site disposal, as summarised in **Attachment A**;

- The "NT Waste Classification Guidelines" adopted from NSW DECCW Waste Classification Guidelines (2008); and
- The site specific acceptance criteria (URS RAP V6 9th August 2005) based on National Environment Protection (Assessment of Site Contamination) Measure – Health Based Investigation Levels (NEPM, 1999) – HILs E and F and Ecological Intervention Levels (EILs); and Dutch Intervention Criteria (2000).

Data Validation

URS has undertaken a review of the laboratory analytical results and considers the data acceptable for interpretive use as described in **Attachment D**. The following points have been raised and considered when making this assertion.

- Several analytes (Barium, Beryllium, Cobalt, Manganese, Vanadium, Hexavalent Chromium, Phenols and OC and OP pesticides) were not reported in either Intra- and Inter-laboratory field duplicate results; hence, care should be taken when interpreting results for these compounds close to the investigation levels (metals).
- No Field Blank, Rinsate Blank, Trip Blank or Method Blank were analysed; hence potential cross-contamination has not been assessed directly. As no samples were reported to contain BTEXN or volatile TPH and all samples were taken from the excavator's bucket, fresh gloves and placed directly into the sample container, the potential for cross-contamination is minimal; therefore, this is not considered to affect the interpretation of the results.
- Laboratory duplicate RPDs exceeded LOR based limits for Manganese in one sample. This apparent lack of precision is likely due to heterogeneity of the distribution of Manganese in soils at the site, and should be taken into consideration when evaluating individual results close to the investigation levels.
- The Laboratory Control Spike (LCS) recoveries for 3- and 4-Methylphenol and Acenaphthene were reported greater than the upper control limits by <1% in laboratory Batch ES1300228; hence, there is the potential for the results to be biased high. Due to the presence of other quality control data, including method blanks, matrix spikes and surrogate recoveries, and as these analytes were not reported above the laboratory LOR, the accuracy of the analytical data is considered acceptable.

Laboratory Results

The laboratory results are summarised and assessed against the relevant off-site disposal criteria in **Attachment A**. Laboratory analytical reports and chain of custody (COC) documentation are provided as **Attachment B**.

On-Site Reuse – Site Specific Acceptance Criteria (URS RAP V6 – 9 August 2005)

Table 1 On-Site Reuse Criteria – Site Specific Acceptance Criteria

Analyte	[a] Class 1 Criteria	# of Samples	# >LOR	# > Guideline	95% UCL
Arsenic	20	54	33	0	7.7
Barium	300	20	18	2	217.6
Chromium	-	54	54	NA	47.2
Copper	100	54	54	3	54.3
Lead	600	54	52	0	55.5
Manganese	500	20	20	0	158.5
Nickel	60	54	54	0	6.7
Zinc	200	54	54	1	64.9
Vanadium	**50**	**20**	**20**	**17**	**96.4**
TPH C_6-C_9	65	54	1	0	NA
TPH C_{10}-C_{36}	1000	54	1	0	NA

[a] URS RAP V6 9th August 2005

No individual sample results or 95% UCL of the mean exceeded the site specific Class 1 guidelines for the following analytes:

- Arsenic;
- Chromium;
- Manganese; and
- Nickel.

Individual sample results exceeded the site specific Class 1 guidelines for the following analytes. The 95% UCL of the mean for the same analytes did not exceed the site specific Class 1 guidelines:

- Barium;
- Copper; and
- Zinc.

Two individual sample results for lead (336 and 110 mg/kg) and the 95% UCL of the mean did not exceed the site specific Class 1 guideline value.

Seventeen (of 20) individual sample results and the 95% UCL of the mean exceeded the site specific Class 1 guidelines for vanadium as reported in **Table 1**. The exceedance in this instance is considered indicative of background concentrations based on no historical handling of vanadium at the site, exceedance of the guideline was noted at 17 out of 20 samples analysed for vanadium and both individual samples results and the 95% UCL of the mean are within the range that is considered background based on the "National Environment Protection (Assessment of Site

Contamination) Measure [NEPM], Schedule B(1), "Investigation Levels for Soil and Groundwater" document (background range 20 to 500 mg/kg).

Off-Site Disposal Criteria – NT Waste Classification Guidelines

Table 2 Off-Site Disposal Criteria – NT Waste Classification Guideline

Analyte	NT Waste Classification Guideline	# of Samples	# >LOR	# > Guideline	95% UCL
Arsenic	100	54	33	0	7.7
Barium	-	20	18	NA	217.6
Chromium	-	54	54	NA	47.2
Copper	-	54	54	NA	54.3
Lead	100	54	52	2	55.5
Manganese	-	20	20	NA	158.5
Nickel	40	54	54	0	6.7
Zinc	-	54	54	NA	64.9
Vanadium	-	20	20	NA	96.4
TPH C_6-C_9	-	54	1	NA	NA
TPH C_{10}-C_{36}	-	54	1	NA	NA

No individual sample results or 95% UCL of the mean exceeded the NT Waste Classification guidelines for the following analytes:

- Arsenic;
- Chromium;
- Manganese; and
- Nickel.

There was no applicable NT Waste Classification guideline value for these analytes:

- Barium;
- Copper;
- Vanadium; and
- Zinc.

Two individual sample results exceeded the NT Waste Classification guidelines for lead (336 and 110 mg/kg). The 95% UCL of the mean for lead did not exceed the NT Waste Classification guidelines.

Conclusion and Recommendation

The stockpiled material resultant from the Stage 2A basement excavation has been characterised based on the results of the field observations, sampling and analysis conducted by URS as presented in the attached tables.

On the basis of the analytical results for samples collected from stockpiles 1 and 2 at a rate of at least 1:250 m^3, the stockpiled material is classified as General Solid Waste with reference to the NT Waste Classification guidelines

On the basis of the analytical results for samples collected from stockpiles 1 and 2 at a rate of at least 1:250 m^3, the stockpiled material is classified as Class 1 with reference to the site specific acceptance criteria detailed in the RAP (URS 9 August 2005).

Classification and volume of assessed material

Estimated Volume and Tonnage	12,000 m^3	19,200 T
Classification On-Site Reuse	Class 1	
Classification Off-Site Disposal	General solid waste	

URS notes that this letter and the attached information is intended to support the process of on-site reuse or off-site disposal of the described soils to a suitable end-point. URS does not provide any recommendation or endorsement with respect to disposal of this material to any site; responsibility for accepting material to a third party site shall be the onus of the owner of that site.

Limitations

URS Australia Pty Ltd (URS) has prepared this report in accordance with the usual care and thoroughness of the consulting profession for the use of Darwin Waterfront Corporation (DWC). A complete or partial copy of the report may only be provided by DWC to the EPA (Victoria) accredited Environmental Auditor (Contaminated Land) appointed by DWC to the project and to developers and contractors (Interested Parties) working on the Darwin Waterfront Redevelopment Project if the entire limitations statement of this report is included in the complete or partial copy of this report. Whilst URS does not admit that any action may exist or be available to any Interested Party, this report may only be relied on by an Interested Party with the written consent of DWC and on the basis that subject to any law the terms of which cannot be excluded or modified by agreement:

(i) The maximum amount payable (if any) by URS to Interested Parties or any party claiming through an Interested Party in aggregate, whether in contract, tort or otherwise, in relation to claims, damages, liabilities, losses or expenses, under or in any way related to this report and/or its appendices or the services performed by URS to prepare the Report, shall be A$2,000,000; and

(ii) If there is more than one Interested Party, the maximum amount payable to any and all Interested Parties in total shall be A$2,000,000.

Except as specifically stated in this limitations statement, this report may not be used by any third party.

This report is based on generally accepted practices and standards at the time it was prepared. No other warranty, expressed or implied, is made as to the professional advice included in this report. It is prepared in accordance with the scope of work and for the purpose outlined in the proposal dated 24 August 2006 and subsequent requests for this specific task in an email dated 17 December 2012.

The methodology adopted and sources of information used by URS are outlined in this report. Where this report indicates that information has been provided to URS by third parties, URS has made no independent verification of this information except as expressly stated in this report. No indications were found during our investigations that information contained in this report as provided to URS was false.

This report was prepared between 16 January 2013 and 25 January 2013 and is based on the conditions encountered and information reviewed at the time of preparation. URS disclaims responsibility for any changes that may have occurred after this time.

We trust that the information detailed within this letter informs your requirements. Should you require further assistance please contact the undersigned.

Yours sincerely
URS Australia Pty Ltd

Bek Aagaard Environmental Scientist	Tim Smith Senior Environmental Geologist

Attachments

Attachment A Summary of Analytical Results

Attachment B Laboratory reports and Chain of Custody Forms

Attachment C Data Validation and Statistical Analysis

Attachment D Statistical Analysis

Attachment A

Table ??
Analytical Results -
Waterfront Stage 2A - Waterfront Stage 2A
Darwin Waterfront Corporation

Location	SP01-01	SP01-02	SP01-07	SP01-08	SP01-11	SP01-14	SP01-15	SP01-16	SP01-19	SP01-20	SP01-24	SP01-24 - 070113	SP01-26	SP01-27	SP01-27
Field ID	SP01-01 - 070113	SP01-02 - 070113	SP01-07 - 070113	SP01-08 - 070113	SP01-11 - 070113	SP01-14 - 070113	SP01-15 - 070113	SP01-16 - 070113	SP01-19 - 070113	SP01-20 - 070113	SP01-24 - 070113	DUP01 - 070113	SP01-26 - 070113	SP01-27 - 070113	DUP02 - 070113
Sampled Date	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013
Sample Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary	Duplicate
Lab Report #	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	73927

ChemName	output unit	EQL	Class 1	Class 2A	Class 2B														
C6-C9 fraction	mg/kg	10	65	530	no free hydrocarbon	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<25
C10-C14 fraction	mg/kg	50		855		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C29-C36 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C10-C36 fraction (sum)	mg/kg	50	1000	1000		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	-
C6-C10 fraction (F1 minus BTEX)	mg/kg	10				<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<25
C6-C10 fraction	mg/kg	10				<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<25
>C10-C16 fraction	mg/kg	50				<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
>C16-C34 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C34-C40 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C10-C40 fraction (sum)	mg/kg	50				<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	-
Benzene	mg/kg	0.2	1	1	1	<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	<02.
Toluene	mg/kg	0.5	1.4	1.4	1.4	<0.5	<0.5	<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	3.1	3.1	3.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1
m&p-Xylene	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	<0.5	<2
o-Xylene	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	<0.5	<1
Total Xylenes	mg/kg	0.5	14	14	14	<0.5	<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	<0.2	-
Naphthalene (VOC)	mg/kg	1				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
Benzo(b)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	<0.5	<0.2
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	<0.5	<0.1
Benzo(a)pyrene	mg/kg	0.5		2	5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05
Benzo(a)pyrene TEQ	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	<0.5	<0.05
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
Indeno(1,2,3-cd)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	<0.5	<0.1
Phenol	mg/kg	0.5		17,000	42,500	-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-
2-Chlorophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-
2-Methylphenol (o-Cresol)	mg/kg	0.5				-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-
3-&4-Methylphenol (m&p-Cresol)	mg/kg	1				-	<1	-	<1	-	<1	-	-	-	<1	-	-	<1	-	-
2-Nitrophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-
2,4-Dichlorophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-
2,4-Dimethylphenol	mg/kg	0.5				-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-
2,6-Dichlorophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-
4-Chloro-3-methylphenol	mg/kg	0.5				-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-
2,4,6-Trichlorophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-
2,4,5-Trichlorophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-
Pentachlorophenol	mg/kg	2				-	<2	-	<2	-	<2	-	-	-	<2	-	-	<2	-	-
Arsenic	mg/kg	5	20	200	500	**8**	**7**	**9**	**7**	**9**	**11**	**9**	**6**	**10**	**6**	**7**	**7**	**5**	**8**	**6**
Barium	mg/kg	10	300			-	**150**	-	**460**	-	**80**	-	-	-	**100**	-	-	**40**	-	-
Beryllium	mg/kg	1		40	100	-	<1	-	<1	-	<1	-	-	-	<1	-	-	<1	-	-
Cadmium	mg/kg	1	3	40	100	<1	<1	<1	<1	<1	**2**	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Chromium	mg/kg	2				**61**	**49**	**42**	**83**	**74**	**70**	**50**	**30**	**58**	**30**	**72**	**53**	**26**	**69**	**40**
Chromium (hexavalent)	mg/kg	0.5	1	200	500	-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-
Cobalt	mg/kg	2		200	500	-	<2	-	<2	-	**7**	-	-	-	<2	-	-	**5**	-	-
Copper	mg/kg	5	100	2,000	5,000	**20**	**31**	**160**	**15**	**42**	**204**	**38**	**52**	**15**	**27**	**48**	**55**	**22**	**29**	**29**
Lead	mg/kg	5	600	600	1,500	**35**	**17**	**39**	**18**	**16**	**336**	**29**	**52**	**26**	**17**	**31**	**25**	**23**	**21**	**18**
Manganese	mg/kg	5	500	3,000	7,500	-	**79**	-	**91**	-	**111**	-	-	-	**57**	-	-	**82**	-	-
Mercury	mg/kg	0.1	1	30	75	<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	<0.1	<0.1
Nickel	mg/kg	2	60	600	3,000	**6**	**4**	**6**	**4**	**3**	**10**	**5**	**5**	**5**	**4**	**10**	**4**	**4**	**4**	**5**
Zinc	mg/kg	5	200	14,000	35,000	**75**	**31**	**80**	**50**	**27**	**335**	**197**	**72**	**49**	**32**	**93**	**45**	**73**	**31**	**37**
Vanadium	mg/kg	5	50			-	**90**	-	**102**	-	**110**	-	-	-	**108**	-	-	**47**	-	-
Polychlorinated Biphenyls	mg/kg	0.1		20	50	-	<0.1	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	<0.1	-	-
Aldrin	mg/kg	0.05				-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
Dieldrin	mg/kg	0.05				-	<0.05	-	**0.07**	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
a-BHC	mg/kg	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	-	-
d-BHC	mg/kg	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	-	-
cis-Chlordane	mg/kg	0.05				-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
trans-Chlordane	mg/kg	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	-	-
DDE	mg/kg	0.05				-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
DDT	mg/kg	0.2				-	<0.2	-	<0.2	-	<0.2	-	-	-	<0.2	-	-	<0.2	-	-
Endosulfan 1	mg/kg	0.05				-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
Endosulfan 2	mg/kg	0.05				-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
Endosulfan sulfate	mg/kg	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	-	-
Endrin aldehyde	mg/kg	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	-	-
Heptachlor	mg/kg	0.05	2	20	50	-	<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	-	-
Hexachlorobenzene (HCB)	mg/kg	0.05				-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
Methoxychlor	mg/kg	0.2				-	<0.2	-	<0.2	-	<0.2	-	-	-	<0.2	-	-	<0.2	-	-
pH (Lab)	pH Units	0.1	6-8	5-10	5-10	**8.2**	**8.4**	**8.5**	**8.3**	**7.8**	**8.2**	**8.4**	**8.4**	**8.2**	**8.4**	**8.3**	**8.3**	**8.4**	**8.3**	**8.5**
Moisture Content	%	1				**10.5**	**8**	**12.6**	**6.6**	**8.2**	**10.5**	**14**	**13.6**	**11.6**	**13.3**	**21.1**	**15**	**11.6**	**8.6**	**8.2**

Table ??
Analytical Results -
Waterfront Stage 2A - Waterfront Stage 2A
Darwin Waterfront Corporation

Location	SP01-31	SP01-32	SP01-35	SP01-38	SP01-40	SP01-44	SP01-44 - 070113	SP01-45	SP01-47	SP02-01	SP02-03	SP02-04	SP02-08	SP02-10	SP02-12
Field_ID	SP01-31 - 070113	SP01-32 - 070113	SP01-35 - 070113	SP01-38 - 070113	SP01-40 - 070113	SP01-44 - 070113	DUP03 - 070113	SP01-45 - 070113	SP01-47 - 070113	SP02-01 - 070113	SP02-03 - 070113	SP02-04 - 070113	SP02-08 - 070113	SP02-10 - 070113	SP02-12 - 070113
Sampled Date	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013
Sample Type	Primary	Primary	Primary	Primary	Primary	Primary	Duplicate	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Report #	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228

ChemName	output unit	EQL	Class 1	Class 2A	Class 2B														
C6-C9 fraction	mg/kg	10	65	530	no free hydrocarbon	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10-C14 fraction	mg/kg	50		855		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C29-C36 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C10-C36 fraction (sum)	mg/kg	50	1000	1000		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C6-C10 fraction (F1 minus BTEX)	mg/kg	10				<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6-C10 fraction	mg/kg	10				<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C10-C16 fraction	mg/kg	50				<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
>C16-C34 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C34-C40 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C10-C40 fraction (sum)	mg/kg	50				<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Benzene	mg/kg	0.2	1	1	1	<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
Toluene	mg/kg	0.5	1.4	1.4	1.4	<0.5	<0.5	<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	3.1	3.1	3.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	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	<0.5	<0.5
o-Xylene	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	<0.5	<0.5
Total Xylenes	mg/kg	0.5	14	14	14	<0.5	<0.5	<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	<0.2	<0.2
Naphthalene (VOC)	mg/kg	1				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	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	<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	<0.5	<0.5
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	<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	<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	<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	<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	<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	<0.5	<0.5
Benzo(b)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	<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	<0.5	<0.5
Benzo(a)pyrene	mg/kg	0.5		2	5	<0.5	<0.5	<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	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	<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	<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	<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	<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	<0.5	<0.5
Indeno(1,2,3-cd)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	<0.5	<0.5
Phenol	mg/kg	0.5		17,000	42,500	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2-Chlorophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2-Methylphenol (o-Cresol)	mg/kg	0.5				-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
3-&4-Methylphenol (m&p-Cresol)	mg/kg	1				-	<1	-	<1	-	-	-	<1	-	-	<1	-	-	<1	-
2-Nitrophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2,4-Dichlorophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2,4-Dimethylphenol	mg/kg	0.5				-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2,6-Dichlorophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
4-Chloro-3-methylphenol	mg/kg	0.5				-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2,4,6-Trichlorophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2,4,5-Trichlorophenol	mg/kg	0.5				-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
Pentachlorophenol	mg/kg	2				-	<2	-	<2	-	-	-	<2	-	-	<2	-	-	<2	-
Arsenic	mg/kg	5	20	200	500	<5	**7**	**6**	**12**	**6**	**8**	**6**	**18**	**8**	**6**	**8**	**6**	<5	<5	<5
Barium	mg/kg	10	300			-	**80**	-	**60**	-	-	-	**200**	-	-	**340**	-	-	**20**	-
Beryllium	mg/kg	1		40	100	-	<1	-	<1	-	-	-	<1	-	-	<1	-	-	<1	-
Cadmium	mg/kg	1	3	40	100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	mg/kg	2				**22**	**34**	**38**	**39**	**33**	**42**	**33**	**78**	**61**	**43**	**46**	**73**	**37**	**34**	**31**
Chromium (hexavalent)	mg/kg	0.5	1	200	500	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
Cobalt	mg/kg	2		200	500	-	<2	-	<2	-	-	-	**5**	-	-	**3**	-	-	**2**	-
Copper	mg/kg	5	100	2,000	5,000	**18**	**34**	**20**	**28**	**22**	**19**	**17**	**116**	**46**	**11**	**51**	**39**	**20**	**23**	**12**
Lead	mg/kg	5	600	600	1,500	**20**	**51**	**29**	**26**	**20**	**20**	**17**	**77**	**51**	**19**	**11**	**15**	**10**	**7**	**6**
Manganese	mg/kg	5	500	3,000	7,500	-	**111**	-	**69**	-	-	-	**128**	-	-	**118**	-	-	**108**	-
Mercury	mg/kg	0.1	1	30	75	<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	<0.1	<0.1
Nickel	mg/kg	2	60	600	3,000	**4**	**4**	**17**	**6**	**4**	**5**	**6**	**8**	**5**	**4**	**9**	**6**	**5**	**10**	**7**
Zinc	mg/kg	5	200	14,000	35,000	**44**	**45**	**63**	**50**	**32**	**45**	**44**	**125**	**118**	**58**	**30**	**29**	**16**	**26**	**49**
Vanadium	mg/kg	5	50			-	**70**	-	**73**	-	-	-	**189**	-	-	**77**	-	-	**60**	-
Polychlorinated Biphenyls	mg/kg	0.1		20	50	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	<0.1	-	-	<0.1	-
Aldrin	mg/kg	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	-
a-BHC	mg/kg	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	-
d-BHC	mg/kg	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	-
cis-Chlordane	mg/kg	0.05				-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-	<0.05	-
trans-Chlordane	mg/kg	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	-
DDE	mg/kg	0.05				-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-	<0.05	-
DDT	mg/kg	0.2				-	<0.2	-	<0.2	-	-	-	<0.2	-	-	<0.2	-	-	<0.2	-
Endosulfan 1	mg/kg	0.05				-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-	<0.05	-
Endosulfan 2	mg/kg	0.05				-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-	<0.05	-
Endosulfan sulfate	mg/kg	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	-
Endrin aldehyde	mg/kg	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	-
Heptachlor	mg/kg	0.05	2	20	50	-	<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	-
Hexachlorobenzene (HCB)	mg/kg	0.05				-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-	<0.05	-
Methoxychlor	mg/kg	0.2				-	<0.2	-	<0.2	-	-	-	<0.2	-	-	<0.2	-	-	<0.2	-
pH (Lab)	pH Units	0.1	6-8	5-10	5-10	**8.5**	**8.4**	**8.6**	**8.4**	**8.4**	**8.4**	**8.4**	**8.2**	**8.4**	**8.6**	**8.2**	**8.4**	**7.6**	**7**	**6.2**
Moisture Content	%	1				**15**	**10.1**	**11.9**	**18.2**	**10.8**	**9.8**	**10.4**	**7.8**	**9.2**	**12.2**	**20**	**13.7**	**14.9**	**12.9**	**14.5**

Table ??
Analytical Results -
Waterfront Stage 2A - Waterfront Stage 2A
Darwin Waterfront Corporation

Location	SP02-15	SP02-15	SP02-16	SP02-20	SP02-22	SP02-24	SP02-26	SP02-28	SP02-31	SP02-34	SP02-36	SP02-39	SP02-40	SP02-41	SP02-46
Field_ID	SP02-15 - 070113	DUP-04	SP02-16 - 070113	SP02-20 - 070113	SP02-22 - 070113	SP02-24 - 070113	SP02-26 - 070113	SP02-28 - 070113	SP02-31 - 070113	SP02-34 - 070113	SP02-36 - 070113	SP02-39 - 070113	SP02-40 - 070113	SP02-41 - 070113	SP02-46 - 070113
Sampled Date	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013
Sample Type	Primary	Duplicate	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Report #	ES1300228	73927	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228

ChemName	output unit	EQL	Class 1	Class 2A	Class 2B														
C6-C9 fraction	mg/kg	10	65	530	no free hydrocarbon	<10	<25	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10-C14 fraction	mg/kg	50		855		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C29-C36 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C10-C36 fraction (sum)	mg/kg	50	1000	1000		<50	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C6-C10 fraction (F1 minus BTEX)	mg/kg	10				<10	<25	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6-C10 fraction	mg/kg	10				<10	<25	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C10-C16 fraction	mg/kg	50				<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
>C16-C34 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C34-C40 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C10-C40 fraction (sum)	mg/kg	50				<50	-	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
Benzene	mg/kg	0.2	1	1	1	<0.2	<02.	<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	1.4	1.4	1.4	<0.5	<0.5	<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	3.1	3.1	3.1	<0.5	<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
m&p-Xylene	mg/kg	0.5				<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	mg/kg	0.5				<0.5	<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
Total Xylenes	mg/kg	0.5	14	14	14	<0.5	-	<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	<0.2
Naphthalene (VOC)	mg/kg	1				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	mg/kg	0.5				<0.5	<0.2	<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	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	mg/kg	0.5		2	5	<0.5	<0.05	<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	mg/kg	0.5				<0.5	<0.05	<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	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g,h,i)perylene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a,h)anthracene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	mg/kg	0.5				<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenol	mg/kg	0.5		17,000	42,500	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-
2-Chlorophenol	mg/kg	0.5				-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-
2-Methylphenol (o-Cresol)	mg/kg	0.5				-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-
3-&4-Methylphenol (m&p-Cresol)	mg/kg	1				-	-	<1	-	<1	-	-	<1	-	<1	-	<1	-	-
2-Nitrophenol	mg/kg	0.5				-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-
2,4-Dichlorophenol	mg/kg	0.5				-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-
2,4-Dimethylphenol	mg/kg	0.5				-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-
2,6-Dichlorophenol	mg/kg	0.5				-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-
4-Chloro-3-methylphenol	mg/kg	0.5				-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-
2,4,6-Trichlorophenol	mg/kg	0.5				-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-
2,4,5-Trichlorophenol	mg/kg	0.5				-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-
Pentachlorophenol	mg/kg	2				-	-	<2	-	<2	-	-	<2	-	<2	-	<2	-	-
Arsenic	mg/kg	5	20	200	500	<5	<4	<5	<5	<5	<5	<5	**9**	<5	<5	<5	**6**	<5	**5**	<5
Barium	mg/kg	10	300			-	-	**30**	-	**130**	-	-	**160**	-	<10	-	<10	-	-
Beryllium	mg/kg	1		40	100	-	-	<1	-	<1	-	-	<1	-	<1	-	<1	-	-
Cadmium	mg/kg	1	3	40	100	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	mg/kg	2				**49**	**48**	**49**	**31**	**46**	**36**	**36**	**74**	**48**	**32**	**18**	**39**	**26**	**72**	**33**
Chromium (hexavalent)	mg/kg	0.5	1	200	500	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5	-	-
Cobalt	mg/kg	2		200	500	-	-	**2**	-	**4**	-	-	**2**	-	<2	-	<2	-	-
Copper	mg/kg	5	100	2,000	5,000	**12**	**13**	**27**	**9**	**13**	**36**	**23**	**20**	**14**	**21**	**15**	**9**	**14**	**19**	**14**
Lead	mg/kg	5	600	600	1,500	<5	**6**	**13**	**6**	**8**	**14**	**5**	**13**	**12**	**5**	**7**	**6**	**6**	**7**	<5
Manganese	mg/kg	5	500	3,000	7,500	-	-	**187**	-	**419**	-	-	**212**	-	**38**	-	**37**	-	-	-
Mercury	mg/kg	0.1	1	30	75	<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	<0.1	<0.1
Nickel	mg/kg	2	60	600	3,000	**6**	**8**	**10**	**4**	**10**	**5**	**5**	**8**	**4**	**8**	**7**	**5**	**4**	**4**	**4**
Zinc	mg/kg	5	200	14,000	35,000	**29**	**23**	**33**	**13**	**24**	**29**	**16**	**48**	**35**	**15**	**14**	**14**	**13**	**10**	**10**
Vanadium	mg/kg	5	50			-	-	**79**	-	**71**	-	-	**125**	-	**28**	-	**74**	-	-	-
Polychlorinated Biphenyls	mg/kg	0.1		20	50	-	-	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	<0.1	-	-	-
Aldrin	mg/kg	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	-	-	-
a-BHC	mg/kg	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	-	-	-
d-BHC	mg/kg	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	-	-	-
cis-Chlordane	mg/kg	0.05				-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
trans-Chlordane	mg/kg	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	-	-	-
DDE	mg/kg	0.05				-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
DDT	mg/kg	0.2				-	-	<0.2	-	<0.2	-	-	<0.2	-	<0.2	-	<0.2	-	-	-
Endosulfan 1	mg/kg	0.05				-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Endosulfan 2	mg/kg	0.05				-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Endosulfan sulfate	mg/kg	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	-	-	-
Endrin aldehyde	mg/kg	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	-	-	-
Heptachlor	mg/kg	0.05	2	20	50	-	-	<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	-	-	-
Hexachlorobenzene (HCB)	mg/kg	0.05				-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	<0.05	-	-	-
Methoxychlor	mg/kg	0.2				-	-	<0.2	-	<0.2	-	-	<0.2	-	<0.2	-	<0.2	-	-	-
pH (Lab)	pH Units	0.1	6-8	5-10	5-10	**6**	**6.8**	**8.1**	**6.5**	**8**	**8.3**	**8.3**	**8.6**	**8.4**	**8.3**	**8.3**	**6.5**	**7.5**	**7**	**5.1**
Moisture Content	%	1				**16.5**	**15**	**13.8**	**14.6**	**13.5**	**20.6**	**15.9**	**10.4**	**15.9**	**16.8**	**24.1**	**21.6**	**21.6**	**18.5**	**25.8**

Table ??
Analytical Results -
Waterfront Stage 2A - Waterfront Stage 2A
Darwin Waterfront Corporation

Location	SP02-47	SP02-50	SP02-52	SP02-53	SP02-56	SP02-58	SP02-60	SP02-63	SP02-64	SP02-68	SP02-70
Field_ID	SP02-47 - 070113	SP02-50 - 070113	SP02-52 - 070113	SP02-53 - 070113	SP02-56 - 070113	SP02-58 - 070113	SP02-60 - 070113	SP02-63 - 070113	SP02-64 - 070113	SP02-68 - 070113	SP02-70 - 070113
Sampled Date	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013
Sample Type	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary	Primary
Lab Report #	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228

ChemName	output unit	EQL	Class 1	Class 2A	Class 2B										
C6-C9 fraction	mg/kg	10	65	530	no free hydrocarbon	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C10-C14 fraction	mg/kg	50		855		<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 fraction	mg/kg	100				<100	<100	<100	<100	<100	**210**	<100	<100	<100	<100
C29-C36 fraction	mg/kg	100				<100	<100	<100	<100	<100	**120**	<100	<100	<100	<100
C10-C36 fraction (sum)	mg/kg	50	1000	1000		<50	<50	<50	<50	<50	**330**	<50	<50	<50	<50
C6-C10 fraction (F1 minus BTEX)	mg/kg	10				<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6-C10 fraction	mg/kg	10				<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C10-C16 fraction	mg/kg	50				<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
>C16-C34 fraction	mg/kg	100				<100	<100	<100	<100	<100	**280**	<100	<100	<100	<100
>C34-C40 fraction	mg/kg	100				<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C10-C40 fraction (sum)	mg/kg	50				<50	<50	<50	<50	<50	**280**	<50	<50	<50	<50
Benzene	mg/kg	0.2	1	1	1	<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	1.4	1.4	1.4	<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	3.1	3.1	3.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	mg/kg	0.5				<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Xylenes	mg/kg	0.5	14	14	14	<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
Naphthalene (VOC)	mg/kg	1				<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	mg/kg	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
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
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
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
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
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
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
Benzo(b)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
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
Benzo(a)pyrene	mg/kg	0.5		2	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	mg/kg	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
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
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
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
Indeno(1,2,3-cd)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
Phenol	mg/kg	0.5		17,000	42,500	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2-Chlorophenol	mg/kg	0.5				<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2-Methylphenol (o-Cresol)	mg/kg	0.5				<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
3-&4-Methylphenol (m&p-Cresol)	mg/kg	1				<1	-	<1	-	-	<1	-	<1	-	<1
2-Nitrophenol	mg/kg	0.5				<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2,4-Dichlorophenol	mg/kg	0.5				<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2,4-Dimethylphenol	mg/kg	0.5				<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2,6-Dichlorophenol	mg/kg	0.5				<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
4-Chloro-3-methylphenol	mg/kg	0.5				<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2,4,6-Trichlorophenol	mg/kg	0.5				<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2,4,5-Trichlorophenol	mg/kg	0.5				<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
Pentachlorophenol	mg/kg	2				<2	-	<2	-	-	<2	-	<2	-	<2
Arsenic	mg/kg	5	20	200	500	<5	<5	<5	<5	<5	**12**	**6**	**6**	**8**	<5
Barium	mg/kg	10	300			**40**	-	**40**	-	-	**60**	-	**40**	-	-
Beryllium	mg/kg	1		40	100	<1	-	<1	-	-	<1	-	<1	-	-
Cadmium	mg/kg	1	3	40	100	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	mg/kg	2				**36**	**40**	**36**	**20**	**23**	**40**	**27**	**36**	**22**	**19**
Chromium (hexavalent)	mg/kg	0.5	1	200	500	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	-
Cobalt	mg/kg	2		200	500	**2**	-	<2	-	-	**4**	-	**2**	-	-
Copper	mg/kg	5	100	2,000	5,000	**18**	**10**	**26**	**18**	**15**	**67**	**20**	**37**	**33**	**10**
Lead	mg/kg	5	600	600	1,500	**12**	**24**	**9**	**10**	**13**	**44**	**21**	**43**	**26**	**6**
Manganese	mg/kg	5	500	3,000	7,500	**190**	-	**78**	-	-	**172**	-	**128**	-	-
Mercury	mg/kg	0.1	1	30	75	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	60	600	3,000	**10**	**5**	**7**	**6**	**5**	**11**	**6**	**9**	**5**	**4**
Zinc	mg/kg	5	200	14,000	35,000	**35**	**54**	**17**	**73**	**86**	**71**	**58**	**47**	**95**	**14**
Vanadium	mg/kg	5	50			**47**	-	**60**	-	-	**110**	-	**54**	-	-
Polychlorinated Biphenyls	mg/kg	0.1		20	50	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-
Aldrin	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Dieldrin	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
a-BHC	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
b-BHC	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
d-BHC	mg/kg	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	-	-
cis-Chlordane	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
trans-Chlordane	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
DDD	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
DDE	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
DDT	mg/kg	0.2				<0.2	-	<0.2	-	-	<0.2	-	<0.2	-	-
Endosulfan 1	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Endosulfan 2	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Endosulfan sulfate	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Endrin	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Endrin aldehyde	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Endrin ketone	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Heptachlor	mg/kg	0.05	2	20	50	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Heptachlor epoxide	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Hexachlorobenzene (HCB)	mg/kg	0.05				<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Methoxychlor	mg/kg	0.2				<0.2	-	<0.2	-	-	<0.2	-	<0.2	-	-
pH (Lab)	pH Units	0.1	6-8	5-10	5-10	**8.4**	**8.1**	**7.9**	**8.4**	**8.4**	**8.4**	**8.2**	**8.4**	**8.3**	**8.2**
Moisture Content	%	1				**19.2**	**18.4**	**10.9**	**19.6**	**18.5**	**12.5**	**11**	**13.1**	**17.1**	**10.5**

Table ??
Analytical Results -
Waterfront Stage 2A - Waterfront Stage 2A
Darwin Waterfront Corporation

Location	SP01-01	SP01-02	SP01-07	SP01-08	SP01-11	SP01-14	SP01-15	SP01-16	SP01-19	SP01-20	SP01-24	SP01-24 - 070113	SP01-26	SP01-27	SP01-27
Sample ID	SP01-01 - 070113	SP01-02 - 070113	SP01-07 - 070113	SP01-08 - 070113	SP01-11 - 070113	SP01-14 - 070113	SP01-15 - 070113	SP01-16 - 070113	SP01-19 - 070113	SP01-20 - 070113	SP01-24 - 070113	DUP01 - 070113	SP01-26 - 070113	SP01-27 - 070113	DUP-02
Date Sampled	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013
Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Duplicate	Normal	Normal	Duplicate
Lab Batch	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	73927

ChemName	output unit	EQL	NSW 2008 General Solid Waste (No Leaching)	NSW 2008 General Solid Waste (with leached)														
C10-C14 fraction	mg/kg	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<25
C15-C28 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<50
C15-C28 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<50
C29-C36 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C6-C9 fraction	mg/kg	10		**650**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<25
>C10-C16 fraction	mg/kg	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<25
>C16-C34 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C34-C40 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C10-C40 fraction (sum)	mg/kg	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<100
C6-C10 fraction (F1 minus BTEX)	mg/kg	10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<25
C6-C10 fraction	mg/kg	10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	-
Benzene	mg/kg	0.2	**10**	**18**	<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
Toluene	mg/kg	0.5	**288**	**518**	<0.5	<0.5	<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	**600**	**1080**	<0.5	<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
m&p-Xylene	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	<0.5	<2
o-Xylene	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	<0.5	<1
Total Xylenes	mg/kg	0.5	**1000**	**1800**	<0.5	<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	<0.2	-
Naphthalene (VOC)	mg/kg	1			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
Benzo(b)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	<0.5	<0.2
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	<0.5	<0.1
Benzo(a)pyrene	mg/kg	0.5	**0.8**	**10**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.05
Benzo(a)pyrene TEQ	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	<0.5	<0.05
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
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	<0.5	<0.1
Indeno(1,2,3-cd)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	<0.5	<0.1
Phenol	mg/kg	0.5		**518**	-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-
2-Chlorophenol	mg/kg	0.5			-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-
2-Methylphenol (o-Cresol)	mg/kg	0.5	**4000**	**7200**	-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-
3-&4-Methylphenol (m&p-Cresol)	mg/kg	1			-	<1	-	<1	-	<1	-	-	-	<1	-	-	<1	-
2-Nitrophenol	mg/kg	0.5			-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-
2,4-Dichlorophenol	mg/kg	0.5			-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-
2,4-Dimethylphenol	mg/kg	0.5			-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-
2,6-Dichlorophenol	mg/kg	0.5			-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-
4-Chloro-3-methylphenol	mg/kg	0.5			-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-
2,4,6-Trichlorophenol	mg/kg	0.5	**40**	**72**	-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-
2,4,5-Trichlorophenol	mg/kg	0.5	**8000**	**14400**	-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-
Pentachlorophenol	mg/kg	2			-	<2	-	<2	-	<2	-	-	-	<2	-	-	<2	-
Chromium (hexavalent)	mg/kg	0.5	**100**	**1900**	-	<0.5	-	<0.5	-	<0.5	-	-	-	<0.5	-	-	<0.5	-
Mercury	mg/kg	0.1	**4**	**50**	<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	<0.1
Arsenic	mg/kg	5	**100**	**500**	**8**	**7**	**9**	**7**	**9**	**11**	**9**	**6**	**10**	**6**	**7**	**7**	**5**	**8**	**6**
Barium	mg/kg	10			-	**150**	-	**460**	-	**80**	-	-	-	**100**	-	-	**40**	-	-
Beryllium	mg/kg	1	**20**	**100**	-	<1	-	<1	-	<1	-	-	-	<1	-	-	<1	-	-
Cadmium	mg/kg	1	**20**	**100**	<1	<1	<1	<1	<1	**2**	<1	<1	<1	<1	<1	<1	<1	<1	<0.5
Chromium	mg/kg	2			**61**	**49**	**42**	**83**	**74**	**70**	**50**	**30**	**58**	**30**	**72**	**53**	**26**	**69**	**40**
Cobalt	mg/kg	2			-	<2	-	<2	-	**7**	-	-	-	<2	-	-	**5**	-	-
Copper	mg/kg	5			**20**	**31**	**160**	**15**	**42**	**204**	**38**	**52**	**15**	**27**	**48**	**55**	**22**	**29**	**29**
Lead	mg/kg	5	**100**	**1500**	**35**	**17**	**39**	**18**	**16**	**336**	**29**	**52**	**26**	**17**	**31**	**25**	**23**	**21**	**18**
Manganese	mg/kg	5			-	**79**	-	**91**	-	**111**	-	-	-	**57**	-	-	**82**	-	-
Nickel	mg/kg	2	**40**	**1050**	**6**	**4**	**6**	**4**	**3**	**10**	**5**	**5**	**5**	**4**	**10**	**4**	**4**	**4**	**5**
Zinc	mg/kg	5			**75**	**31**	**80**	**50**	**27**	**335**	**197**	**72**	**49**	**32**	**93**	**45**	**73**	**31**	**37**
Vanadium	mg/kg	5			-	**90**	-	**102**	-	**110**	-	-	-	**108**	-	-	**47**	-	-
Polychlorinated Biphenyls	mg/kg	0.1		**50**	-	<0.1	-	<0.1	-	<0.1	-	-	-	<0.1	-	-	<0.1	-	-
Aldrin	mg/kg	0.05			-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
Dieldrin	mg/kg	0.05			-	<0.05	-	**0.07**	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
a-BHC	mg/kg	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	-	-
d-BHC	mg/kg	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	-	-
cis-Chlordane	mg/kg	0.05			-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
trans-Chlordane	mg/kg	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	-	-
DDE	mg/kg	0.05			-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
DDT	mg/kg	0.2			-	<0.2	-	<0.2	-	<0.2	-	-	-	<0.2	-	-	<0.2	-	-
Endosulfan 1	mg/kg	0.05			-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
Endosulfan 2	mg/kg	0.05			-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
Endosulfan sulfate	mg/kg	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	-	-
Endrin aldehyde	mg/kg	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	-	-
Heptachlor	mg/kg	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	-	-
Hexachlorobenzene (HCB)	mg/kg	0.05			-	<0.05	-	<0.05	-	<0.05	-	-	-	<0.05	-	-	<0.05	-	-
Methoxychlor	mg/kg	0.2			-	<0.2	-	<0.2	-	<0.2	-	-	-	<0.2	-	-	<0.2	-	-
Moisture Content	%	1			**10.5**	**8**	**12.6**	**6.6**	**8.2**	**10.5**	**14**	**13.6**	**11.6**	**13.3**	**21.1**	**15**	**11.6**	**8.6**	**8.5**
pH (Lab)	pH Units	0.1			**8.2**	**8.4**	**8.5**	**8.3**	**7.8**	**8.2**	**8.4**	**8.4**	**8.2**	**8.4**	**8.3**	**8.3**	**8.4**	**8.3**	**8.2**

Table ??
Analytical Results -
Waterfront Stage 2A - Waterfront Stage 2A
Darwin Waterfront Corporation

Location	SP01-27 - 070113	SP01-31	SP01-32	SP01-35	SP01-38	SP01-40	SP01-44	SP01-45	SP01-47	SP02-01	SP02-03	SP02-04	SP02-08	SP02-10	SP02-12
Sample ID	DUP03 - 070113	SP01-31 - 070113	SP01-32 - 070113	SP01-35 - 070113	SP01-38 - 070113	SP01-40 - 070113	SP01-44 - 070113	SP01-45 - 070113	SP01-47 - 070113	SP02-01 - 070113	SP02-03 - 070113	SP02-04 - 070113	SP02-08 - 070113	SP02-10 - 070113	SP02-12 - 070113
Date Sampled	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013
Sample Type	Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Lab Batch	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228

ChemName	output unit	EQL	NSW 2008 General Solid Waste (No Leaching)	NSW 2008 General Solid Waste (with leached)														
C10-C14 fraction	mg/kg	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C15-C28 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C29-C36 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C6-C9 fraction	mg/kg	10		**650**	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C10-C16 fraction	mg/kg	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
>C16-C34 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C34-C40 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C10-C40 fraction (sum)	mg/kg	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C6-C10 fraction (F1 minus BTEX)	mg/kg	10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6-C10 fraction	mg/kg	10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	mg/kg	0.2	**10**	**18**	<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
Toluene	mg/kg	0.5	**288**	**518**	<0.5	<0.5	<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	**600**	**1080**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	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	<0.5	<0.5
o-Xylene	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	<0.5	<0.5
Total Xylenes	mg/kg	0.5	**1000**	**1800**	<0.5	<0.5	<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	<0.2	<0.2
Naphthalene (VOC)	mg/kg	1			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	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	<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	<0.5	<0.5
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	<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	<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	<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	<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	<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	<0.5	<0.5
Benzo(b)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	<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	<0.5	<0.5
Benzo(a)pyrene	mg/kg	0.5	**0.8**	**10**	<0.5	<0.5	<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	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	<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	<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	<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	<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	<0.5	<0.5
Indeno(1,2,3-cd)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	<0.5	<0.5
Phenol	mg/kg	0.5		**518**	-	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2-Chlorophenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2-Methylphenol (o-Cresol)	mg/kg	0.5	**4000**	**7200**	-	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
3-&4-Methylphenol (m&p-Cresol)	mg/kg	1			-	-	<1	-	<1	-	-	<1	-	-	<1	-	-	<1	-
2-Nitrophenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2,4-Dichlorophenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2,4-Dimethylphenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2,6-Dichlorophenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
4-Chloro-3-methylphenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2,4,6-Trichlorophenol	mg/kg	0.5	**40**	**72**	-	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
2,4,5-Trichlorophenol	mg/kg	0.5	**8000**	**14400**	-	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
Pentachlorophenol	mg/kg	2			-	-	<2	-	<2	-	-	<2	-	-	<2	-	-	<2	-
Chromium (hexavalent)	mg/kg	0.5	**100**	**1900**	-	-	<0.5	-	<0.5	-	-	<0.5	-	-	<0.5	-	-	<0.5	-
Mercury	mg/kg	0.1	**4**	**50**	<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	<0.1
Arsenic	mg/kg	5	**100**	**500**	**6**	<5	**7**	**6**	**12**	**6**	**8**	**18**	**8**	**6**	**8**	**6**	<5	<5
Barium	mg/kg	10			-	-	**80**	-	**60**	-	-	**200**	-	-	**340**	-	-	**20**	-
Beryllium	mg/kg	1	**20**	**100**	-	-	<1	-	<1	-	-	<1	-	-	<1	-	-	<1	-
Cadmium	mg/kg	1	**20**	**100**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	mg/kg	2			**33**	**22**	**34**	**38**	**39**	**33**	**42**	**78**	**61**	**43**	**46**	**73**	**37**	**34**	**31**
Cobalt	mg/kg	2			-	-	<2	-	<2	-	-	**5**	-	-	**3**	-	-	**2**	-
Copper	mg/kg	5			**17**	**18**	**34**	**20**	**28**	**22**	**19**	**116**	**46**	**11**	**51**	**39**	**20**	**23**	**12**
Lead	mg/kg	5	**100**	**1500**	**17**	**20**	**51**	**29**	**26**	**20**	**20**	**77**	**51**	**19**	**11**	**15**	**10**	**7**	**6**
Manganese	mg/kg	5			-	-	**111**	-	**69**	-	-	**128**	-	-	**118**	-	-	**108**	-
Nickel	mg/kg	2	**40**	**1050**	**6**	**4**	**4**	**17**	**6**	**4**	**5**	**8**	**5**	**4**	**9**	**6**	**5**	**10**	**7**
Zinc	mg/kg	5			**44**	**44**	**45**	**63**	**50**	**32**	**45**	**125**	**118**	**58**	**30**	**29**	**16**	**26**	**49**
Vanadium	mg/kg	5			-	-	**70**	-	**73**	-	-	**189**	-	-	**77**	-	-	**60**	-
Polychlorinated Biphenyls	mg/kg	0.1		**50**	-	-	<0.1	-	<0.1	-	-	<0.1	-	-	<0.1	-	-	<0.1	-
Aldrin	mg/kg	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	-
a-BHC	mg/kg	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	-
d-BHC	mg/kg	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	-
cis-Chlordane	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	-	<0.05	-	-	<0.05	-
trans-Chlordane	mg/kg	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	-
DDE	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	-	<0.05	-	-	<0.05	-
DDT	mg/kg	0.2			-	-	<0.2	-	<0.2	-	-	<0.2	-	-	<0.2	-	-	<0.2	-
Endosulfan 1	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	-	<0.05	-	-	<0.05	-
Endosulfan 2	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	-	<0.05	-	-	<0.05	-
Endosulfan sulfate	mg/kg	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	-
Endrin aldehyde	mg/kg	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	-
Heptachlor	mg/kg	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	-
Hexachlorobenzene (HCB)	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	-	<0.05	-	-	<0.05	-
Methoxychlor	mg/kg	0.2			-	-	<0.2	-	<0.2	-	-	<0.2	-	-	<0.2	-	-	<0.2	-
Moisture Content	%	1			**10.4**	**15**	**10.1**	**11.9**	**18.2**	**10.8**	**9.8**	**7.8**	**9.2**	**12.2**	**20**	**13.7**	**14.9**	**12.9**	**14.5**
pH (Lab)	pH Units	0.1			**8.4**	**8.5**	**8.4**	**8.6**	**8.4**	**8.4**	**8.4**	**8.2**	**8.4**	**8.6**	**8.2**	**8.4**	**7.6**	**7**	**6.2**

Table ??
Analytical Results -
Waterfront Stage 2A - Waterfront Stage 2A
Darwin Waterfront Corporation

Location	SP02-15	SP02-15	SP02-16	SP02-20	SP02-22	SP02-24	SP02-26	SP02-28	SP02-31	SP02-34	SP02-36
Sample ID	SP02-15 - 070113	DUP-04	SP02-16 - 070113	SP02-20 - 070113	SP02-22 - 070113	SP02-24 - 070113	SP02-26 - 070113	SP02-28 - 070113	SP02-31 - 070113	SP02-34 - 070113	SP02-36 - 070113
Date Sampled	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013
Sample Type	Normal	Duplicate	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Lab Batch	ES1300228	83927	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228

ChemName	output unit	EQL	NSW 2008 General Solid Waste (No Leaching)	NSW 2008 General Solid Waste (with leached)									
C10-C14 fraction	mg/kg	50			<50	<25	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 fraction	mg/kg	100			<100	<50	<100	<100	<100	<100	<100	<100	<100	<100
C15-C28 fraction	mg/kg	100			<100	<50	<100	<100	<100	<100	<100	<100	<100	<100
C29-C36 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
C6-C9 fraction	mg/kg	10		650	<10	<25	<10	<10	<10	<10	<10	<10	<10	<10
>C10-C16 fraction	mg/kg	50			<50	<25	<50	<50	<50	<50	<50	<50	<50	<50
>C16-C34 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C34-C40 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C10-C40 fraction (sum)	mg/kg	50			<50	<100	<50	<50	<50	<50	<50	<50	<50	<50
C6-C10 fraction (F1 minus BTEX)	mg/kg	10			<10	<25	<10	<10	<10	<10	<10	<10	<10	<10
C6-C10 fraction	mg/kg	10			<10	-	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	mg/kg	0.2	10	18	<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	288	518	<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	600	1080	<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	mg/kg	0.5			<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
o-Xylene	mg/kg	0.5			<0.5	<1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Total Xylenes	mg/kg	0.5	1000	1800	<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
Naphthalene (VOC)	mg/kg	1			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	mg/kg	0.5			<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	mg/kg	0.5			<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	mg/kg	0.5			<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	mg/kg	0.5			<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	mg/kg	0.5			<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	mg/kg	0.5			<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	mg/kg	0.5			<0.5	<0.1	<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	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	mg/kg	0.5			<0.5	<0.2	<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	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	mg/kg	0.5	0.8	10	<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ	mg/kg	0.5			<0.5	<0.05	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	mg/kg	0.5			<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	mg/kg	0.5			<0.5	<0.1	<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	<0.1	<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	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1,2,3-cd)pyrene	mg/kg	0.5			<0.5	<0.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Phenol	mg/kg	0.5		518	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-
2-Chlorophenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-
2-Methylphenol (o-Cresol)	mg/kg	0.5	4000	7200	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-
3-&4-Methylphenol (m&p-Cresol)	mg/kg	1			-	-	<1	-	<1	-	-	<1	-	<1	-
2-Nitrophenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-
2,4-Dichlorophenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-
2,4-Dimethylphenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-
2,6-Dichlorophenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-
4-Chloro-3-methylphenol	mg/kg	0.5			-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-
2,4,6-Trichlorophenol	mg/kg	0.5	40	72	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-
2,4,5-Trichlorophenol	mg/kg	0.5	8000	14400	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-
Pentachlorophenol	mg/kg	2			-	-	<2	-	<2	-	-	<2	-	<2	-
Chromium (hexavalent)	mg/kg	0.5	100	1900	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-
Mercury	mg/kg	0.1	4	50	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
Arsenic	mg/kg	5	100	500	<5	4	<5	<5	<5	<5	<5	9	<5	<5
Barium	mg/kg	10			-	-	30	-	130	-	-	160	-	<10	-
Beryllium	mg/kg	1	20	100	-	-	<1	-	<1	-	-	<1	-	<1	-
Cadmium	mg/kg	1	20	100	<1	<0.5	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	mg/kg	2			49	48	49	31	46	36	36	74	48	32	18
Cobalt	mg/kg	2			-	-	2	-	4	-	-	2	-	<2	-
Copper	mg/kg	5			12	13	27	9	13	36	23	20	14	21	15
Lead	mg/kg	5	100	1500	<5	6	13	6	8	14	5	13	12	5	7
Manganese	mg/kg	5			-	-	187	-	419	-	-	212	-	38	-
Nickel	mg/kg	2	40	1050	6	8	10	4	10	5	5	8	4	8	7
Zinc	mg/kg	5			29	23	33	13	24	29	16	48	35	15	14
Vanadium	mg/kg	5			-	-	79	-	71	-	-	125	-	28	-
Polychlorinated Biphenyls	mg/kg	0.1		50	-	-	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-
Aldrin	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
Dieldrin	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
a-BHC	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
b-BHC	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
d-BHC	mg/kg	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	-
cis-Chlordane	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
trans-Chlordane	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
DDD	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
DDE	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
DDT	mg/kg	0.2			-	-	<0.2	-	<0.2	-	-	<0.2	-	<0.2	-
Endosulfan 1	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
Endosulfan 2	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
Endosulfan sulfate	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
Endrin	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
Endrin aldehyde	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
Endrin ketone	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
Heptachlor	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
Heptachlor epoxide	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
Hexachlorobenzene (HCB)	mg/kg	0.05			-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-
Methoxychlor	mg/kg	0.2			-	-	<0.2	-	<0.2	-	-	<0.2	-	<0.2	-
Moisture Content	%	1			16.5	15	13.8	14.6	13.5	20.6	15.9	10.4	15.9	16.8	24.1
pH (Lab)	pH Units	0.1			6	6.8	8.1	6.5	8	8.3	8.3	8.6	8.4	8.3	8.3

Table ??
Analytical Results -
Waterfront Stage 2A - Waterfront Stage 2A
Darwin Waterfront Corporation

Location	SP02-39	SP02-40	SP02-41	SP02-46	SP02-47	SP02-50	SP02-52	SP02-53	SP02-56	SP02-58	SP02-60	SP02-63	SP02-64	SP02-68	SP02-70
Sample ID	SP02-39 - 070113	SP02-40 - 070113	SP02-41 - 070113	SP02-46 - 070113	SP02-47 - 070113	SP02-50 - 070113	SP02-52 - 070113	SP02-53 - 070113	SP02-56 - 070113	SP02-58 - 070113	SP02-60 - 070113	SP02-63 - 070113	SP02-64 - 070113	SP02-68 - 070113	SP02-70 - 070113
Date Sampled	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013	7/01/2013
Sample Type	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal
Lab Batch	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228	ES1300228

ChemName	output unit	EQL	NSW 2008 General Solid Waste (No Leaching)	NSW 2008 General Solid Waste (with leached)														
C10-C14 fraction	mg/kg	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
C15-C28 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	**210**	<100	<100	<100	<100
C15-C28 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	**210**	<100	<100	<100	<100
C29-C36 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	**120**	<100	<100	<100	<100
C6-C9 fraction	mg/kg	10	**650**		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
>C10-C16 fraction	mg/kg	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50	<50
>C16-C34 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	**280**	<100	<100	<100	<100
>C34-C40 fraction	mg/kg	100			<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100	<100
>C10-C40 fraction (sum)	mg/kg	50			<50	<50	<50	<50	<50	<50	<50	<50	<50	**280**	<50	<50	<50	<50
C6-C10 fraction (F1 minus BTEX)	mg/kg	10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
C6-C10 fraction	mg/kg	10			<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Benzene	mg/kg	0.2	**10**	**18**	<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
Toluene	mg/kg	0.5	**288**	**518**	<0.5	<0.5	<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	**600**	**1080**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
m&p-Xylene	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	<0.5	<0.5
o-Xylene	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	<0.5	<0.5
Total Xylenes	mg/kg	0.5	**1000**	**1800**	<0.5	<0.5	<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	<0.2	<0.2
Naphthalene (VOC)	mg/kg	1			<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Naphthalene	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	<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	<0.5	<0.5
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	<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	<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	<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	<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	<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	<0.5	<0.5
Benzo(b)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	<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	<0.5	<0.5
Benzo(a)pyrene	mg/kg	0.5	**0.8**	**10**	<0.5	<0.5	<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	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	<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	<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	<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	<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	<0.5	<0.5
Indeno(1,2,3-cd)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	<0.5	<0.5
Phenol	mg/kg	0.5		**518**	<0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2-Chlorophenol	mg/kg	0.5			<0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2-Methylphenol (o-Cresol)	mg/kg	0.5	**4000**	**7200**	<0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
3-&4-Methylphenol (m&p-Cresol)	mg/kg	1			<1	-	-	-	<1	-	<1	-	-	<1	-	<1	-	<1
2-Nitrophenol	mg/kg	0.5			<0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2,4-Dichlorophenol	mg/kg	0.5			<0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2,4-Dimethylphenol	mg/kg	0.5			<0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2,6-Dichlorophenol	mg/kg	0.5			<0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
4-Chloro-3-methylphenol	mg/kg	0.5			<0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2,4,6-Trichlorophenol	mg/kg	0.5	**40**	**72**	<0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
2,4,5-Trichlorophenol	mg/kg	0.5	**8000**	**14400**	<0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
Pentachlorophenol	mg/kg	2			<2	-	-	-	<2	-	<2	-	-	<2	-	<2	-	<2
Chromium (hexavalent)	mg/kg	0.5	**100**	**1900**	<0.5	-	-	-	<0.5	-	<0.5	-	-	<0.5	-	<0.5	-	<0.5
Mercury	mg/kg	0.1	**4**	**50**	<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	<0.1
Arsenic	mg/kg	5	**100**	**500**	**6**	<5	**5**	<5	<5	<5	<5	<5	<5	**12**	**6**	**6**	**8**	<5
Barium	mg/kg	10			<10	-	-	-	**40**	-	**40**	-	-	**60**	-	**40**	-	-
Beryllium	mg/kg	1	**20**	**100**	<1	-	-	-	<1	-	<1	-	-	<1	-	<1	-	-
Cadmium	mg/kg	1	**20**	**100**	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1
Chromium	mg/kg	2			**39**	**26**	**72**	**33**	**36**	**40**	**36**	**20**	**23**	**40**	**27**	**36**	**22**	**19**
Cobalt	mg/kg	2			<2	-	-	-	**2**	-	<2	-	-	**4**	-	**2**	-	-
Copper	mg/kg	5			**9**	**14**	**19**	**14**	**18**	**10**	**26**	**18**	**15**	**67**	**20**	**37**	**33**	**10**
Lead	mg/kg	5	**100**	**1500**	**6**	**6**	**7**	<5	**12**	**24**	**9**	**10**	**13**	**44**	**21**	**43**	**26**	**6**
Manganese	mg/kg	5			**37**	-	-	-	**190**	-	**78**	-	-	**172**	-	**128**	-	-
Nickel	mg/kg	2	**40**	**1050**	**5**	**4**	**4**	**4**	**10**	**5**	**7**	**6**	**5**	**11**	**6**	**9**	**5**	**4**
Zinc	mg/kg	5			**14**	**13**	**10**	**10**	**35**	**54**	**17**	**73**	**86**	**71**	**58**	**47**	**95**	**14**
Vanadium	mg/kg	5			**74**	-	-	-	**47**	-	**60**	-	-	**110**	-	**54**	-	-
Polychlorinated Biphenyls	mg/kg	0.1		**50**	<0.1	-	-	-	<0.1	-	<0.1	-	-	<0.1	-	<0.1	-	-
Aldrin	mg/kg	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	-	-
a-BHC	mg/kg	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	-	-
d-BHC	mg/kg	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	-	-
cis-Chlordane	mg/kg	0.05			<0.05	-	-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
trans-Chlordane	mg/kg	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	-	-
DDE	mg/kg	0.05			<0.05	-	-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
DDT	mg/kg	0.2			<0.2	-	-	-	<0.2	-	<0.2	-	-	<0.2	-	<0.2	-	-
Endosulfan 1	mg/kg	0.05			<0.05	-	-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Endosulfan 2	mg/kg	0.05			<0.05	-	-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Endosulfan sulfate	mg/kg	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	-	-
Endrin aldehyde	mg/kg	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	-	-
Heptachlor	mg/kg	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	-	-
Hexachlorobenzene (HCB)	mg/kg	0.05			<0.05	-	-	-	<0.05	-	<0.05	-	-	<0.05	-	<0.05	-	-
Methoxychlor	mg/kg	0.2			<0.2	-	-	-	<0.2	-	<0.2	-	-	<0.2	-	<0.2	-	-
Moisture Content	%	1			**21.6**	**21.6**	**18.5**	**25.8**	**19.2**	**18.4**	**10.9**	**19.6**	**18.5**	**12.5**	**11**	**13.1**	**17.1**	**10.5**
pH (Lab)	pH Units	0.1			**6.5**	**7.5**	**7**	**5.1**	**8.4**	**8.1**	**7.9**	**8.4**	**8.4**	**8.4**	**8.2**	**8.4**	**8.3**	**8.2**

Attachment B

URS PROJECT - CHAIN OF CUSTODY

Environmental Division Sydney

Work Order

ES1300228

Telephone : +61-2-8784 8555

CLIENT:	URS Australia	LABORATORY:	ALS
ADDRESS:	Level 3, 93 Mitchell St Darwin NT 0800	ADDRESS:	2-4 Westall Road SPRINGVALE Victoria, 3171
PHONE NO:	08 8980 2900	PHONE NO:	03 8549 9600
FAX NO:	08 8366 1001	FAX NO:	03 8549 9601
PROJECT NAME:	Darwin Waterfront Stage 2	PROJECT MANAGER: Tim Smith	
PROJECT NO:	42213719	SAMPLERS: Philippa Scott - 0413599470, Bek Aagaard	SIGNED:

All results to be provided in ESDAT format.

email address: darwin@urscorp.com

philippa.scott@urs.com

ALSE Quote Number:

FOR LABORATORY USE ONLY

COMMENTS: SPECIAL HANDLING/STORAGE

ANALYSIS REQUIRED

LAB OF ORIGIN: DARWIN

LAB ID	SITE	LOCATION	MATRIX	SAMPLE TYPE	SAMPLE ID	Date	CONTAINER TYPE AND PRESERVATIVE	FIELD FILTERED? CONTAINER TYPE?	TOTAL NUMBER OF CONTAINERS	Hold	TPH/BTEX, PAH, Metals.			
1			Soil		SP01-01 070113	7/1/13			1	X	X			
33					SP01-02					X				
36					SP01_03					X				
37					SP01_04					X				
38					SP01_05					X				
39					SP01_06					X				
2					SP01_07						X			
46					SP01_08					X				
41					SP01_09					X				
42					SP01_10					X				
3					SP01_11						X			
43					SP01_12					X				
44					SP01_13					X				
45					SP01_14					X				
4					SP01_15					X	X			
									TOTAL	10	4	0	0	0

Custody Seal? Y N NA

Samples Cold? Y N NA

Comments:

RELINQUISHED BY: P. Scott DATE: 7/1/13 CHECKED: TIME:

RECEIVED BY: Dan DATE: 8/1 CHECKED: TIME: 0830

CONTAINER TYPE AND PRESERVATIVE CODES

P = Natural Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Acid Rinsed Jar

S = Solvent Washed Acid Rinsed Glass Bottle; VC = Hydrochloric Acid Preserved Vial; VS Sulphuric Acid Preserved Glass Bottle;

Z = Zinc acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; O = Other

URS PROJECT - CHAIN OF CUSTODY

CLIENT:	URS Australia	LABORATORY:	ALS	All results to be provided in ESDAT	FOR LABORATORY USE ONLY
ADDRESS:	Level 3, 93 Mitchell St Darwin NT 0800	ADDRESS:	2-4 Westall Road SPRINGVALE Victoria, 3171	formal. email address: darwin@urscorp.com	
PHONE NO:	08 8980 2900	PHONE NO:	03 8549 9600	ALSE Quote Number:	
FAX NO:	08 8366 1001	FAX NO:	03 8549 9601		
PROJECT NAME:	Darwin Waterfront Stage 2	PROJECT MANAGER: Tim Smith			
PROJECT NO:	42213719	SAMPLERS: Philippa Scott - 0413599470, Bek Aagaard	SIGNED: PScott		

COMMENTS: SPECIAL HANDLING/STORAGE

ANALYSIS REQUIRED

LAB ID	SITE	LOCATION	MATRIX	SAMPLE TYPE	SAMPLE ID	Date	CONTAINER TYPE AND PRESERVATIVE	FIELD FILTERED? CONTAINER TYPE?	TOTAL NUMBER OF CONTAINERS	Hold	TPH, BTEX, PAH, metals			
5			Soil		SP01_16 0706113	7/1/13			1		X			
(46)					SP01_17									
(47)					SP01_18									
6					SP01_19						X			
(48)					SP01_20									
(49)					SP01_21									
(50)					SP01_22									
(51)					SP01_23									
7					SP01_24						X			
(52)					SP01_25									
(53)					SP01_26									
8					SP01_27						X			
(54)					SP01_28									
(55)					SP01_29									
(56)					SP01_30									
									TOTAL	10	6	0	0	0

Custody Seal? Y N NA

Samples Cold? Y N NA

Comments:

RELINQUISHED BY: PScott DATE: 7/1/13 CHECKED: TIME:

RECEIVED BY: DGuil DATE: 8/1 CHECKED: TIME: 0830

CONTAINER TYPE AND PRESERVATIVE CODES

P = Natural Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Acid Rinsed Jar

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Z = Zinc acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; O = Other

URS PROJECT - CHAIN OF CUSTODY

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PHONE NO:	08 8980 2900	PHONE NO:	03 8549 9600	ALSE Quote Number:	
FAX NO:	08 8366 1001	FAX NO:	03 8549 9601		
PROJECT NAME:	Darwin Waterfront Stage 2	PROJECT MANAGER: Tim Smith			
PROJECT NO:	42213719	SAMPLERS: Philippa Scott - 0413599470, Bek Aagaard		SIGNED: PScott	

COMMENTS: SPECIAL HANDLING/STORAGE

ANALYSIS REQUIRED

LAB ID	SITE	LOCATION	MATRIX	SAMPLE TYPE	SAMPLE ID	Date	CONTAINER TYPE AND PRESERVATIVE	FIELD FILTERED? CONTAINER TYPE?	TOTAL NUMBER OF CONTAINERS	Hold	TPH, BTEX, PAH, Metals			
9			Soil		SP01-31 070113	7/1/13			1	X	X			
(57)					SP01-32					X				
(58)					SP01-33					X				
(54)					SP01-34					X				
10					SP01-35						X			
(60)					SP01-36					X				
(61)					SP01-37					X				
(62)					SP01-38					X				
(63)					SP01-39									
11					SP01-40						X			
(64)					SP01-41					X				
(65)					SP01-42					X				
(66)					SP01-43					X				
12					SP01-44						X			
(67)					SP01-45									
									TOTAL	10	4	0	0	0

Custody Seal ? Y N NA

Samples Cold ? Y N NA

Comments:

RELINQUISHED BY: P.Scott DATE: 7/1/13 CHECKED: TIME:

RECEIVED BY: DATE: 8/1 CHECKED: TIME: 0830

CONTAINER TYPE AND PRESERVATIVE CODES

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PROJECT NAME:	Darwin Waterfront Stage 2	PROJECT MANAGER: Tim Smith			
PROJECT NO:	42213719	SAMPLERS: Philippa Scott - 0413599470, Bek Aagaard		SIGNED:	

COMMENTS: SPECIAL HANDLING/STORAGE

ANALYSIS REQUIRED

LAB ID	SITE	LOCATION	MATRIX	SAMPLE TYPE	SAMPLE ID	Date	CONTAINER TYPE AND PRESERVATIVE	FIELD FILTERED? CONTAINER TYPE?	TOTAL NUMBER OF CONTAINERS	Hold	TPH, BTEX, PAH, Metals			
(61)			Soil		SP01_46 070113	7/1/13			1	X				
13					SP01_47						X			
(62)					SP01_48					X				
(38)					SP01_49					X				
(76)					SP01_50					X				
101					SP02_01						X			
(72)					SP02_02					X				
(53)					SP02_03					X				
19					SP02_04						X			
(74)					SP02_05					X				
(79)					SP02_06					X				
(78)					SP02_07					X				
16					SP02_08						X			
(50)					SP02_09					X				
(28)					SP02_16					X				
									TOTAL	16	6	0	0	0

Custody Seal ? Y N NA

Samples Cold ? Y N NA

Comments:

RELINQUISHED BY: P-Scott DATE: 7/1/13 CHECKED: TIME:

RECEIVED BY: DA..1 DATE: 8/1 CHECKED: TIME: 0830

CONTAINER TYPE AND PRESERVATIVE CODES

P = Natural Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Acid Rinsed Jar

S = Solvent Washed Acid Rinsed Glass Bottle; VC = Hydrochloric Acid Preserved Vial; VS Sulphuric Acid Preserved Glass Bottle;

Z = Zinc acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; O = Other

URS PROJECT - CHAIN OF CUSTODY

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PHONE NO:	08 8980 2900	PHONE NO:	03 8549 9600	ALSE Quote Number:	
FAX NO:	08 8366 1001	FAX NO:	03 8549 9601		
PROJECT NAME:	Darwin Waterfront Stage 2	PROJECT MANAGER: Tim Smith			
PROJECT NO:	42213719	SAMPLERS: Philippa Scott - 0413599470, Bek Aagaard		SIGNED: PScott	

COMMENTS: SPECIAL HANDLING/STORAGE

ANALYSIS REQUIRED

LAB ID	SITE	LOCATION	MATRIX	SAMPLE TYPE	SAMPLE ID	Date	CONTAINER TYPE AND PRESERVATIVE	FIELD FILTERED? CONTAINER TYPE?	TOTAL NUMBER OF CONTAINERS	Hold	TPH, BTEX, PAH, Metals			
79			Soil	SPOZ-FT	SP02-11 070113	7/1/13			1					
17					SP02-12						X			
80					SP02-13									
81					SP02-14									
18					SP02-15						X			
82					SP02-16									
17					SP02-17									
84					SP02-18									
85					SP02-19									
19					SP02-20						X			
86					SP02-21									
87					SP02-22									
88					SP02-23									
20					SP02-24						X			
89					SP025									
									TOTAL	10	04	0	0	0

Custody Seal? Y N NA

Samples Cold? Y N NA

Comments:

RELINQUISHED BY: PScott DATE: 7/1/13 TIME:

RECEIVED BY: DATE: 8/1 TIME: 0830

CHECKED:

CHECKED:

CONTAINER TYPE AND PRESERVATIVE CODES

P = Natural Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Acid Rinsed Jar

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PHONE NO:	08 8980 2900	PHONE NO:	03 8549 9600	ALSE Quote Number:	
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PROJECT NAME:	Darwin Waterfront Stage 2	PROJECT MANAGER: Tim Smith			
PROJECT NO:	42213719	SAMPLERS: Philippa Scott - 0413599470, Bek Aagaard		SIGNED: PScott	

COMMENTS: SPECIAL HANDLING/STORAGE

ANALYSIS REQUIRED

LAB ID	SITE	LOCATION	MATRIX	SAMPLE TYPE	SAMPLE ID	Date	CONTAINER TYPE AND PRESERVATIVE	FIELD FILTERED? CONTAINER TYPE?	TOTAL NUMBER OF CONTAINERS	TPH, BTEX, PAH, Metals	Hg(r)				
21			Soil		SP02-26 070113	7/1/13			1	X					
99					SP02_27						X				
91					SP02_28						X				
83					SP02_30						X				
49					SP02_29						X				
22					SP02_31					X					
69					SP02_32						X				
45					SP02_33						X				
90					SP02_34						X				
67					SP02_35						X				
23					SP02_36					X					
42					SP02_37						X				
69					SP02_38						X				
100					SP02_39						X				
24					SP02_40					X					
									TOTAL	0	0	0	0	0	0

Custody Seal ? Y N NA

Samples Cold ? Y N NA

Comments:

RELINQUISHED BY: P.Scott DATE: 7/1/13 CHECKED: TIME:

RECEIVED BY: Dayi DATE: 8/1 CHECKED: TIME: 0830

CONTAINER TYPE AND PRESERVATIVE CODES

P = Natural Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Acid Rinsed Jar

S = Solvent Washed Acid Rinsed Glass Bottle; VC = Hydrochloric Acid Preserved Vial; VS Sulphuric Acid Preserved Glass Bottle;

Z = Zinc acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; O = Other

URS PROJECT - CHAIN OF CUSTODY

CLIENT:	URS Australia	LABORATORY:	ALS	All results to be provided in ESDAT	FOR LABORATORY USE ONLY
ADDRESS:	Level 3, 93 Mitchell St Darwin NT 0800	ADDRESS:	2-4 Westall Road SPRINGVALE Victoria, 3171	format. email address: darwin@urscorp.com	
PHONE NO:	08 8980 2900	PHONE NO:	03 8549 9600	ALSE Quote Number:	
FAX NO:	08 8366 1001	FAX NO:	03 8549 9601		
PROJECT NAME:	Darwin Waterfront Stage 2	PROJECT MANAGER: Tim Smith			
PROJECT NO:	42213719	SAMPLERS: Philippa Scott - 0413599470, Bek Aagaard	SIGNED: PScott		

COMMENTS: SPECIAL HANDLING/STORAGE

ANALYSIS REQUIRED

LAB ID	SITE	LOCATION	MATRIX	SAMPLE TYPE	SAMPLE ID	Date	CONTAINER TYPE AND PRESERVATIVE	FIELD FILTERED? CONTAINER TYPE?	TOTAL NUMBER OF CONTAINERS	TPH, BTEX, PAH, metals	HOLD				
28			Soil		SP02_41 G0113	7/1/13			1	X					
10					SP02_42						X				
102					SP02_43						X				
101					SP02_44						X				
104					SP02_45						X				
26					SP02_46					X					
103					SP02_47						X				
108					SP02_48						X				
107					SP02_49						X				
27					SP02_50					X					
106					SP02_51						X				
109					SP02_52						X				
28					SP02_53					X					
110					SP02_54						X				
111					SP02_55						X				
									TOTAL	0	0	0	0	0	

Custody Seal ? Y N NA

Samples Cold ? Y N NA

Comments:

RELINQUISHED BY: P-Scott DATE: 7/1/13 CHECKED: TIME:

RECEIVED BY: David DATE: 8/1 CHECKED: TIME: 0830

CONTAINER TYPE AND PRESERVATIVE CODES

P = Natural Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Acid Rinsed Jar

S = Solvent Washed Acid Rinsed Glass Bottle; VC = Hydrochloric Acid Preserved Vial; VS Sulphuric Acid Preserved Glass Bottle;

Z = Zinc acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; O = Other

URS PROJECT - CHAIN OF CUSTODY

CLIENT:	URS Australia	LABORATORY:	ALS	All results to be provided in ESDAT format.	FOR LABORATORY USE ONLY
ADDRESS:	Level 3, 93 Mitchell St Darwin NT 0800	ADDRESS:	2-4 Westall Road SPRINGVALE Victoria, 3171	email address: darwin@urscorp.com	
PHONE NO:	08 8980 2900	PHONE NO:	03 8549 9600	ALSE Quote Number:	
FAX NO:	08 8366 1001	FAX NO:	03 8549 9601		
PROJECT NAME:	Darwin Waterfront Stage 2	PROJECT MANAGER: Tim Smith			
PROJECT NO:	42213719	SAMPLERS: Philippa Scott - 0413599470, Bek Aagaard	SIGNED:		

COMMENTS: SPECIAL HANDLING/STORAGE

ANALYSIS REQUIRED

LAB ID	SITE	LOCATION	MATRIX	SAMPLE TYPE	SAMPLE ID	Date	CONTAINER TYPE AND PRESERVATIVE	FIELD FILTERED? CONTAINER TYPE?	TOTAL NUMBER OF CONTAINERS	TPH, BTEX, PAH, metals	hold			
29			Soil		SP02-S6 - 070113	7/1/13			1	X				
(112)					SP02-S7						X			
(113)					SP02-S8						X			
(114)					SP02-S9						X			
30					SP02-60					X				
(115)					SP02-61						X			
(116)					SP02-62						X			
(117)					SP02-63						X			
31					SP02-64					X				
(118)					SP02-65						X			
(119)					SP02-66						X			
(120)					SP02-67						X			
32					SP02-68					X				
(121)					SP02-69						X			
(122)					SP02-70						X			
									TOTAL	4	16	0	0	0

Custody Seal ? Y N NA

Samples Cold ? Y N NA

Comments:

RELINQUISHED BY: P-Scott DATE: 7/1/13 CHECKED: TIME:

RECEIVED BY: DG DATE: 8/1 CHECKED: TIME: 0830

CONTAINER TYPE AND PRESERVATIVE CODES

P = Natural Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Acid Rinsed Jar

S = Solvent Washed Acid Rinsed Glass Bottle; VC = Hydrochloric Acid Preserved Vial; VS Sulphuric Acid Preserved Glass Bottle;

Z = Zinc acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; O = Other

URS PROJECT - CHAIN OF CUSTODY

CLIENT:	URS Australia	LABORATORY:	ALS	All results to be provided in ESDAT format.	FOR LABORATORY USE ONLY
ADDRESS:	Level 3, 93 Mitchell St Darwin NT 0800	ADDRESS:	2-4 Westall Road SPRINGVALE Victoria, 3171	email address: darwin@urscorp.com philippa.scott@urs.com	
PHONE NO:	08 8980 2900	PHONE NO:	03 8549 9600	ALSE Quote Number:	
FAX NO:	08 8366 1001	FAX NO:	03 8549 9601		
PROJECT NAME:	Darwin Waterfront Stage 2	PROJECT MANAGER: Tim Smith			
PROJECT NO:	42213719	SAMPLERS: Philippa Scott - 0413599470, Bek Aagaard	SIGNED:		

COMMENTS: SPECIAL HANDLING/STORAGE

Please send DUP02 & DUP04 to envirolab.

ANALYSIS REQUIRED

LAB ID	SITE	LOCATION	MATRIX	SAMPLE TYPE	SAMPLE ID		Date	CONTAINER TYPE AND PRESERVATIVE	FIELD FILTERED? CONTAINER TYPE?	TOTAL NUMBER OF CONTAINERS	TPH, BTEX, PAH, metals	Hold			
33			Soil		DUP01	070113	7/1/13				X				
—					DUP02						X				
34					DUP03						X				
—					DUP04						X				
123					DUP05							X			
124					DUP06							X			
125					DUP07							X			
										TOTAL	4	0	0	0	0

Custody Seal ? Y N NA

Samples Cold ? Y N NA

Comments:

RELINQUISHED BY: P Scott DATE: 7/1/13 CHECKED: TIME:

RECEIVED BY: DATE: 8/1 CHECKED: TIME: 0830

CONTAINER TYPE AND PRESERVATIVE CODES

P = Natural Plastic; N = Nitric Acid Preserved; C = Sodium Hydroxide Preserved; J = Solvent Washed Acid Rinsed Jar

S = Solvent Washed Acid Rinsed Glass Bottle; VC = Hydrochloric Acid Preserved Vial; VS Sulphuric Acid Preserved Glass Bottle;

Z = Zinc acetate Preserved Bottle; E = EDTA Preserved Bottle; ST = Sterile Bottle; O = Other

Environmental Division

SAMPLE RECEIPT NOTIFICATION (SRN)

Comprehensive Report

Work Order	: **ES1300228**		
Client	: **URS AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR TIM SMITH	Contact	: Client Services
Address	: G P O BOX 2005 DARWIN NT, AUSTRALIA 0801	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: tim.smith@urs.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 89802900	Telephone	: +61-2-8784 8555
Facsimile	: +61 89413920	Facsimile	: +61-2-8784 8500
Project	: 42213719 DARWIN WATERFRONT STAGE 2	Page	: 1 of 6
Order number	: ----		
C-O-C number	: ----	Quote number	: ES2012URSNT0270 (EN/001/12)
Site	: ----		
Sampler	: P.SCOTT	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement

Dates

Date Samples Received	: 08-JAN-2013	Issue Date	: 09-JAN-2013 18:17
Client Requested Due Date	: 15-JAN-2013	Scheduled Reporting Date	: **15-JAN-2013**

Delivery Details

Mode of Delivery	: Carrier	Temperature	: 2.6'C - Ice present
No. of coolers/boxes	: 3 HARD	No. of samples received	: 123
Security Seal	: Intact.	No. of samples analysed	: 54

General Comments

- This report contains the following information:
  - Sample Container(s)/Preservation Non-Compliances
  - Summary of Sample(s) and Requested Analysis
  - Proactive Holding Time Report
  - Requested Deliverables
- **Samples received in appropriately pretreated and preserved containers.**
- **Please refer to the Proactive Holding Time Report table below which summarises breaches of recommended holding times that have occurred prior to samples/instructions being received at the laboratory. The absence of this summary table indicates that all samples have been received within the recommended holding times for the analysis requested.**
- **Sample(s) requiring volatile organic compound analysis received in airtight containers (ZHE).**
- **Sample DUP02 and DUP04 sent to Envirolab as per COC**
- Please direct any queries you have regarding this work order to the above ALS laboratory contact.
- Analytical work for this work order will be conducted at ALS Sydney.
- Sample Disposal - Aqueous (14 days), Solid (60 days) from date of completion of work order.

Sample Container(s)/Preservation Non-Compliances

All comparisons are made against pretreatment/preservation AS, APHA, USEPA standards.

- **No sample container / preservation non-compliance exist.**

Summary of Sample(s) and Requested Analysis

Some items described below may be part of a laboratory process neccessary for the execution of client requested tasks. Packages may contain additional analyses, such as the determination of moisture content and preparation tasks, that are included in the package.
If no sampling time is provided, the sampling time will default to 15:00 on the date of sampling. If no sampling date is provided, the sampling date will be assumed by the laboratory for processing purposes and will be shown bracketed without a time component.

Matrix: **SOIL**

Laboratory sample ID	Client sampling date / time	Client sample ID	(On Hold) SOIL No analysis requested	SOIL - EA002 pH (1:5)	SOIL - P-13/1 (ES) NEPM Table 5A (Sydney Lab)	SOIL - S-26 8 metals/TPH/BTEX/PAH
ES1300228-001	07-JAN-2013 15:00	SP01-01 - 070113		✓		✓
ES1300228-002	07-JAN-2013 15:00	SP01-07 - 070113		✓		✓
ES1300228-003	07-JAN-2013 15:00	SP01-11 - 070113		✓		✓
ES1300228-004	07-JAN-2013 15:00	SP01-15 - 070113		✓		✓
ES1300228-005	07-JAN-2013 15:00	SP01-16 - 070113		✓		✓
ES1300228-006	07-JAN-2013 15:00	SP01-19 - 070113		✓		✓
ES1300228-007	07-JAN-2013 15:00	SP01-24 - 070113		✓		✓
ES1300228-008	07-JAN-2013 15:00	SP01-27 - 070113		✓		✓
ES1300228-009	07-JAN-2013 15:00	SP01-31 - 070113		✓		✓
ES1300228-010	07-JAN-2013 15:00	SP01-35 - 070113		✓		✓
ES1300228-011	07-JAN-2013 15:00	SP01-40 - 070113		✓		✓
ES1300228-012	07-JAN-2013 15:00	SP01-44 - 070113		✓		✓
ES1300228-013	07-JAN-2013 15:00	SP01-47 - 070113		✓		✓
ES1300228-014	07-JAN-2013 15:00	SP02-01 - 070113		✓		✓
ES1300228-015	07-JAN-2013 15:00	SP02-04 - 070113		✓		✓
ES1300228-016	07-JAN-2013 15:00	SP02-08 - 070113		✓		✓
ES1300228-017	07-JAN-2013 15:00	SP02-12 - 070113		✓		✓
ES1300228-018	07-JAN-2013 15:00	SP02-15 - 070113		✓		✓
ES1300228-019	07-JAN-2013 15:00	SP02-20 - 070113		✓		✓
ES1300228-020	07-JAN-2013 15:00	SP02-24 - 070113		✓		✓
ES1300228-021	07-JAN-2013 15:00	SP02-26 - 070113		✓		✓
ES1300228-022	07-JAN-2013 15:00	SP02-31 - 070113		✓		✓
ES1300228-023	07-JAN-2013 15:00	SP02-36 - 070113		✓		✓
ES1300228-024	07-JAN-2013 15:00	SP02-40 - 070113		✓		✓
ES1300228-025	07-JAN-2013 15:00	SP02-41 - 070113		✓		✓
ES1300228-026	07-JAN-2013 15:00	SP02-46 - 070113		✓		✓
ES1300228-027	07-JAN-2013 15:00	SP02-50 - 070113		✓		✓
ES1300228-028	07-JAN-2013 15:00	SP02-53 - 070113		✓		✓
ES1300228-029	07-JAN-2013 15:00	SP02-56 - 070113		✓		✓
ES1300228-030	07-JAN-2013 15:00	SP02-60 - 070113		✓		✓
ES1300228-031	07-JAN-2013 15:00	SP02-64 - 070113		✓		✓
ES1300228-032	07-JAN-2013 15:00	SP02-68 - 070113		✓		✓
ES1300228-033	07-JAN-2013 15:00	DUP01 - 070113		✓		✓
ES1300228-034	07-JAN-2013 15:00	DUP03 - 070113		✓		✓
ES1300228-035	07-JAN-2013 15:00	SP01-02 - 070113		✓	✓	

			(On Hold) SOIL No analysis requested	SOIL - EA002 pH (1:5)	SOIL - P-13/1 (ES) NEPM Table 5A (Sydney Lab)	SOIL - S-26 8 metals/TPH/BTEX/PAH
ES1300228-036	07-JAN-2013 15:00	SP01-03 - 070113	✓			
ES1300228-037	07-JAN-2013 15:00	SP01-04 - 070113	✓			
ES1300228-038	07-JAN-2013 15:00	SP01-05 - 070113	✓			
ES1300228-039	07-JAN-2013 15:00	SP01-06 - 070113	✓			
ES1300228-040	07-JAN-2013 15:00	SP01-08 - 070113		✓	✓	
ES1300228-041	07-JAN-2013 15:00	SP01-09 - 070113	✓			
ES1300228-042	07-JAN-2013 15:00	SP01-10 - 070113	✓			
ES1300228-043	07-JAN-2013 15:00	SP01-12 - 070113	✓			
ES1300228-044	07-JAN-2013 15:00	SP01-13 - 070113	✓			
ES1300228-045	07-JAN-2013 15:00	SP01-14 - 070113		✓	✓	
ES1300228-046	07-JAN-2013 15:00	SP01-17 - 070113	✓			
ES1300228-047	07-JAN-2013 15:00	SP01-18 - 070113	✓			
ES1300228-048	07-JAN-2013 15:00	SP01-20 - 070113		✓	✓	
ES1300228-049	07-JAN-2013 15:00	SP01-21 - 070113	✓			
ES1300228-050	07-JAN-2013 15:00	SP01-22 - 070113	✓			
ES1300228-051	07-JAN-2013 15:00	SP01-23 - 070113	✓			
ES1300228-052	07-JAN-2013 15:00	SP01-25 - 070113	✓			
ES1300228-053	07-JAN-2013 15:00	SP01-26 - 070113		✓	✓	
ES1300228-054	07-JAN-2013 15:00	SP01-28 - 070113	✓			
ES1300228-055	07-JAN-2013 15:00	SP01-29 - 070113	✓			
ES1300228-056	07-JAN-2013 15:00	SP01-30 - 070113	✓			
ES1300228-057	07-JAN-2013 15:00	SP01-32 - 070113		✓	✓	
ES1300228-058	07-JAN-2013 15:00	SP01-33 - 070113	✓			
ES1300228-059	07-JAN-2013 15:00	SP01-36 - 070113	✓			
ES1300228-060	07-JAN-2013 15:00	SP01-37 - 070113	✓			
ES1300228-061	07-JAN-2013 15:00	SP01-38 - 070113		✓	✓	
ES1300228-062	07-JAN-2013 15:00	SP01-39 - 070113	✓			
ES1300228-063	07-JAN-2013 15:00	SP01-41 - 070113	✓			
ES1300228-064	07-JAN-2013 15:00	SP01-43 - 070113	✓			
ES1300228-065	07-JAN-2013 15:00	SP01-45 - 070113		✓	✓	
ES1300228-066	07-JAN-2013 15:00	SP01-46 - 070113	✓			
ES1300228-067	07-JAN-2013 15:00	SP01-48 - 070113	✓			
ES1300228-068	07-JAN-2013 15:00	SP01-49 - 070113	✓			
ES1300228-069	07-JAN-2013 15:00	SP01-50 - 070113	✓			
ES1300228-070	07-JAN-2013 15:00	SP02-02 - 070113	✓			
ES1300228-071	07-JAN-2013 15:00	SP02-03 - 070113		✓	✓	
ES1300228-072	07-JAN-2013 15:00	SP02-05 - 070113	✓			
ES1300228-073	07-JAN-2013 15:00	SP02-06 - 070113	✓			
ES1300228-074	07-JAN-2013 15:00	SP02-07 - 070113	✓			
ES1300228-075	07-JAN-2013 15:00	SP02-09 - 070113	✓			
ES1300228-076	07-JAN-2013 15:00	SP02-10 - 070113		✓	✓	

			(On Hold) SOIL No analysis requested	SOIL - EA002 pH (1:5)	SOIL - P-13/1 (ES) NEPM Table 5A (Sydney Lab)	SOIL - S-26 8 metals/TPH/BTEX/PAH
ES1300228-077	07-JAN-2013 15:00	SP02-11 - 070113	✓			
ES1300228-078	07-JAN-2013 15:00	SP02-13 - 070113	✓			
ES1300228-079	07-JAN-2013 15:00	SP02-14 - 070113	✓			
ES1300228-080	07-JAN-2013 15:00	SP02-16 - 070113		✓	✓	
ES1300228-081	07-JAN-2013 15:00	SP02-17 - 070113	✓			
ES1300228-082	07-JAN-2013 15:00	SP02-18 - 070113	✓			
ES1300228-083	07-JAN-2013 15:00	SP02-19 - 070113	✓			
ES1300228-084	07-JAN-2013 15:00	SP02-21 - 070113	✓			
ES1300228-085	07-JAN-2013 15:00	SP02-22 - 070113		✓	✓	
ES1300228-086	07-JAN-2013 15:00	SP02-23 - 070113	✓			
ES1300228-087	07-JAN-2013 15:00	SP02-25 - 070113	✓			
ES1300228-088	07-JAN-2013 15:00	SP02-27 - 070113	✓			
ES1300228-089	07-JAN-2013 15:00	SP02-28 - 070113		✓	✓	
ES1300228-090	07-JAN-2013 15:00	SP02-30 - 070113	✓			
ES1300228-091	07-JAN-2013 15:00	SP02-29 - 070113	✓			
ES1300228-092	07-JAN-2013 15:00	SP02-32 - 070113	✓			
ES1300228-093	07-JAN-2013 15:00	SP02-33 - 070113	✓			
ES1300228-094	07-JAN-2013 15:00	SP02-34 - 070113		✓	✓	
ES1300228-095	07-JAN-2013 15:00	SP02-35 - 070113	✓			
ES1300228-096	07-JAN-2013 15:00	SP02-37 - 070113	✓			
ES1300228-097	07-JAN-2013 15:00	SP02-38 - 070113	✓			
ES1300228-098	07-JAN-2013 15:00	SP02-39 - 070113		✓	✓	
ES1300228-099	07-JAN-2013 15:00	SP02-42 - 070113	✓			
ES1300228-100	07-JAN-2013 15:00	SP02-43 - 070113	✓			
ES1300228-101	07-JAN-2013 15:00	SP02-44 - 070113	✓			
ES1300228-102	07-JAN-2013 15:00	SP02-45 - 070113	✓			
ES1300228-103	07-JAN-2013 15:00	SP02-47 - 070113		✓	✓	
ES1300228-104	07-JAN-2013 15:00	SP02-48 - 070113	✓			
ES1300228-105	07-JAN-2013 15:00	SP02-49 - 070113	✓			
ES1300228-106	07-JAN-2013 15:00	SP02-51 - 070113	✓			
ES1300228-107	07-JAN-2013 15:00	SP02-52 - 070113		✓	✓	
ES1300228-108	07-JAN-2013 15:00	SP02-54 - 070113	✓			
ES1300228-109	07-JAN-2013 15:00	SP02-55 - 070113	✓			
ES1300228-110	07-JAN-2013 15:00	SP02-57 - 070113	✓			
ES1300228-111	07-JAN-2013 15:00	SP02-58 - 070113		✓	✓	
ES1300228-112	07-JAN-2013 15:00	SP02-59 - 070113	✓			
ES1300228-113	07-JAN-2013 15:00	SP02-61 - 070113	✓			
ES1300228-114	07-JAN-2013 15:00	SP02-62 - 070113	✓			
ES1300228-115	07-JAN-2013 15:00	SP02-63 - 070113		✓	✓	
ES1300228-116	07-JAN-2013 15:00	SP02-65 - 070113	✓			
ES1300228-117	07-JAN-2013 15:00	SP02-66 - 070113	✓			

			(On Hold) SOIL No analysis requested	SOIL - EA002 pH (1:5)	SOIL - P-13/1 (ES) NEPM Table 5A (Sydney Lab)	SOIL - S-26 8 metals/TPH/BTEX/PAH
ES1300228-118	07-JAN-2013 15:00	SP02-67 - 070113	✓			
ES1300228-119	07-JAN-2013 15:00	SP02-69 - 070113	✓			
ES1300228-120	07-JAN-2013 15:00	SP02-70 - 070113		✓	✓	
ES1300228-121	07-JAN-2013 15:00	DUP05 - 070113	✓			
ES1300228-122	07-JAN-2013 15:00	DUP06 - 070113	✓			
ES1300228-123	07-JAN-2013 15:00	DUP07 - 070113	✓			

Proactive Holding Time Report

Sample(s) have been received within the recommended holding times for the requested analysis.

Requested Deliverables

ALL ACCOUNTS PAYABLE		
- A4 - AU Tax Invoice (INV)	Email	Adelaide_Accounts@urscorp.com
DARWIN CORP		
- *AU Certificate of Analysis - NATA	Email	darwin@urscorp.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep)	Email	darwin@urscorp.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA	Email	darwin@urscorp.com
- A4 - AU Sample Receipt Notification - Environmental HT	Email	darwin@urscorp.com
- A4 - AU Tax Invoice	Email	darwin@urscorp.com
- Chain of Custody (CoC)	Email	darwin@urscorp.com
- EDI Format - ENMRG	Email	darwin@urscorp.com
- EDI Format - EQUIS V5 URS	Email	darwin@urscorp.com
- EDI Format - ESDAT	Email	darwin@urscorp.com
- EDI Format - MRED	Email	darwin@urscorp.com
MR TIM SMITH		
- *AU Certificate of Analysis - NATA (COA)	Email	tim.smith@urs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	tim.smith@urs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	tim.smith@urs.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	tim.smith@urs.com
- A4 - AU Tax Invoice (INV)	Email	tim.smith@urs.com
- Chain of Custody (CoC) (COC)	Email	tim.smith@urs.com
- EDI Format - ENMRG (ENMRG)	Email	tim.smith@urs.com
- EDI Format - EQUIS V5 URS (EQUIS_V5_URS)	Email	tim.smith@urs.com
- EDI Format - ESDAT (ESDAT)	Email	tim.smith@urs.com
- EDI Format - MRED (MRED)	Email	tim.smith@urs.com
PHILIPA SCOTT		
- *AU Certificate of Analysis - NATA	Email	philippa.scott@urs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep)	Email	philippa.scott@urs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA	Email	philippa.scott@urs.com
- A4 - AU Sample Receipt Notification - Environmental HT	Email	philippa.scott@urs.com
- A4 - AU Tax Invoice	Email	philippa.scott@urs.com
- Chain of Custody (CoC)	Email	philippa.scott@urs.com
- EDI Format - ENMRG	Email	philippa.scott@urs.com
- EDI Format - EQUIS V5 URS	Email	philippa.scott@urs.com
- EDI Format - ESDAT	Email	philippa.scott@urs.com
- EDI Format - MRED	Email	philippa.scott@urs.com
RESULTS ADDRESS		
- *AU Certificate of Analysis - NATA (COA)	Email	darwin@urs.com
- *AU Interpretive QC Report - DEFAULT (Anon QCI Rep) (QCI)	Email	darwin@urs.com
- *AU QC Report - DEFAULT (Anon QC Rep) - NATA (QC)	Email	darwin@urs.com
- A4 - AU Sample Receipt Notification - Environmental HT (SRN)	Email	darwin@urs.com
- A4 - AU Tax Invoice (INV)	Email	darwin@urs.com
- Chain of Custody (CoC) (COC)	Email	darwin@urs.com
- EDI Format - ENMRG (ENMRG)	Email	darwin@urs.com
- EDI Format - EQUIS V5 URS (EQUIS_V5_URS)	Email	darwin@urs.com
- EDI Format - ESDAT (ESDAT)	Email	darwin@urs.com
- EDI Format - MRED (MRED)	Email	darwin@urs.com

Environmental Division

CERTIFICATE OF ANALYSIS

Work Order	: **ES1300228**	Page	: 1 of 41
Client	: **URS AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR TIM SMITH	Contact	: Client Services
Address	: G P O BOX 2005 DARWIN NT, AUSTRALIA 0801	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: tim.smith@urs.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 89802900	Telephone	: +61-2-8784 8555
Facsimile	: +61 89413920	Facsimile	: +61-2-8784 8500
Project	: 42213719 DARWIN WATERFRONT STAGE 2	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Order number	: ----		
C-O-C number	: ----	Date Samples Received	: 08-JAN-2013
Sampler	: P.SCOTT	Issue Date	: 15-JAN-2013
Site	: ----		
		No. of samples received	: 123
Quote number	: EN/001/12	No. of samples analysed	: 54

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Certificate of Analysis contains the following information:

- General Comments
- Analytical Results
- Surrogate Control Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Evie.Sidarta	Inorganic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Sarah Millington	Senior Inorganic Chemist	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

When sampling time information is not provided by the client, sampling dates are shown without a time component. In these instances, the time component has been assumed by the laboratory for processing purposes.

Key : CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
^ = This result is computed from individual analyte detections at or above the level of reporting

- **EG005: Poor precision was obtained for Manganese on sample ES1300228#31due to sample heterogeneity. Results have been confirmed by re-extraction and reanalysis.**
- **EP068: Pozitive results on sample SP01-08-070113 confirmed by re-extraction and re-analysis.**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-01 - 070113	SP01-07 - 070113	SP01-11 - 070113	SP01-15 - 070113	SP01-16 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-001	ES1300228-002	ES1300228-003	ES1300228-004	ES1300228-005
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		8.2	8.5	7.8	8.4	8.4
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		10.5	12.6	8.2	14.0	13.6
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		8	9	9	9	6
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		61	42	74	50	30
Copper	7440-50-8	5	mg/kg		20	160	42	38	52
Lead	7439-92-1	5	mg/kg		35	39	16	29	52
Nickel	7440-02-0	2	mg/kg		6	6	3	5	5
Zinc	7440-66-6	5	mg/kg		75	80	27	197	72
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-01 - 070113	SP01-07 - 070113	SP01-11 - 070113	SP01-15 - 070113	SP01-16 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-001	ES1300228-002	ES1300228-003	ES1300228-004	ES1300228-005
EP080/071: Total Petroleum Hydrocarbons - Continued									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN									
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**106**	**101**	**101**	**101**	**101**
2-Chlorophenol-D4	93951-73-6	0.1	%		**101**	**96.8**	**99.3**	**99.4**	**98.9**
2.4.6-Tribromophenol	118-79-6	0.1	%		**77.4**	**82.1**	**86.8**	**79.0**	**82.8**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**98.4**	**98.0**	**97.5**	**97.0**	**99.5**
Anthracene-d10	1719-06-8	0.1	%		**91.9**	**93.0**	**91.1**	**90.2**	**93.0**
4-Terphenyl-d14	1718-51-0	0.1	%		**93.3**	**93.5**	**92.3**	**91.9**	**94.6**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**98.8**	**106**	**106**	**104**	**108**
Toluene-D8	2037-26-5	0.1	%		**108**	**111**	**113**	**111**	**111**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP01-01 - 070113	SP01-07 - 070113	SP01-11 - 070113	SP01-15 - 070113	SP01-16 - 070113
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
Compound	CAS Number	LOR	Unit	ES1300228-001	ES1300228-002	ES1300228-003	ES1300228-004	ES1300228-005
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.1	%	118	120	122	118	107

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-19 - 070113	SP01-24 - 070113	SP01-27 - 070113	SP01-31 - 070113	SP01-35 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-006	ES1300228-007	ES1300228-008	ES1300228-009	ES1300228-010
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		8.2	8.3	8.3	8.5	8.6
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		11.6	21.1	8.6	15.0	11.9
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		10	7	8	<5	6
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		58	72	69	22	38
Copper	7440-50-8	5	mg/kg		15	48	29	18	20
Lead	7439-92-1	5	mg/kg		26	31	21	20	29
Nickel	7440-02-0	2	mg/kg		5	10	4	4	17
Zinc	7440-66-6	5	mg/kg		49	93	31	44	63
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-19 - 070113	SP01-24 - 070113	SP01-27 - 070113	SP01-31 - 070113	SP01-35 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-006	ES1300228-007	ES1300228-008	ES1300228-009	ES1300228-010
EP080/071: Total Petroleum Hydrocarbons - Continued									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN									
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**98.6**	**100**	**98.4**	**96.6**	**102**
2-Chlorophenol-D4	93951-73-6	0.1	%		**95.8**	**97.9**	**97.0**	**94.2**	**102**
2.4.6-Tribromophenol	118-79-6	0.1	%		**81.4**	**81.3**	**80.4**	**80.6**	**86.4**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**95.5**	**97.6**	**94.0**	**94.6**	**101**
Anthracene-d10	1719-06-8	0.1	%		**88.9**	**90.9**	**88.1**	**88.7**	**93.3**
4-Terphenyl-d14	1718-51-0	0.1	%		**90.7**	**92.2**	**89.5**	**90.3**	**95.2**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**107**	**103**	**113**	**111**	**109**
Toluene-D8	2037-26-5	0.1	%		**107**	**104**	**120**	**116**	**111**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP01-19 - 070113	SP01-24 - 070113	SP01-27 - 070113	SP01-31 - 070113	SP01-35 - 070113
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
Compound	CAS Number	LOR	Unit	ES1300228-006	ES1300228-007	ES1300228-008	ES1300228-009	ES1300228-010
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.1	%	115	113	115	125	114

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-40 - 070113	SP01-44 - 070113	SP01-47 - 070113	SP02-01 - 070113	SP02-04 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-011	ES1300228-012	ES1300228-013	ES1300228-014	ES1300228-015
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		8.4	8.4	8.4	8.6	8.4
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		10.8	9.8	9.2	12.2	13.7
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		6	8	8	6	6
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		33	42	61	43	73
Copper	7440-50-8	5	mg/kg		22	19	46	11	39
Lead	7439-92-1	5	mg/kg		20	20	51	19	15
Nickel	7440-02-0	2	mg/kg		4	5	5	4	6
Zinc	7440-66-6	5	mg/kg		32	45	118	58	29
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-40 - 070113	SP01-44 - 070113	SP01-47 - 070113	SP02-01 - 070113	SP02-04 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-011	ES1300228-012	ES1300228-013	ES1300228-014	ES1300228-015
EP080/071: Total Petroleum Hydrocarbons - Continued									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN									
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**97.5**	**102**	**99.5**	**98.3**	**96.6**
2-Chlorophenol-D4	93951-73-6	0.1	%		**96.6**	**101**	**98.4**	**96.2**	**94.5**
2.4.6-Tribromophenol	118-79-6	0.1	%		**79.2**	**85.0**	**83.1**	**82.9**	**77.6**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**94.4**	**99.8**	**98.0**	**97.6**	**94.3**
Anthracene-d10	1719-06-8	0.1	%		**88.3**	**91.9**	**90.8**	**91.4**	**87.8**
4-Terphenyl-d14	1718-51-0	0.1	%		**89.9**	**93.2**	**91.8**	**92.8**	**88.5**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**109**	**112**	**119**	**115**	**104**
Toluene-D8	2037-26-5	0.1	%		**113**	**115**	**118**	**113**	**108**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP01-40 - 070113	SP01-44 - 070113	SP01-47 - 070113	SP02-01 - 070113	SP02-04 - 070113
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
Compound	CAS Number	LOR	Unit	ES1300228-011	ES1300228-012	ES1300228-013	ES1300228-014	ES1300228-015
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.1	%	119	121	111	122	114

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-08 - 070113	SP02-12 - 070113	SP02-15 - 070113	SP02-20 - 070113	SP02-24 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-016	ES1300228-017	ES1300228-018	ES1300228-019	ES1300228-020
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		7.6	6.2	6.0	6.5	8.3
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		14.9	14.5	16.5	14.6	20.6
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	<5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		37	31	49	31	36
Copper	7440-50-8	5	mg/kg		20	12	12	9	36
Lead	7439-92-1	5	mg/kg		10	6	<5	6	14
Nickel	7440-02-0	2	mg/kg		5	7	6	4	5
Zinc	7440-66-6	5	mg/kg		16	49	29	13	29
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-08 - 070113	SP02-12 - 070113	SP02-15 - 070113	SP02-20 - 070113	SP02-24 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-016	ES1300228-017	ES1300228-018	ES1300228-019	ES1300228-020
EP080/071: Total Petroleum Hydrocarbons - Continued									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN									
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**99.9**	**100**	**98.3**	**100**	**96.8**
2-Chlorophenol-D4	93951-73-6	0.1	%		**98.3**	**98.6**	**98.2**	**99.2**	**94.5**
2.4.6-Tribromophenol	118-79-6	0.1	%		**84.8**	**81.9**	**82.0**	**83.2**	**81.7**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**98.5**	**98.2**	**98.3**	**98.8**	**98.0**
Anthracene-d10	1719-06-8	0.1	%		**92.7**	**91.0**	**91.1**	**92.5**	**91.4**
4-Terphenyl-d14	1718-51-0	0.1	%		**93.8**	**92.9**	**92.9**	**92.8**	**93.0**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**108**	**109**	**107**	**104**	**103**
Toluene-D8	2037-26-5	0.1	%		**111**	**112**	**107**	**114**	**111**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP02-08 - 070113	SP02-12 - 070113	SP02-15 - 070113	SP02-20 - 070113	SP02-24 - 070113
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
Compound	CAS Number	LOR	Unit	ES1300228-016	ES1300228-017	ES1300228-018	ES1300228-019	ES1300228-020
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.1	%	112	112	114	107	106

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-26 - 070113	SP02-31 - 070113	SP02-36 - 070113	SP02-40 - 070113	SP02-41 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-021	ES1300228-022	ES1300228-023	ES1300228-024	ES1300228-025
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		8.3	8.4	8.3	7.5	7.0
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		15.9	15.9	24.1	21.6	18.5
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	5
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		36	48	18	26	72
Copper	7440-50-8	5	mg/kg		23	14	15	14	19
Lead	7439-92-1	5	mg/kg		5	12	7	6	7
Nickel	7440-02-0	2	mg/kg		5	4	7	4	4
Zinc	7440-66-6	5	mg/kg		16	35	14	13	10
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-26 - 070113	SP02-31 - 070113	SP02-36 - 070113	SP02-40 - 070113	SP02-41 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-021	ES1300228-022	ES1300228-023	ES1300228-024	ES1300228-025
EP080/071: Total Petroleum Hydrocarbons - Continued									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN									
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		**85.1**	**85.8**	**89.0**	**90.9**	**92.5**
2-Chlorophenol-D4	93951-73-6	0.1	%		**80.2**	**77.0**	**83.2**	**85.0**	**84.6**
2.4.6-Tribromophenol	118-79-6	0.1	%		**87.2**	**91.4**	**88.7**	**96.4**	**103**
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		**93.8**	**96.4**	**97.6**	**98.5**	**103**
Anthracene-d10	1719-06-8	0.1	%		**85.1**	**89.5**	**89.0**	**91.0**	**97.8**
4-Terphenyl-d14	1718-51-0	0.1	%		**92.2**	**96.9**	**96.0**	**97.2**	**105**
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		**126**	**107**	**112**	**110**	**106**
Toluene-D8	2037-26-5	0.1	%		**118**	**111**	**122**	**108**	**108**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP02-26 - 070113	SP02-31 - 070113	SP02-36 - 070113	SP02-40 - 070113	SP02-41 - 070113
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
Compound	CAS Number	LOR	Unit	ES1300228-021	ES1300228-022	ES1300228-023	ES1300228-024	ES1300228-025
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.1	%	**107**	**114**	**123**	**118**	**106**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-46 - 070113	SP02-50 - 070113	SP02-53 - 070113	SP02-56 - 070113	SP02-60 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-026	ES1300228-027	ES1300228-028	ES1300228-029	ES1300228-030
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		**5.1**	**8.1**	**8.4**	**8.4**	**8.2**
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		**25.8**	**18.4**	**19.6**	**18.5**	**11.0**
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	<5	<5	<5	**6**
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		**33**	**40**	**20**	**23**	**27**
Copper	7440-50-8	5	mg/kg		**14**	**10**	**18**	**15**	**20**
Lead	7439-92-1	5	mg/kg		<5	**24**	**10**	**13**	**21**
Nickel	7440-02-0	2	mg/kg		**4**	**5**	**6**	**5**	**6**
Zinc	7440-66-6	5	mg/kg		**10**	**54**	**73**	**86**	**58**
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ **Sum of polycyclic aromatic hydrocarbons**	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-46 - 070113	SP02-50 - 070113	SP02-53 - 070113	SP02-56 - 070113	SP02-60 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-026	ES1300228-027	ES1300228-028	ES1300228-029	ES1300228-030
EP080/071: Total Petroleum Hydrocarbons - Continued									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN									
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1
EP075(SIM)S: Phenolic Compound Surrogates									
Phenol-d6	13127-88-3	0.1	%		89.8	85.4	89.1	85.5	97.3
2-Chlorophenol-D4	93951-73-6	0.1	%		87.0	81.4	81.5	77.3	93.3
2.4.6-Tribromophenol	118-79-6	0.1	%		89.9	83.8	89.5	91.0	98.9
EP075(SIM)T: PAH Surrogates									
2-Fluorobiphenyl	321-60-8	0.1	%		98.0	93.9	97.9	97.8	105
Anthracene-d10	1719-06-8	0.1	%		89.2	85.2	91.6	91.4	95.7
4-Terphenyl-d14	1718-51-0	0.1	%		94.7	91.5	97.9	97.1	101
EP080S: TPH(V)/BTEX Surrogates									
1.2-Dichloroethane-D4	17060-07-0	0.1	%		110	106	105	108	110
Toluene-D8	2037-26-5	0.1	%		111	107	106	112	115

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP02-46 - 070113	SP02-50 - 070113	SP02-53 - 070113	SP02-56 - 070113	SP02-60 - 070113
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
Compound	CAS Number	LOR	Unit	ES1300228-026	ES1300228-027	ES1300228-028	ES1300228-029	ES1300228-030
EP080S: TPH(V)/BTEX Surrogates - Continued								
4-Bromofluorobenzene	460-00-4	0.1	%	**114**	**114**	**111**	**119**	**121**

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-64 - 070113	SP02-68 - 070113	DUP01 - 070113	DUP03 - 070113	SP01-02 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-031	ES1300228-032	ES1300228-033	ES1300228-034	ES1300228-035
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		8.3	8.2	8.3	8.4	8.4
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		17.1	10.5	15.0	10.4	8.0
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		8	<5	7	6	7
Barium	7440-39-3	10	mg/kg		----	----	----	----	150
Beryllium	7440-41-7	1	mg/kg		----	----	----	----	<1
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		22	19	53	33	49
Cobalt	7440-48-4	2	mg/kg		----	----	----	----	<2
Copper	7440-50-8	5	mg/kg		33	10	55	17	31
Lead	7439-92-1	5	mg/kg		26	6	25	17	17
Manganese	7439-96-5	5	mg/kg		----	----	----	----	79
Nickel	7440-02-0	2	mg/kg		5	4	4	6	4
Vanadium	7440-62-2	5	mg/kg		----	----	----	----	90
Zinc	7440-66-6	5	mg/kg		95	14	45	44	31
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)									
Hexavalent Chromium	18540-29-9	0.5	mg/kg		----	----	----	----	<0.5
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		----	----	----	----	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		----	----	----	----	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		----	----	----	----	<0.05
beta-BHC	319-85-7	0.05	mg/kg		----	----	----	----	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		----	----	----	----	<0.05
delta-BHC	319-86-8	0.05	mg/kg		----	----	----	----	<0.05
Heptachlor	76-44-8	0.05	mg/kg		----	----	----	----	<0.05
Aldrin	309-00-2	0.05	mg/kg		----	----	----	----	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		----	----	----	----	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		----	----	----	----	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		----	----	----	----	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-64 - 070113	SP02-68 - 070113	DUP01 - 070113	DUP03 - 070113	SP01-02 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-031	ES1300228-032	ES1300228-033	ES1300228-034	ES1300228-035
EP068A: Organochlorine Pesticides (OC) - Continued									
cis-Chlordane	5103-71-9	0.05	mg/kg		----	----	----	----	<0.05
Dieldrin	60-57-1	0.05	mg/kg		----	----	----	----	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		----	----	----	----	<0.05
Endrin	72-20-8	0.05	mg/kg		----	----	----	----	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		----	----	----	----	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		----	----	----	----	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		----	----	----	----	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		----	----	----	----	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		----	----	----	----	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		----	----	----	----	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		----	----	----	----	<0.2
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		----	----	----	----	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg		----	----	----	----	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		----	----	----	----	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg		----	----	----	----	<1
2-Nitrophenol	88-75-5	0.5	mg/kg		----	----	----	----	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		----	----	----	----	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		----	----	----	----	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		----	----	----	----	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		----	----	----	----	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		----	----	----	----	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		----	----	----	----	<0.5
Pentachlorophenol	87-86-5	2	mg/kg		----	----	----	----	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-64 - 070113	SP02-68 - 070113	DUP01 - 070113	DUP03 - 070113	SP01-02 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-031	ES1300228-032	ES1300228-033	ES1300228-034	ES1300228-035
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN									
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP02-64 - 070113	SP02-68 - 070113	DUP01 - 070113	DUP03 - 070113	SP01-02 - 070113
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
Compound	CAS Number	LOR	Unit	ES1300228-031	ES1300228-032	ES1300228-033	ES1300228-034	ES1300228-035
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	----	----	----	----	130
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	----	----	----	----	107
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	----	----	----	----	106
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	88.8	93.5	88.4	83.8	88.5
2-Chlorophenol-D4	93951-73-6	0.1	%	85.5	90.5	81.9	82.8	85.0
2.4.6-Tribromophenol	118-79-6	0.1	%	85.2	98.2	84.4	87.4	89.6
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	96.9	101	97.2	93.4	94.4
Anthracene-d10	1719-06-8	0.1	%	88.5	92.0	89.7	85.9	86.9
4-Terphenyl-d14	1718-51-0	0.1	%	93.4	97.1	94.8	90.6	92.2
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	104	104	109	111	106
Toluene-D8	2037-26-5	0.1	%	112	105	109	112	110
4-Bromofluorobenzene	460-00-4	0.1	%	111	113	115	120	94.3

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-08 - 070113	SP01-14 - 070113	SP01-20 - 070113	SP01-26 - 070113	SP01-32 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-040	ES1300228-045	ES1300228-048	ES1300228-053	ES1300228-057
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		8.3	8.2	8.4	8.4	8.4
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		6.6	10.5	13.3	11.6	10.1
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		7	11	6	5	7
Barium	7440-39-3	10	mg/kg		460	80	100	40	80
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg		<1	2	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		83	70	30	26	34
Cobalt	7440-48-4	2	mg/kg		<2	7	<2	5	<2
Copper	7440-50-8	5	mg/kg		15	204	27	22	34
Lead	7439-92-1	5	mg/kg		18	336	17	23	51
Manganese	7439-96-5	5	mg/kg		91	111	57	82	111
Nickel	7440-02-0	2	mg/kg		4	10	4	4	4
Vanadium	7440-62-2	5	mg/kg		102	110	108	47	70
Zinc	7440-66-6	5	mg/kg		50	335	32	73	45
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)									
Hexavalent Chromium	18540-29-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: **SOIL** (Matrix: **SOIL**)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-08 - 070113	SP01-14 - 070113	SP01-20 - 070113	SP01-26 - 070113	SP01-32 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-040	ES1300228-045	ES1300228-048	ES1300228-053	ES1300228-057
EP068A: Organochlorine Pesticides (OC) - Continued									
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		**0.07**	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg		<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-08 - 070113	SP01-14 - 070113	SP01-20 - 070113	SP01-26 - 070113	SP01-32 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-040	ES1300228-045	ES1300228-048	ES1300228-053	ES1300228-057
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN									
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP01-08 - 070113	SP01-14 - 070113	SP01-20 - 070113	SP01-26 - 070113	SP01-32 - 070113
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
Compound	CAS Number	LOR	Unit	ES1300228-040	ES1300228-045	ES1300228-048	ES1300228-053	ES1300228-057
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	126	82.6	83.0	139	133
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	94.7	94.9	104	97.0	120
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	109	102	102	106	107
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	90.9	91.4	94.3	89.1	89.8
2-Chlorophenol-D4	93951-73-6	0.1	%	88.5	88.2	91.4	86.3	86.4
2.4.6-Tribromophenol	118-79-6	0.1	%	94.6	95.8	99.6	95.5	93.9
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	97.3	96.9	101	95.6	95.9
Anthracene-d10	1719-06-8	0.1	%	89.8	88.5	93.6	88.3	87.9
4-Terphenyl-d14	1718-51-0	0.1	%	95.5	93.6	98.9	94.0	93.0
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	108	113	106	112	116
Toluene-D8	2037-26-5	0.1	%	114	110	110	108	114
4-Bromofluorobenzene	460-00-4	0.1	%	114	91.0	91.5	89.4	93.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-38 - 070113	SP01-45 - 070113	SP02-03 - 070113	SP02-10 - 070113	SP02-16 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-061	ES1300228-065	ES1300228-071	ES1300228-076	ES1300228-080
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		8.4	8.2	8.2	7.0	8.1
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		18.2	7.8	20.0	12.9	13.8
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		12	18	8	<5	<5
Barium	7440-39-3	10	mg/kg		60	200	340	20	30
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		39	78	46	34	49
Cobalt	7440-48-4	2	mg/kg		<2	5	3	2	2
Copper	7440-50-8	5	mg/kg		28	116	51	23	27
Lead	7439-92-1	5	mg/kg		26	77	11	7	13
Manganese	7439-96-5	5	mg/kg		69	128	118	108	187
Nickel	7440-02-0	2	mg/kg		6	8	9	10	10
Vanadium	7440-62-2	5	mg/kg		73	189	77	60	79
Zinc	7440-66-6	5	mg/kg		50	125	30	26	33
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)									
Hexavalent Chromium	18540-29-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-38 - 070113	SP01-45 - 070113	SP02-03 - 070113	SP02-10 - 070113	SP02-16 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-061	ES1300228-065	ES1300228-071	ES1300228-076	ES1300228-080
EP068A: Organochlorine Pesticides (OC) - Continued									
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg		<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP01-38 - 070113	SP01-45 - 070113	SP02-03 - 070113	SP02-10 - 070113	SP02-16 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-061	ES1300228-065	ES1300228-071	ES1300228-076	ES1300228-080
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN									
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP01-38 - 070113	SP01-45 - 070113	SP02-03 - 070113	SP02-10 - 070113	SP02-16 - 070113
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
Compound	CAS Number	LOR	Unit	ES1300228-061	ES1300228-065	ES1300228-071	ES1300228-076	ES1300228-080
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	138	136	127	128	125
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	101	110	112	98.2	94.6
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	110	92.6	121	103	107
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	90.0	87.1	87.8	93.9	88.7
2-Chlorophenol-D4	93951-73-6	0.1	%	86.8	84.0	85.6	91.6	86.6
2.4.6-Tribromophenol	118-79-6	0.1	%	94.3	90.7	91.4	99.0	91.8
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	96.6	92.8	93.5	101	95.2
Anthracene-d10	1719-06-8	0.1	%	88.0	85.2	85.7	93.6	86.8
4-Terphenyl-d14	1718-51-0	0.1	%	93.1	88.5	90.4	97.8	92.5
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	103	116	95.8	113	107
Toluene-D8	2037-26-5	0.1	%	101	119	97.2	108	107
4-Bromofluorobenzene	460-00-4	0.1	%	84.8	95.6	82.0	87.0	87.9

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-22 - 070113	SP02-28 - 070113	SP02-34 - 070113	SP02-39 - 070113	SP02-47 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-085	ES1300228-089	ES1300228-094	ES1300228-098	ES1300228-103
EA002 : pH (Soils)									
pH Value	----	0.1	pH Unit		8.0	8.6	8.3	6.5	8.4
EA055: Moisture Content									
Moisture Content (dried @ 103°C)	----	1.0	%		13.5	10.4	16.8	21.6	19.2
EG005T: Total Metals by ICP-AES									
Arsenic	7440-38-2	5	mg/kg		<5	9	<5	6	<5
Barium	7440-39-3	10	mg/kg		130	160	<10	<10	40
Beryllium	7440-41-7	1	mg/kg		<1	<1	<1	<1	<1
Cadmium	7440-43-9	1	mg/kg		<1	<1	<1	<1	<1
Chromium	7440-47-3	2	mg/kg		46	74	32	39	36
Cobalt	7440-48-4	2	mg/kg		4	2	<2	<2	2
Copper	7440-50-8	5	mg/kg		13	20	21	9	18
Lead	7439-92-1	5	mg/kg		8	13	5	6	12
Manganese	7439-96-5	5	mg/kg		419	212	38	37	190
Nickel	7440-02-0	2	mg/kg		10	8	8	5	10
Vanadium	7440-62-2	5	mg/kg		71	125	28	74	47
Zinc	7440-66-6	5	mg/kg		24	48	15	14	35
EG035T: Total Recoverable Mercury by FIMS									
Mercury	7439-97-6	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EG048: Hexavalent Chromium (Alkaline Digest)									
Hexavalent Chromium	18540-29-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP066: Polychlorinated Biphenyls (PCB)									
Total Polychlorinated biphenyls	----	0.1	mg/kg		<0.1	<0.1	<0.1	<0.1	<0.1
EP068A: Organochlorine Pesticides (OC)									
alpha-BHC	319-84-6	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-BHC	319-85-7	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
gamma-BHC	58-89-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
delta-BHC	319-86-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor	76-44-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Aldrin	309-00-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Heptachlor epoxide	1024-57-3	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
trans-Chlordane	5103-74-2	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
alpha-Endosulfan	959-98-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-22 - 070113	SP02-28 - 070113	SP02-34 - 070113	SP02-39 - 070113	SP02-47 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-085	ES1300228-089	ES1300228-094	ES1300228-098	ES1300228-103
EP068A: Organochlorine Pesticides (OC) - Continued									
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	<0.05
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	<1	<1	<1	<1
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pentachlorophenol	87-86-5	2	mg/kg		<2	<2	<2	<2	<2
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)

Compound	CAS Number	LOR	Unit	Client sample ID	SP02-22 - 070113	SP02-28 - 070113	SP02-34 - 070113	SP02-39 - 070113	SP02-47 - 070113
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
					ES1300228-085	ES1300228-089	ES1300228-094	ES1300228-098	ES1300228-103
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
C15 - C28 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
C29 - C36 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	<10
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	<10
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	<50
>C16 - C34 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	<100
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	<50	<50	<50	<50
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
EP080: BTEXN									
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	<0.5
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	<0.2
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	<1

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP02-22 - 070113	SP02-28 - 070113	SP02-34 - 070113	SP02-39 - 070113	SP02-47 - 070113
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00
Compound	CAS Number	LOR	Unit	ES1300228-085	ES1300228-089	ES1300228-094	ES1300228-098	ES1300228-103
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	130	113	121	118	121
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	93.3	92.3	93.4	102	98.6
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	96.1	102	105	118	110
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	93.0	87.5	88.8	91.1	83.6
2-Chlorophenol-D4	93951-73-6	0.1	%	89.6	85.4	87.9	90.3	71.1
2.4.6-Tribromophenol	118-79-6	0.1	%	93.5	90.1	91.6	98.0	38.7
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	99.8	95.7	99.6	102	104
Anthracene-d10	1719-06-8	0.1	%	90.5	87.0	91.8	93.6	94.3
4-Terphenyl-d14	1718-51-0	0.1	%	96.5	92.5	96.9	95.3	97.8
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	108	106	107	104	90.9
Toluene-D8	2037-26-5	0.1	%	99.9	108	101	98.3	80.0
4-Bromofluorobenzene	460-00-4	0.1	%	83.8	87.8	84.3	81.4	92.3

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP02-52 - 070113	SP02-58 - 070113	SP02-63 - 070113	SP02-70 - 070113	----
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	----
Compound	CAS Number	LOR	Unit	ES1300228-107	ES1300228-111	ES1300228-115	ES1300228-120	----
EA002 : pH (Soils)								
pH Value	----	0.1	pH Unit	7.9	8.4	8.4	7.6	----
EA055: Moisture Content								
Moisture Content (dried @ 103°C)	----	1.0	%	10.9	12.5	13.1	10.5	----
EG005T: Total Metals by ICP-AES								
Arsenic	7440-38-2	5	mg/kg	<5	12	6	13	----
Barium	7440-39-3	10	mg/kg	40	60	40	40	----
Beryllium	7440-41-7	1	mg/kg	<1	<1	<1	<1	----
Cadmium	7440-43-9	1	mg/kg	<1	<1	<1	<1	----
Chromium	7440-47-3	2	mg/kg	36	40	36	31	----
Cobalt	7440-48-4	2	mg/kg	<2	4	2	<2	----
Copper	7440-50-8	5	mg/kg	26	67	37	69	----
Lead	7439-92-1	5	mg/kg	9	44	43	110	----
Manganese	7439-96-5	5	mg/kg	78	172	128	76	----
Nickel	7440-02-0	2	mg/kg	7	11	9	5	----
Vanadium	7440-62-2	5	mg/kg	60	110	54	52	----
Zinc	7440-66-6	5	mg/kg	17	71	47	117	----
EG035T: Total Recoverable Mercury by FIMS								
Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----
EG048: Hexavalent Chromium (Alkaline Digest)								
Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	<0.5	<0.5	----
EP066: Polychlorinated Biphenyls (PCB)								
Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	<0.1	<0.1	----
EP068A: Organochlorine Pesticides (OC)								
alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----
alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	<0.05	<0.05	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	SP02-52 - 070113	SP02-58 - 070113	SP02-63 - 070113	SP02-70 - 070113	----
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	----
Compound	CAS Number	LOR	Unit		ES1300228-107	ES1300228-111	ES1300228-115	ES1300228-120	----
EP068A: Organochlorine Pesticides (OC) - Continued									
cis-Chlordane	5103-71-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	----
Dieldrin	60-57-1	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	----
4.4`-DDE	72-55-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	----
Endrin	72-20-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	----
beta-Endosulfan	33213-65-9	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	----
4.4`-DDD	72-54-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	----
Endrin aldehyde	7421-93-4	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	----
Endosulfan sulfate	1031-07-8	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	----
4.4`-DDT	50-29-3	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	----
Endrin ketone	53494-70-5	0.05	mg/kg		<0.05	<0.05	<0.05	<0.05	----
Methoxychlor	72-43-5	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	----
EP075(SIM)A: Phenolic Compounds									
Phenol	108-95-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
2-Chlorophenol	95-57-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
2-Methylphenol	95-48-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
3- & 4-Methylphenol	1319-77-3	1	mg/kg		<1	<1	<1	<1	----
2-Nitrophenol	88-75-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
2.4-Dimethylphenol	105-67-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
2.4-Dichlorophenol	120-83-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
2.6-Dichlorophenol	87-65-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Pentachlorophenol	87-86-5	2	mg/kg		<2	<2	<2	<2	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons									
Naphthalene	91-20-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Acenaphthylene	208-96-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Acenaphthene	83-32-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Fluorene	86-73-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Phenanthrene	85-01-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Anthracene	120-12-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Fluoranthene	206-44-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Pyrene	129-00-0	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)				Client sample ID	SP02-52 - 070113	SP02-58 - 070113	SP02-63 - 070113	SP02-70 - 070113	----
				Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	----
Compound	CAS Number	LOR	Unit		ES1300228-107	ES1300228-111	ES1300228-115	ES1300228-120	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons - Continued									
Benz(a)anthracene	56-55-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Chrysene	218-01-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(b)fluoranthene	205-99-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(k)fluoranthene	207-08-9	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(a)pyrene	50-32-8	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
EP080/071: Total Petroleum Hydrocarbons									
C6 - C9 Fraction	----	10	mg/kg		<10	<10	<10	<10	----
C10 - C14 Fraction	----	50	mg/kg		<50	<50	<50	<50	----
C15 - C28 Fraction	----	100	mg/kg		<100	**210**	<100	<100	----
C29 - C36 Fraction	----	100	mg/kg		<100	**120**	<100	<100	----
^ C10 - C36 Fraction (sum)	----	50	mg/kg		<50	**330**	<50	<50	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft									
C6 - C10 Fraction	----	10	mg/kg		<10	<10	<10	<10	----
^ C6 - C10 Fraction minus BTEX (F1)	----	10	mg/kg		<10	<10	<10	<10	----
>C10 - C16 Fraction	----	50	mg/kg		<50	<50	<50	<50	----
>C16 - C34 Fraction	----	100	mg/kg		<100	**280**	<100	<100	----
>C34 - C40 Fraction	----	100	mg/kg		<100	<100	<100	<100	----
^ >C10 - C40 Fraction (sum)	----	50	mg/kg		<50	**280**	<50	<50	----
EP080: BTEX									
Benzene	71-43-2	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	----
Toluene	108-88-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
Ethylbenzene	100-41-4	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
ortho-Xylene	95-47-6	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
EP080: BTEXN									
^ Total Xylenes	1330-20-7	0.5	mg/kg		<0.5	<0.5	<0.5	<0.5	----
^ Sum of BTEX	----	0.2	mg/kg		<0.2	<0.2	<0.2	<0.2	----
Naphthalene	91-20-3	1	mg/kg		<1	<1	<1	<1	----

Analytical Results

Sub-Matrix: SOIL (Matrix: SOIL)			Client sample ID	SP02-52 - 070113	SP02-58 - 070113	SP02-63 - 070113	SP02-70 - 070113	----
			Client sampling date / time	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	07-JAN-2013 15:00	----
Compound	CAS Number	LOR	Unit	ES1300228-107	ES1300228-111	ES1300228-115	ES1300228-120	----
EP066S: PCB Surrogate								
Decachlorobiphenyl	2051-24-3	0.1	%	122	108	135	113	----
EP068S: Organochlorine Pesticide Surrogate								
Dibromo-DDE	21655-73-2	0.1	%	93.2	91.6	107	99.8	----
EP068T: Organophosphorus Pesticide Surrogate								
DEF	78-48-8	0.1	%	103	90.4	119	105	----
EP075(SIM)S: Phenolic Compound Surrogates								
Phenol-d6	13127-88-3	0.1	%	79.2	84.2	81.7	75.5	----
2-Chlorophenol-D4	93951-73-6	0.1	%	70.2	70.3	70.0	76.6	----
2.4.6-Tribromophenol	118-79-6	0.1	%	38.1	37.0	40.0	42.6	----
EP075(SIM)T: PAH Surrogates								
2-Fluorobiphenyl	321-60-8	0.1	%	103	101	94.7	103	----
Anthracene-d10	1719-06-8	0.1	%	93.5	92.4	88.4	94.5	----
4-Terphenyl-d14	1718-51-0	0.1	%	101	95.4	93.8	99.6	----
EP080S: TPH(V)/BTEX Surrogates								
1.2-Dichloroethane-D4	17060-07-0	0.1	%	114	112	107	108	----
Toluene-D8	2037-26-5	0.1	%	88.7	102	108	102	----
4-Bromofluorobenzene	460-00-4	0.1	%	82.9	80.5	83.1	80.9	----

Surrogate Control Limits

Sub-Matrix: **SOIL**

Compound	CAS Number	Recovery Limits (%) Low	High
EP066S: PCB Surrogate			
Decachlorobiphenyl	2051-24-3	29.4	145
EP068S: Organochlorine Pesticide Surrogate			
Dibromo-DDE	21655-73-2	49	145
EP068T: Organophosphorus Pesticide Surrogate			
DEF	78-48-8	32	142
EP075(SIM)S: Phenolic Compound Surrogates			
Phenol-d6	13127-88-3	63	127
2-Chlorophenol-D4	93951-73-6	64	126
2.4.6-Tribromophenol	118-79-6	36	136
EP075(SIM)T: PAH Surrogates			
2-Fluorobiphenyl	321-60-8	64	130
Anthracene-d10	1719-06-8	69	135
4-Terphenyl-d14	1718-51-0	64	136
EP080S: TPH(V)/BTEX Surrogates			
1.2-Dichloroethane-D4	17060-07-0	72.8	133.2
Toluene-D8	2037-26-5	73.9	132.1
4-Bromofluorobenzene	460-00-4	71.6	130.0

Environmental Division

QUALITY CONTROL REPORT

Work Order	: **ES1300228**	Page	: 1 of 25
Client	: **URS AUSTRALIA PTY LTD**	Laboratory	: Environmental Division Sydney
Contact	: MR TIM SMITH	Contact	: Client Services
Address	: G P O BOX 2005 DARWIN NT, AUSTRALIA 0801	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: tim.smith@urs.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 89802900	Telephone	: +61-2-8784 8555
Facsimile	: +61 89413920	Facsimile	: +61-2-8784 8500
Project	: 42213719 DARWIN WATERFRONT STAGE 2	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 08-JAN-2013
Sampler	: P.SCOTT	Issue Date	: 15-JAN-2013
Order number	: ----		
		No. of samples received	: 123
Quote number	: EN/001/12	No. of samples analysed	: 54

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Quality Control Report contains the following information:

- Laboratory Duplicate (DUP) Report; Relative Percentage Difference (RPD) and Acceptance Limits
- Method Blank (MB) and Laboratory Control Spike (LCS) Report; Recovery and Acceptance Limits
- Matrix Spike (MS) Report; Recovery and Acceptance Limits

NATA Accredited Laboratory 825

Accredited for compliance with ISO/IEC 17025.

Signatories

This document has been electronically signed by the authorized signatories indicated below. Electronic signing has been carried out in compliance with procedures specified in 21 CFR Part 11.

Signatories	*Position*	*Accreditation Category*
Ankit Joshi	Inorganic Chemist	Sydney Inorganics
Celine Conceicao	Senior Spectroscopist	Sydney Inorganics
Evie.Sidarta	Inorganic Chemist	Sydney Inorganics
Pabi Subba	Senior Organic Chemist	Sydney Organics
Sarah Millington	Senior Inorganic Chemist	Sydney Inorganics

General Comments

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the USEPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request.

Where moisture determination has been performed, results are reported on a dry weight basis.

Where a reported less than (<) result is higher than the LOR, this may be due to primary sample extract/digestate dilution and/or insufficient sample for analysis.

Where the LOR of a reported result differs from standard LOR, this may be due to high moisture content, insufficient sample (reduced weight employed) or matrix interference.

Key : Anonymous = Refers to samples which are not specifically part of this work order but formed part of the QC process lot
CAS Number = CAS registry number from database maintained by Chemical Abstracts Services. The Chemical Abstracts Service is a division of the American Chemical Society.
LOR = Limit of reporting
RPD = Relative Percentage Difference
# = Indicates failed QC

Laboratory Duplicate (DUP) Report

The quality control term Laboratory Duplicate refers to a randomly selected intralaboratory split. Laboratory duplicates provide information regarding method precision and sample heterogeneity. The permitted ranges for the Relative Percent Deviation (RPD) of Laboratory Duplicates are specified in ALS Method QWI-EN/38 and are dependent on the magnitude of results in comparison to the level of reporting: Result < 10 times LOR:- No Limit; Result between 10 and 20 times LOR:- 0% - 50%; Result > 20 times LOR:- 0% - 20%.

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EA002 : pH (Soils) (QC Lot: 2681493)									
ES1300228-001	SP01-01 - 070113	EA002: pH Value	----	0.1	pH Unit	8.2	8.2	0.0	0% - 20%
ES1300228-011	SP01-40 - 070113	EA002: pH Value	----	0.1	pH Unit	8.4	8.4	0.0	0% - 20%
EA002 : pH (Soils) (QC Lot: 2681494)									
ES1300228-021	SP02-26 - 070113	EA002: pH Value	----	0.1	pH Unit	8.3	8.3	0.0	0% - 20%
ES1300228-031	SP02-64 - 070113	EA002: pH Value	----	0.1	pH Unit	8.3	8.3	0.0	0% - 20%
EA002 : pH (Soils) (QC Lot: 2681495)									
ES1300228-061	SP01-38 - 070113	EA002: pH Value	----	0.1	pH Unit	8.4	8.5	0.0	0% - 20%
EA002 : pH (Soils) (QC Lot: 2683585)									
ES1300228-111	SP02-58 - 070113	EA002: pH Value	----	0.1	pH Unit	8.4	8.4	0.0	0% - 20%
EA055: Moisture Content (QC Lot: 2678294)									
EM1300105-003	Anonymous	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	5.4	6.0	10.2	No Limit
ES1300228-009	SP01-31 - 070113	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	15.0	14.8	1.7	0% - 50%
EA055: Moisture Content (QC Lot: 2678295)									
ES1300228-018	SP02-15 - 070113	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	16.5	15.7	4.7	0% - 50%
ES1300228-029	SP02-56 - 070113	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	18.5	19.2	3.6	0% - 50%
EA055: Moisture Content (QC Lot: 2678996)									
ES1300228-045	SP01-14 - 070113	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	10.5	9.9	6.0	No Limit
ES1300228-094	SP02-34 - 070113	EA055-103: Moisture Content (dried @ 103°C)	----	1.0	%	16.8	15.8	5.9	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 2681553)									
ES1300228-001	SP01-01 - 070113	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	61	50	19.9	0% - 20%
		EG005T: Nickel	7440-02-0	2	mg/kg	6	4	42.4	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	7	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	20	15	31.7	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	35	28	23.3	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	75	54	32.8	0% - 50%
ES1300228-011	SP01-40 - 070113	EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	33	24	33.6	0% - 50%
		EG005T: Nickel	7440-02-0	2	mg/kg	4	5	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	6	5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	22	20	12.9	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	20	23	13.1	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	32	39	19.6	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2681555)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EG005T: Total Metals by ICP-AES (QC Lot: 2681555) - continued									
ES1300228-021	SP02-26 - 070113	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	70	80	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	36	33	10.5	0% - 50%
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	5	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	<5	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	23	9	85.6	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	5	6	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	96	112	15.6	0% - 20%
		EG005T: Vanadium	7440-62-2	5	mg/kg	47	43	10.4	No Limit
		EG005T: Zinc	7440-66-6	5	mg/kg	16	17	7.1	No Limit
ES1300228-031	SP02-64 - 070113	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	80	70	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	22	37	48.0	0% - 50%
		EG005T: Cobalt	7440-48-4	2	mg/kg	3	2	39.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	5	4	0.0	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	8	6	35.8	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	33	28	18.3	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	26	26	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	126	76	# 50.4	0% - 50%
		EG005T: Vanadium	7440-62-2	5	mg/kg	51	51	0.0	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	95	70	30.2	0% - 50%
EG005T: Total Metals by ICP-AES (QC Lot: 2681665)									
ES1300228-061	SP01-38 - 070113	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	60	60	0.0	No Limit
		EG005T: Chromium	7440-47-3	2	mg/kg	39	34	14.0	0% - 50%
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	6	8	35.1	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	12	8	33.7	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	28	35	23.2	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	26	32	19.3	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	69	82	18.2	0% - 50%
		EG005T: Vanadium	7440-62-2	5	mg/kg	73	62	16.5	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	50	58	14.5	0% - 50%
ES1300228-107	SP02-52 - 070113	EG005T: Beryllium	7440-41-7	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Cadmium	7440-43-9	1	mg/kg	<1	<1	0.0	No Limit
		EG005T: Barium	7440-39-3	10	mg/kg	40	40	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EG005T: Total Metals by ICP-AES (QC Lot: 2681665) - continued									
ES1300228-107	SP02-52 - 070113	EG005T: Chromium	7440-47-3	2	mg/kg	36	43	17.5	0% - 20%
		EG005T: Cobalt	7440-48-4	2	mg/kg	<2	<2	0.0	No Limit
		EG005T: Nickel	7440-02-0	2	mg/kg	7	6	17.6	No Limit
		EG005T: Arsenic	7440-38-2	5	mg/kg	<5	6	0.0	No Limit
		EG005T: Copper	7440-50-8	5	mg/kg	26	8	108	No Limit
		EG005T: Lead	7439-92-1	5	mg/kg	9	8	0.0	No Limit
		EG005T: Manganese	7439-96-5	5	mg/kg	78	91	15.1	0% - 50%
		EG005T: Vanadium	7440-62-2	5	mg/kg	60	87	36.4	0% - 50%
		EG005T: Zinc	7440-66-6	5	mg/kg	17	14	16.4	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2681838)									
ES1300244-001	Anonymous	EG005T: Vanadium	7440-62-2	5	mg/kg	70	73	4.3	0% - 50%
ES1300458-002	Anonymous	EG005T: Vanadium	7440-62-2	5	mg/kg	16	16	0.0	No Limit
EG005T: Total Metals by ICP-AES (QC Lot: 2684636)									
ES1300653-001	Anonymous	EG005T: Chromium	7440-47-3	2	mg/kg	Not Authorised	# Not Authorised	10.2	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	Not Authorised	# Not Authorised	0.0	No Limit
ES1300458-002	Anonymous	EG005T: Chromium	7440-47-3	2	mg/kg	9	10	0.0	No Limit
		EG005T: Vanadium	7440-62-2	5	mg/kg	16	16	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2681554)									
ES1300228-001	SP01-01 - 070113	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1300228-011	SP01-40 - 070113	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2681556)									
ES1300228-021	SP02-26 - 070113	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1300228-031	SP02-64 - 070113	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG035T: Total Recoverable Mercury by FIMS (QC Lot: 2681666)									
ES1300228-061	SP01-38 - 070113	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1300228-107	SP02-52 - 070113	EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EG048: Hexavalent Chromium (Alkaline Digest) (QC Lot: 2679505)									
ES1300228-035	SP01-02 - 070113	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES1300228-076	SP02-10 - 070113	EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP066: Polychlorinated Biphenyls (PCB) (QC Lot: 2678987)									
ES1300228-035	SP01-02 - 070113	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
ES1300228-080	SP02-16 - 070113	EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	<0.1	0.0	No Limit
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2678986)									
ES1300228-035	SP01-02 - 070113	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP068A: Organochlorine Pesticides (OC) (QC Lot: 2678986) - continued									
ES1300228-035	SP01-02 - 070113	EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
ES1300228-080	SP02-16 - 070113	EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	<0.05	0.0	No Limit
		EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
EP075(SIM)A: Phenolic Compounds (QC Lot: 2678989)									
ES1300228-035	SP01-02 - 070113	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)A: Phenolic Compounds (QC Lot: 2678989) - continued									
ES1300228-035	SP01-02 - 070113	EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
ES1300228-080	SP02-16 - 070113	EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1	mg/kg	<1	<1	0.0	No Limit
		EP075(SIM): Pentachlorophenol	87-86-5	2	mg/kg	<2	<2	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2678522)									
ES1300228-001	SP01-01 - 070113	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2678522) - continued									
ES1300228-001	SP01-01 - 070113	EP075(SIM): Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES1300228-011	SP01-40 - 070113	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2678524)									
ES1300228-021	SP02-26 - 070113	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2678524) - continued									
ES1300228-031	SP02-64 - 070113	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2678989)									
ES1300228-035	SP01-02 - 070113	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
ES1300228-080	SP02-16 - 070113	EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Laboratory Duplicate (DUP) Report					
				LOR	Unit	Original Result	Duplicate Result	RPD (%)	Recovery Limits (%)
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QC Lot: 2678989) - continued									
ES1300228-080	SP02-16 - 070113	EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Sum of polycyclic aromatic hydrocarbons	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP075(SIM): Benzo(a)pyrene TEQ (WHO)	----	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2677868)									
ES1300228-001	SP01-01 - 070113	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1300228-011	SP01-40 - 070113	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2678038)									
ES1300228-021	SP02-26 - 070113	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1300228-031	SP02-64 - 070113	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2678521)									
ES1300228-001	SP01-01 - 070113	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1300228-011	SP01-40 - 070113	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2678523)									
ES1300228-021	SP02-26 - 070113	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1300228-031	SP02-64 - 070113	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2678985)									
ES1300228-035	SP01-02 - 070113	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2678985) - continued									
ES1300228-080	SP02-16 - 070113	EP080: C6 - C9 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Petroleum Hydrocarbons (QC Lot: 2678988)									
ES1300228-035	SP01-02 - 070113	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1300228-080	SP02-16 - 070113	EP071: C15 - C28 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C29 - C36 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: C10 - C14 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2677868)									
ES1300228-001	SP01-01 - 070113	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1300228-011	SP01-40 - 070113	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2678038)									
ES1300228-021	SP02-26 - 070113	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1300228-031	SP02-64 - 070113	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2678521)									
ES1300228-001	SP01-01 - 070113	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1300228-011	SP01-40 - 070113	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2678523)									
ES1300228-021	SP02-26 - 070113	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1300228-031	SP02-64 - 070113	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2678985)									
ES1300228-035	SP01-02 - 070113	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
ES1300228-080	SP02-16 - 070113	EP080: C6 - C10 Fraction	----	10	mg/kg	<10	<10	0.0	No Limit
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QC Lot: 2678988)									
ES1300228-035	SP01-02 - 070113	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
ES1300228-080	SP02-16 - 070113	EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	<100	0.0	No Limit
		EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	<50	0.0	No Limit
EP080: BTEXN (QC Lot: 2677868)									

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080: BTEXN (QC Lot: 2677868) - continued									
ES1300228-001	SP01-01 - 070113	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES1300228-011	SP01-40 - 070113	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 2678038)									
ES1300228-021	SP02-26 - 070113	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES1300228-031	SP02-64 - 070113	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
EP080: BTEXN (QC Lot: 2678985)									
ES1300228-035	SP01-02 - 070113	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit
ES1300228-080	SP02-16 - 070113	EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	<0.2	0.0	No Limit
		EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	<0.5	0.0	No Limit

Sub-Matrix: **SOIL**

				Laboratory Duplicate (DUP) Report					
Laboratory sample ID	*Client sample ID*	*Method: Compound*	*CAS Number*	*LOR*	*Unit*	*Original Result*	*Duplicate Result*	*RPD (%)*	*Recovery Limits (%)*
EP080: BTEXN (QC Lot: 2678985) - continued									
ES1300228-080	SP02-16 - 070113	EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	<0.5	0.0	No Limit
		EP080: Naphthalene	91-20-3	1	mg/kg	<1	<1	0.0	No Limit

Method Blank (MB) and Laboratory Control Spike (LCS) Report

The quality control term Method / Laboratory Blank refers to an analyte free matrix to which all reagents are added in the same volumes or proportions as used in standard sample preparation. The purpose of this QC parameter is to monitor potential laboratory contamination. The quality control term Laboratory Control Sample (LCS) refers to a certified reference material, or a known interference free matrix spiked with target analytes. The purpose of this QC parameter is to monitor method precision and accuracy independent of sample matrix. Dynamic Recovery Limits are based on statistical evaluation of processed LCS.

Sub-Matrix: **SOIL**

				Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
Method: Compound	CAS Number	LOR	Unit	Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2681553)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	114	84	128
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	107	79	119
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	110	70	130
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	110	83	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	102	81	117
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	111	79	127
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	119	78	130
EG005T: Total Metals by ICP-AES (QCLot: 2681555)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	108	84	128
EG005T: Barium	7440-39-3	10	mg/kg	<10	143 mg/kg	106	83	125
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	112	88	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	106	79	119
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	106	70	130
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	16.0 mg/kg	109	83	127
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	108	83	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	101	81	117
EG005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	107	83	121
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	109	79	127
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	29.6 mg/kg	116	89	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	104	78	130
EG005T: Total Metals by ICP-AES (QCLot: 2681665)								
EG005T: Arsenic	7440-38-2	5	mg/kg	<5	21.7 mg/kg	114	84	128
EG005T: Barium	7440-39-3	10	mg/kg	<10	143 mg/kg	115	83	125
EG005T: Beryllium	7440-41-7	1	mg/kg	<1	5.63 mg/kg	112	88	130
EG005T: Cadmium	7440-43-9	1	mg/kg	<1	4.64 mg/kg	108	79	119
EG005T: Chromium	7440-47-3	2	mg/kg	<2	43.9 mg/kg	114	70	130
EG005T: Cobalt	7440-48-4	2	mg/kg	<2	16.0 mg/kg	114	83	127
EG005T: Copper	7440-50-8	5	mg/kg	<5	32.0 mg/kg	109	83	127
EG005T: Lead	7439-92-1	5	mg/kg	<5	40.0 mg/kg	103	81	117
EG005T: Manganese	7439-96-5	5	mg/kg	<5	130 mg/kg	109	83	121
EG005T: Nickel	7440-02-0	2	mg/kg	<2	55.0 mg/kg	111	79	127
EG005T: Vanadium	7440-62-2	5	mg/kg	<5	29.6 mg/kg	122	89	131
EG005T: Zinc	7440-66-6	5	mg/kg	<5	60.8 mg/kg	106	78	130
EG005T: Total Metals by ICP-AES (QCLot: 2684636)								

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2684636) - continued								
EG005T: Chromium	7440-47-3	2	mg/kg	Not Authorised	----	# Not Authorised	70	130
EG005T: Vanadium	7440-62-2	5	mg/kg	Not Authorised	----	# Not Authorised	89	131
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2681554)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	88.9	72	114
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2681556)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	90.5	72	114
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2681666)								
EG035T: Mercury	7439-97-6	0.1	mg/kg	<0.1	2.57 mg/kg	88.8	72	114
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 2679505)								
EG048G: Hexavalent Chromium	18540-29-9	0.5	mg/kg	<0.5	40 mg/kg	89.0	71	123
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2678987)								
EP066: Total Polychlorinated biphenyls	----	0.1	mg/kg	<0.1	1 mg/kg	99.0	57.4	117
EP068A: Organochlorine Pesticides (OC) (QCLot: 2678986)								
EP068: alpha-BHC	319-84-6	0.05	mg/kg	<0.05	0.5 mg/kg	85.1	60.8	116
EP068: Hexachlorobenzene (HCB)	118-74-1	0.05	mg/kg	<0.05	0.5 mg/kg	82.2	59.4	115
EP068: beta-BHC	319-85-7	0.05	mg/kg	<0.05	0.5 mg/kg	91.8	59.8	117
EP068: gamma-BHC	58-89-9	0.05	mg/kg	<0.05	0.5 mg/kg	91.3	59.8	118
EP068: delta-BHC	319-86-8	0.05	mg/kg	<0.05	0.5 mg/kg	83.8	65.8	114
EP068: Heptachlor	76-44-8	0.05	mg/kg	<0.05	0.5 mg/kg	88.8	65.6	115
EP068: Aldrin	309-00-2	0.05	mg/kg	<0.05	0.5 mg/kg	80.3	67	113
EP068: Heptachlor epoxide	1024-57-3	0.05	mg/kg	<0.05	0.5 mg/kg	86.4	65.6	113
EP068: trans-Chlordane	5103-74-2	0.05	mg/kg	<0.05	0.5 mg/kg	96.7	60.7	113
EP068: alpha-Endosulfan	959-98-8	0.05	mg/kg	<0.05	0.5 mg/kg	98.9	65.8	116
EP068: cis-Chlordane	5103-71-9	0.05	mg/kg	<0.05	0.5 mg/kg	94.9	57.3	120
EP068: Dieldrin	60-57-1	0.05	mg/kg	<0.05	0.5 mg/kg	85.6	67.4	116
EP068: 4.4`-DDE	72-55-9	0.05	mg/kg	<0.05	0.5 mg/kg	86.0	67.5	114
EP068: Endrin	72-20-8	0.05	mg/kg	<0.05	0.5 mg/kg	89.9	63	121
EP068: beta-Endosulfan	33213-65-9	0.05	mg/kg	<0.05	0.5 mg/kg	97.8	66.1	117
EP068: 4.4`-DDD	72-54-8	0.05	mg/kg	<0.05	0.5 mg/kg	102	65.3	116
EP068: Endrin aldehyde	7421-93-4	0.05	mg/kg	<0.05	0.5 mg/kg	92.8	57.3	115
EP068: Endosulfan sulfate	1031-07-8	0.05	mg/kg	<0.05	0.5 mg/kg	111	63.6	119
EP068: 4.4`-DDT	50-29-3	0.2	mg/kg	<0.2	0.5 mg/kg	108	58.4	127
EP068: Endrin ketone	53494-70-5	0.05	mg/kg	<0.05	0.5 mg/kg	101	63.6	117
EP068: Methoxychlor	72-43-5	0.2	mg/kg	<0.2	0.5 mg/kg	92.3	50.4	132
EP075(SIM)A: Phenolic Compounds (QCLot: 2678989)								
EP075(SIM): Phenol	108-95-2	0.5	mg/kg	<0.5	4 mg/kg	98.7	73.9	115
EP075(SIM): 2-Chlorophenol	95-57-8	0.5	mg/kg	<0.5	4 mg/kg	102	80.2	115
EP075(SIM): 2-Methylphenol	95-48-7	0.5	mg/kg	<0.5	4 mg/kg	97.0	76.8	114

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)A: Phenolic Compounds (QCLot: 2678989) - continued								
EP075(SIM): 3- & 4-Methylphenol	1319-77-3	1.0	mg/kg	<1	8 mg/kg	# 120	72	119
EP075(SIM): 2-Nitrophenol	88-75-5	0.5	mg/kg	<0.5	4 mg/kg	91.0	60.3	117
EP075(SIM): 2.4-Dimethylphenol	105-67-9	0.5	mg/kg	<0.5	4 mg/kg	109	74.5	119
EP075(SIM): 2.4-Dichlorophenol	120-83-2	0.5	mg/kg	<0.5	4 mg/kg	102	71.6	113
EP075(SIM): 2.6-Dichlorophenol	87-65-0	0.5	mg/kg	<0.5	4 mg/kg	101	74.8	115
EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	0.5	mg/kg	<0.5	4 mg/kg	108	76.4	114
EP075(SIM): 2.4.6-Trichlorophenol	88-06-2	0.5	mg/kg	<0.5	4 mg/kg	93.7	62.2	115
EP075(SIM): 2.4.5-Trichlorophenol	95-95-4	0.5	mg/kg	<0.5	4 mg/kg	93.5	68.9	112
EP075(SIM): Pentachlorophenol	87-86-5	1.0	mg/kg	<1	8 mg/kg	13.6	1.23	91.6
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678522)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	107	81.9	113
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	110	79.6	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	111	81.5	112
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	110	79.9	112
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	111	79.4	114
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	109	81.1	112
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	110	78.8	113
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	110	78.9	113
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	104	77.2	112
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	110	79.8	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	108	71.8	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	106	74.2	117
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	105	76.4	113
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	111	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	104	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	108	72.4	114
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678524)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	111	81.9	113
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	110	79.6	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	# 112	81.5	112
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	108	79.9	112
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	112	79.4	114
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	110	81.1	112
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	110	78.8	113
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	111	78.9	113
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	101	77.2	112
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	111	79.8	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	106	71.8	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	110	74.2	117

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678524) - continued								
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	102	76.4	113
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	106	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	107	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	106	72.4	114
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678989)								
EP075(SIM): Naphthalene	91-20-3	0.5	mg/kg	<0.5	4 mg/kg	95.8	81.9	113
EP075(SIM): Acenaphthylene	208-96-8	0.5	mg/kg	<0.5	4 mg/kg	89.6	79.6	113
EP075(SIM): Acenaphthene	83-32-9	0.5	mg/kg	<0.5	4 mg/kg	108	81.5	112
EP075(SIM): Fluorene	86-73-7	0.5	mg/kg	<0.5	4 mg/kg	109	79.9	112
EP075(SIM): Phenanthrene	85-01-8	0.5	mg/kg	<0.5	4 mg/kg	108	79.4	114
EP075(SIM): Anthracene	120-12-7	0.5	mg/kg	<0.5	4 mg/kg	101	81.1	112
EP075(SIM): Fluoranthene	206-44-0	0.5	mg/kg	<0.5	4 mg/kg	94.7	78.8	113
EP075(SIM): Pyrene	129-00-0	0.5	mg/kg	<0.5	4 mg/kg	96.8	78.9	113
EP075(SIM): Benz(a)anthracene	56-55-3	0.5	mg/kg	<0.5	4 mg/kg	98.0	77.2	112
EP075(SIM): Chrysene	218-01-9	0.5	mg/kg	<0.5	4 mg/kg	104	79.8	114
EP075(SIM): Benzo(b)fluoranthene	205-99-2	0.5	mg/kg	<0.5	4 mg/kg	95.8	71.8	118
EP075(SIM): Benzo(k)fluoranthene	207-08-9	0.5	mg/kg	<0.5	4 mg/kg	107	74.2	117
EP075(SIM): Benzo(a)pyrene	50-32-8	0.5	mg/kg	<0.5	4 mg/kg	103	76.4	113
EP075(SIM): Indeno(1.2.3.cd)pyrene	193-39-5	0.5	mg/kg	<0.5	4 mg/kg	108	71	113
EP075(SIM): Dibenz(a.h)anthracene	53-70-3	0.5	mg/kg	<0.5	4 mg/kg	101	71.7	113
EP075(SIM): Benzo(g.h.i)perylene	191-24-2	0.5	mg/kg	<0.5	4 mg/kg	105	72.4	114
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2677868)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	97.4	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678038)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	89.2	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678521)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	97.1	59	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	98.2	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	92.9	63	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678523)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	112	59	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	86.2	74	138
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	114	63	131
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678985)								
EP080: C6 - C9 Fraction	----	10	mg/kg	<10	26 mg/kg	77.4	68.4	128
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678988)								
EP071: C10 - C14 Fraction	----	50	mg/kg	<50	200 mg/kg	105	59	131
EP071: C15 - C28 Fraction	----	100	mg/kg	<100	300 mg/kg	106	74	138

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report			
					Spike	Spike Recovery (%)	Recovery Limits (%)	
				Result	Concentration	LCS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678988) - continued								
EP071: C29 - C36 Fraction	----	100	mg/kg	<100	200 mg/kg	100	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2677868)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	31 mg/kg	97.3	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678038)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	31 mg/kg	87.7	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678521)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	250 mg/kg	99.0	59	131
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	95.5	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
		50	mg/kg	----	150 mg/kg	90.2	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678523)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	250 mg/kg	111	59	131
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	91.1	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
		50	mg/kg	----	150 mg/kg	125	63	131
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678985)								
EP080: C6 - C10 Fraction	----	10	mg/kg	<10	31 mg/kg	79.4	68.4	128
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678988)								
EP071: >C10 - C16 Fraction	----	50	mg/kg	<50	250 mg/kg	108	59	131
EP071: >C16 - C34 Fraction	----	100	mg/kg	<100	350 mg/kg	103	74	138
EP071: >C34 - C40 Fraction	----	100	mg/kg	<100	----	----	----	----
		50	mg/kg	----	150 mg/kg	99.0	63	131
EP080: BTEXN (QCLot: 2677868)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	112	62	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	100	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	102	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	102	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	104	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	115	62	138
EP080: BTEXN (QCLot: 2678038)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	105	62	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	97.5	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	93.9	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	95.0	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	99.3	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	93.3	62	138

Sub-Matrix: **SOIL**

Method: Compound	CAS Number	LOR	Unit	Method Blank (MB) Report	Laboratory Control Spike (LCS) Report		
					Spike	Spike Recovery (%)	Recovery Limits (%)
				Result	Concentration	LCS	Low	High
EP080: BTEXN (QCLot: 2678985)								
EP080: Benzene	71-43-2	0.2	mg/kg	<0.2	1 mg/kg	83.0	62	120
EP080: Toluene	108-88-3	0.5	mg/kg	<0.5	1 mg/kg	94.8	62	128
EP080: Ethylbenzene	100-41-4	0.5	mg/kg	<0.5	1 mg/kg	91.8	58	118
EP080: meta- & para-Xylene	108-38-3 106-42-3	0.5	mg/kg	<0.5	2 mg/kg	96.2	60	120
EP080: ortho-Xylene	95-47-6	0.5	mg/kg	<0.5	1 mg/kg	97.7	60	120
EP080: Naphthalene	91-20-3	1	mg/kg	<1	1 mg/kg	89.8	62	138

Matrix Spike (MS) Report

The quality control term Matrix Spike (MS) refers to an intralaboratory split sample spiked with a representative set of target analytes. The purpose of this QC parameter is to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
				Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2681553)							
ES1300228-001	SP01-01 - 070113	EG005T: Arsenic	7440-38-2	50 mg/kg	93.4	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	104	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	110	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	110	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	101	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	100	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	89.6	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2681555)							
ES1300228-021	SP02-26 - 070113	EG005T: Arsenic	7440-38-2	50 mg/kg	98.5	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	108	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	104	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	108	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	106	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	103	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	103	70	130
EG005T: Total Metals by ICP-AES (QCLot: 2681665)							
ES1300228-061	SP01-38 - 070113	EG005T: Arsenic	7440-38-2	50 mg/kg	102	70	130
		EG005T: Cadmium	7440-43-9	50 mg/kg	106	70	130
		EG005T: Chromium	7440-47-3	50 mg/kg	90.0	70	130
		EG005T: Copper	7440-50-8	250 mg/kg	108	70	130
		EG005T: Lead	7439-92-1	250 mg/kg	106	70	130
		EG005T: Nickel	7440-02-0	50 mg/kg	102	70	130
		EG005T: Zinc	7440-66-6	250 mg/kg	99.0	70	130

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EG005T: Total Metals by ICP-AES (QCLot: 2684636)							
ES1300653-001	Anonymous	EG005T: Chromium	7440-47-3	----	# Not Authorised	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2681554)							
ES1300228-001	SP01-01 - 070113	EG035T: Mercury	7439-97-6	5 mg/kg	98.9	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2681556)							
ES1300228-021	SP02-26 - 070113	EG035T: Mercury	7439-97-6	5 mg/kg	107	70	130
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2681666)							
ES1300228-061	SP01-38 - 070113	EG035T: Mercury	7439-97-6	5 mg/kg	98.4	70	130
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 2679505)							
ES1300228-035	SP01-02 - 070113	EG048G: Hexavalent Chromium	18540-29-9	40 mg/kg	90.0	70	130
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2678987)							
ES1300228-035	SP01-02 - 070113	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	108	70	130
EP068A: Organochlorine Pesticides (OC) (QCLot: 2678986)							
ES1300228-035	SP01-02 - 070113	EP068: gamma-BHC	58-89-9	0.5 mg/kg	104	70	130
		EP068: Heptachlor	76-44-8	0.5 mg/kg	102	70	130
		EP068: Aldrin	309-00-2	0.5 mg/kg	93.0	70	130
		EP068: Dieldrin	60-57-1	0.5 mg/kg	95.5	70	130
		EP068: Endrin	72-20-8	2 mg/kg	94.6	70	130
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	107	70	130
EP075(SIM)A: Phenolic Compounds (QCLot: 2678989)							
ES1300228-035	SP01-02 - 070113	EP075(SIM): Phenol	108-95-2	10 mg/kg	99.4	70	130
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	96.0	70	130
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	94.1	60	130
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	10 mg/kg	108	70	130
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	28.8	20	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678522)							
ES1300228-001	SP01-01 - 070113	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	117	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	118	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678524)							
ES1300228-021	SP02-26 - 070113	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	113	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	112	70	130
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678989)							
ES1300228-035	SP01-02 - 070113	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	115	70	130
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	115	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2677868)							

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2677868) - continued							
ES1300228-001	SP01-01 - 070113	EP080: C6 - C9 Fraction	----	32.5 mg/kg	102	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678038)							
ES1300228-021	SP02-26 - 070113	EP080: C6 - C9 Fraction	----	32.5 mg/kg	104	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678521)							
ES1300228-001	SP01-01 - 070113	EP071: C10 - C14 Fraction	----	640 mg/kg	111	73	137
		EP071: C15 - C28 Fraction	----	3140 mg/kg	117	53	131
		EP071: C29 - C36 Fraction	----	2860 mg/kg	91.5	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678523)							
ES1300228-021	SP02-26 - 070113	EP071: C10 - C14 Fraction	----	640 mg/kg	112	73	137
		EP071: C15 - C28 Fraction	----	3140 mg/kg	121	53	131
		EP071: C29 - C36 Fraction	----	2860 mg/kg	119	52	132
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678985)							
ES1300228-035	SP01-02 - 070113	EP080: C6 - C9 Fraction	----	32.5 mg/kg	104	70	130
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678988)							
ES1300228-035	SP01-02 - 070113	EP071: C10 - C14 Fraction	----	640 mg/kg	98.7	73	137
		EP071: C15 - C28 Fraction	----	3140 mg/kg	105	53	131
		EP071: C29 - C36 Fraction	----	2860 mg/kg	81.7	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2677868)							
ES1300228-001	SP01-01 - 070113	EP080: C6 - C10 Fraction	----	37.5 mg/kg	100	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678038)							
ES1300228-021	SP02-26 - 070113	EP080: C6 - C10 Fraction	----	37.5 mg/kg	101	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678521)							
ES1300228-001	SP01-01 - 070113	EP071: >C10 - C16 Fraction	----	850 mg/kg	130	73	137
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	108	53	131
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	55.9	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678523)							
ES1300228-021	SP02-26 - 070113	EP071: >C10 - C16 Fraction	----	850 mg/kg	130	73	137
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	120	53	131
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	66.0	52	132
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678985)							
ES1300228-035	SP01-02 - 070113	EP080: C6 - C10 Fraction	----	37.5 mg/kg	108	70	130
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678988)							
ES1300228-035	SP01-02 - 070113	EP071: >C10 - C16 Fraction	----	850 mg/kg	115	73	137
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	96.1	53	131
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	53.2	52	132

Sub-Matrix: **SOIL**

				Matrix Spike (MS) Report			
				Spike	SpikeRecovery(%)	Recovery Limits (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	Low	High
EP080: BTEXN (QCLot: 2677868)							
ES1300228-001	SP01-01 - 070113	EP080: Benzene	71-43-2	2.5 mg/kg	98.6	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	96.2	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	102	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	103	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	104	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	89.6	70	130
EP080: BTEXN (QCLot: 2678038)							
ES1300228-021	SP02-26 - 070113	EP080: Benzene	71-43-2	2.5 mg/kg	104	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	102	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	99.9	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	98.2	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	101	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	92.3	70	130
EP080: BTEXN (QCLot: 2678985)							
ES1300228-035	SP01-02 - 070113	EP080: Benzene	71-43-2	2.5 mg/kg	82.1	70	130
		EP080: Toluene	108-88-3	2.5 mg/kg	77.6	70	130
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	74.6	70	130
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	76.4	70	130
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	75.9	70	130
		EP080: Naphthalene	91-20-3	2.5 mg/kg	78.2	70	130

Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report

The quality control term Matrix Spike (MS) and Matrix Spike Duplicate (MSD) refers to intralaboratory split samples spiked with a representative set of target analytes. The purpose of these QC parameters are to monitor potential matrix effects on analyte recoveries. Static Recovery Limits as per laboratory Data Quality Objectives (DQOs). Ideal recovery ranges stated may be waived in the event of sample matrix interference.

Sub-Matrix: **SOIL**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2677868)										
ES1300228-001	SP01-01 - 070113	EP080: C6 - C9 Fraction	----	32.5 mg/kg	102	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2677868)										
ES1300228-001	SP01-01 - 070113	EP080: C6 - C10 Fraction	----	37.5 mg/kg	100	----	70	130	----	----
EP080: BTEXN (QCLot: 2677868)										
ES1300228-001	SP01-01 - 070113	EP080: Benzene	71-43-2	2.5 mg/kg	98.6	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	96.2	----	70	130	----	----

Sub-Matrix: **SOIL**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
EP080: BTEXN (QCLot: 2677868) - continued										
ES1300228-001	SP01-01 - 070113	EP080: Ethylbenzene	100-41-4	2.5 mg/kg	102	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	103	----	70	130	----	----
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	104	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	89.6	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678038)										
ES1300228-021	SP02-26 - 070113	EP080: C6 - C9 Fraction	----	32.5 mg/kg	104	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678038)										
ES1300228-021	SP02-26 - 070113	EP080: C6 - C10 Fraction	----	37.5 mg/kg	101	----	70	130	----	----
EP080: BTEXN (QCLot: 2678038)										
ES1300228-021	SP02-26 - 070113	EP080: Benzene	71-43-2	2.5 mg/kg	104	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	102	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	99.9	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	98.2	----	70	130	----	----
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	101	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	92.3	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678521)										
ES1300228-001	SP01-01 - 070113	EP071: C10 - C14 Fraction	----	640 mg/kg	111	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	3140 mg/kg	117	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	2860 mg/kg	91.5	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678521)										
ES1300228-001	SP01-01 - 070113	EP071: >C10 - C16 Fraction	----	850 mg/kg	130	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	108	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	55.9	----	52	132	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678522)										
ES1300228-001	SP01-01 - 070113	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	117	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	118	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678523)										
ES1300228-021	SP02-26 - 070113	EP071: C10 - C14 Fraction	----	640 mg/kg	112	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	3140 mg/kg	121	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	2860 mg/kg	119	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678523)										
ES1300228-021	SP02-26 - 070113	EP071: >C10 - C16 Fraction	----	850 mg/kg	130	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	120	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	66.0	----	52	132	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678524)										
ES1300228-021	SP02-26 - 070113	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	113	----	70	130	----	----

Sub-Matrix: **SOIL**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678524) - continued										
ES1300228-021	SP02-26 - 070113	EP075(SIM): Pyrene	129-00-0	10 mg/kg	112	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678985)										
ES1300228-035	SP01-02 - 070113	EP080: C6 - C9 Fraction	----	32.5 mg/kg	104	----	70	130	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678985)										
ES1300228-035	SP01-02 - 070113	EP080: C6 - C10 Fraction	----	37.5 mg/kg	108	----	70	130	----	----
EP080: BTEXN (QCLot: 2678985)										
ES1300228-035	SP01-02 - 070113	EP080: Benzene	71-43-2	2.5 mg/kg	82.1	----	70	130	----	----
		EP080: Toluene	108-88-3	2.5 mg/kg	77.6	----	70	130	----	----
		EP080: Ethylbenzene	100-41-4	2.5 mg/kg	74.6	----	70	130	----	----
		EP080: meta- & para-Xylene	108-38-3 106-42-3	2.5 mg/kg	76.4	----	70	130	----	----
		EP080: ortho-Xylene	95-47-6	2.5 mg/kg	75.9	----	70	130	----	----
		EP080: Naphthalene	91-20-3	2.5 mg/kg	78.2	----	70	130	----	----
EP068A: Organochlorine Pesticides (OC) (QCLot: 2678986)										
ES1300228-035	SP01-02 - 070113	EP068: gamma-BHC	58-89-9	0.5 mg/kg	104	----	70	130	----	----
		EP068: Heptachlor	76-44-8	0.5 mg/kg	102	----	70	130	----	----
		EP068: Aldrin	309-00-2	0.5 mg/kg	93.0	----	70	130	----	----
		EP068: Dieldrin	60-57-1	0.5 mg/kg	95.5	----	70	130	----	----
		EP068: Endrin	72-20-8	2 mg/kg	94.6	----	70	130	----	----
		EP068: 4.4`-DDT	50-29-3	2 mg/kg	107	----	70	130	----	----
EP066: Polychlorinated Biphenyls (PCB) (QCLot: 2678987)										
ES1300228-035	SP01-02 - 070113	EP066: Total Polychlorinated biphenyls	----	1 mg/kg	108	----	70	130	----	----
EP080/071: Total Petroleum Hydrocarbons (QCLot: 2678988)										
ES1300228-035	SP01-02 - 070113	EP071: C10 - C14 Fraction	----	640 mg/kg	98.7	----	73	137	----	----
		EP071: C15 - C28 Fraction	----	3140 mg/kg	105	----	53	131	----	----
		EP071: C29 - C36 Fraction	----	2860 mg/kg	81.7	----	52	132	----	----
EP080/071: Total Recoverable Hydrocarbons - NEPM 2010 Draft (QCLot: 2678988)										
ES1300228-035	SP01-02 - 070113	EP071: >C10 - C16 Fraction	----	850 mg/kg	115	----	73	137	----	----
		EP071: >C16 - C34 Fraction	----	4800 mg/kg	96.1	----	53	131	----	----
		EP071: >C34 - C40 Fraction	----	2400 mg/kg	53.2	----	52	132	----	----
EP075(SIM)A: Phenolic Compounds (QCLot: 2678989)										
ES1300228-035	SP01-02 - 070113	EP075(SIM): Phenol	108-95-2	10 mg/kg	99.4	----	70	130	----	----
		EP075(SIM): 2-Chlorophenol	95-57-8	10 mg/kg	96.0	----	70	130	----	----
		EP075(SIM): 2-Nitrophenol	88-75-5	10 mg/kg	94.1	----	60	130	----	----
		EP075(SIM): 4-Chloro-3-Methylphenol	59-50-7	10 mg/kg	108	----	70	130	----	----
		EP075(SIM): Pentachlorophenol	87-86-5	10 mg/kg	28.8	----	20	130	----	----
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678989)										
ES1300228-035	SP01-02 - 070113									

Sub-Matrix: **SOIL**

				Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Report						
				Spike	Spike Recovery (%)		Recovery Limits (%)		RPDs (%)	
Laboratory sample ID	Client sample ID	Method: Compound	CAS Number	Concentration	MS	MSD	Low	High	Value	Control Limit
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons (QCLot: 2678989) - continued										
ES1300228-035	SP01-02 - 070113	EP075(SIM): Acenaphthene	83-32-9	10 mg/kg	115	----	70	130	----	----
		EP075(SIM): Pyrene	129-00-0	10 mg/kg	115	----	70	130	----	----
EG048: Hexavalent Chromium (Alkaline Digest) (QCLot: 2679505)										
ES1300228-035	SP01-02 - 070113	EG048G: Hexavalent Chromium	18540-29-9	40 mg/kg	90.0	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 2681553)										
ES1300228-001	SP01-01 - 070113	EG005T: Arsenic	7440-38-2	50 mg/kg	93.4	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	104	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	110	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	110	----	70	130	----	----
		EG005T: Lead	7439-92-1	250 mg/kg	101	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	100	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	89.6	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2681554)										
ES1300228-001	SP01-01 - 070113	EG035T: Mercury	7439-97-6	5 mg/kg	98.9	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 2681555)										
ES1300228-021	SP02-26 - 070113	EG005T: Arsenic	7440-38-2	50 mg/kg	98.5	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	108	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	104	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	108	----	70	130	----	----
		EG005T: Lead	7439-92-1	250 mg/kg	106	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	103	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	103	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2681556)										
ES1300228-021	SP02-26 - 070113	EG035T: Mercury	7439-97-6	5 mg/kg	107	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 2681665)										
ES1300228-061	SP01-38 - 070113	EG005T: Arsenic	7440-38-2	50 mg/kg	102	----	70	130	----	----
		EG005T: Cadmium	7440-43-9	50 mg/kg	106	----	70	130	----	----
		EG005T: Chromium	7440-47-3	50 mg/kg	90.0	----	70	130	----	----
		EG005T: Copper	7440-50-8	250 mg/kg	108	----	70	130	----	----
		EG005T: Lead	7439-92-1	250 mg/kg	106	----	70	130	----	----
		EG005T: Nickel	7440-02-0	50 mg/kg	102	----	70	130	----	----
		EG005T: Zinc	7440-66-6	250 mg/kg	99.0	----	70	130	----	----
EG035T: Total Recoverable Mercury by FIMS (QCLot: 2681666)										
ES1300228-061	SP01-38 - 070113	EG035T: Mercury	7439-97-6	5 mg/kg	98.4	----	70	130	----	----
EG005T: Total Metals by ICP-AES (QCLot: 2684636)										
ES1300653-001	Anonymous	EG005T: Chromium	7440-47-3	----	# Not Authorised	----	70	130	----	----

Environmental Division

INTERPRETIVE QUALITY CONTROL REPORT

Work Order	: **ES1300228**	Page	: 1 of 16
Client	: URS AUSTRALIA PTY LTD	Laboratory	: Environmental Division Sydney
Contact	: MR TIM SMITH	Contact	: Client Services
Address	: G P O BOX 2005 DARWIN NT, AUSTRALIA 0801	Address	: 277-289 Woodpark Road Smithfield NSW Australia 2164
E-mail	: tim.smith@urs.com	E-mail	: sydney@alsglobal.com
Telephone	: +61 89802900	Telephone	: +61-2-8784 8555
Facsimile	: +61 89413920	Facsimile	: +61-2-8784 8500
Project	: 42213719 DARWIN WATERFRONT STAGE 2	QC Level	: NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Site	: ----		
C-O-C number	: ----	Date Samples Received	: 08-JAN-2013
Sampler	: P.SCOTT	Issue Date	: 15-JAN-2013
Order number	: ----		
		No. of samples received	: 123
Quote number	: EN/001/12	No. of samples analysed	: 54

This report supersedes any previous report(s) with this reference. Results apply to the sample(s) as submitted. All pages of this report have been checked and approved for release.

This Interpretive Quality Control Report contains the following information:

- Analysis Holding Time Compliance
- Quality Control Parameter Frequency Compliance
- Brief Method Summaries
- Summary of Outliers

Analysis Holding Time Compliance

The following report summarises extraction / preparation and analysis times and compares with recommended holding times. Dates reported represent first date of extraction or analysis and precludes subsequent dilutions and reruns. Information is also provided re the sample container (preservative) from which the analysis aliquot was taken. Elapsed period to analysis represents number of days from sampling where no extraction / digestion is involved or period from extraction / digestion where this is present. For composite samples, sampling date is assumed to be that of the oldest sample contributing to the composite. Sample date for laboratory produced leachates is assumed as the completion date of the leaching process. Outliers for holding time are based on USEPA SW 846, APHA, AS and NEPM (1999). A listing of breaches is provided in the Summary of Outliers.

Holding times for leachate methods (excluding elutriates) vary according to the analytes being determined on the resulting solution. For non -volatile analytes, the holding time compliance assessment compares the leach date with the shortest analyte holding time for the equivalent soil method. These soil holding times are: Organics (14 days); Mercury (28 days) & other metals (180 days). A recorded breach therefore does not guarantee a breach for all non-volatile parameters.

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA002 : pH (Soils)							
Soil Glass Jar - Unpreserved (EA002)							
SP01-01 - 070113, SP01-07 - 070113, SP01-11 - 070113, SP01-15 - 070113, SP01-16 - 070113, SP01-19 - 070113, SP01-24 - 070113, SP01-27 - 070113, SP01-31 - 070113, SP01-35 - 070113, SP01-40 - 070113, SP01-44 - 070113, SP01-47 - 070113, SP02-01 - 070113, SP02-04 - 070113, SP02-08 - 070113, SP02-12 - 070113, SP02-15 - 070113, SP02-20 - 070113, SP02-24 - 070113, SP02-26 - 070113, SP02-31 - 070113, SP02-36 - 070113, SP02-40 - 070113, SP02-41 - 070113, SP02-46 - 070113, SP02-50 - 070113, SP02-53 - 070113, SP02-56 - 070113, SP02-60 - 070113, SP02-64 - 070113, SP02-68 - 070113, DUP01 - 070113, DUP03 - 070113, SP01-02 - 070113, SP01-08 - 070113, SP01-14 - 070113, SP01-20 - 070113, SP01-26 - 070113, SP01-32 - 070113, SP01-38 - 070113, SP01-45 - 070113, SP02-03 - 070113, SP02-10 - 070113, SP02-16 - 070113, SP02-22 - 070113, SP02-28 - 070113, SP02-34 - 070113, SP02-39 - 070113, SP02-47 - 070113, SP02-52 - 070113, SP02-58 - 070113, SP02-63 - 070113, SP02-70 - 070113	**07-JAN-2013**	**14-JAN-2013**	14-JAN-2013	✓	**14-JAN-2013**	14-JAN-2013	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EA055: Moisture Content								
Soil Glass Jar - Unpreserved (EA055-103)								
SP01-01 - 070113,	SP01-07 - 070113,	**07-JAN-2013**	**----**	----	----	**09-JAN-2013**	21-JAN-2013	✓
SP01-11 - 070113,	SP01-15 - 070113,							
SP01-16 - 070113,	SP01-19 - 070113,							
SP01-24 - 070113,	SP01-27 - 070113,							
SP01-31 - 070113,	SP01-35 - 070113,							
SP01-40 - 070113,	SP01-44 - 070113,							
SP01-47 - 070113,	SP02-01 - 070113,							
SP02-04 - 070113,	SP02-08 - 070113,							
SP02-12 - 070113,	SP02-15 - 070113,							
SP02-20 - 070113,	SP02-24 - 070113,							
SP02-26 - 070113,	SP02-31 - 070113,							
SP02-36 - 070113,	SP02-40 - 070113,							
SP02-41 - 070113,	SP02-46 - 070113,							
SP02-50 - 070113,	SP02-53 - 070113,							
SP02-56 - 070113,	SP02-60 - 070113,							
SP02-64 - 070113,	SP02-68 - 070113,							
DUP01 - 070113,	DUP03 - 070113							
Soil Glass Jar - Unpreserved (EA055-103)								
SP01-02 - 070113,	SP01-08 - 070113,	**07-JAN-2013**	**----**	----	----	**10-JAN-2013**	21-JAN-2013	✓
SP01-14 - 070113,	SP01-20 - 070113,							
SP01-26 - 070113,	SP01-32 - 070113,							
SP01-38 - 070113,	SP01-45 - 070113,							
SP02-03 - 070113,	SP02-10 - 070113,							
SP02-16 - 070113,	SP02-22 - 070113,							
SP02-28 - 070113,	SP02-34 - 070113,							
SP02-39 - 070113,	SP02-47 - 070113,							
SP02-52 - 070113,	SP02-58 - 070113,							
SP02-63 - 070113,	SP02-70 - 070113							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG005T: Total Metals by ICP-AES							
Soil Glass Jar - Unpreserved (EG005T)							
SP01-01 - 070113, SP01-07 - 070113, SP01-11 - 070113, SP01-15 - 070113, SP01-16 - 070113, SP01-19 - 070113, SP01-24 - 070113, SP01-27 - 070113, SP01-31 - 070113, SP01-35 - 070113, SP01-40 - 070113, SP01-44 - 070113, SP01-47 - 070113, SP02-01 - 070113, SP02-04 - 070113, SP02-08 - 070113, SP02-12 - 070113, SP02-15 - 070113, SP02-20 - 070113, SP02-24 - 070113, SP02-26 - 070113, SP02-31 - 070113, SP02-36 - 070113, SP02-40 - 070113, SP02-41 - 070113, SP02-46 - 070113, SP02-50 - 070113, SP02-53 - 070113, SP02-56 - 070113, SP02-60 - 070113, SP02-64 - 070113, SP02-68 - 070113, DUP01 - 070113, DUP03 - 070113, SP01-02 - 070113, SP01-08 - 070113, SP01-14 - 070113, SP01-20 - 070113, SP01-26 - 070113, SP01-32 - 070113, SP01-38 - 070113, SP01-45 - 070113, SP02-03 - 070113, SP02-10 - 070113, SP02-16 - 070113, SP02-22 - 070113, SP02-28 - 070113, SP02-34 - 070113, SP02-39 - 070113, SP02-47 - 070113, SP02-52 - 070113, SP02-58 - 070113, SP02-63 - 070113, SP02-70 - 070113	**07-JAN-2013**	**11-JAN-2013**	06-JUL-2013	✓	**14-JAN-2013**	06-JUL-2013	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EG035T: Total Recoverable Mercury by FIMS							
Soil Glass Jar - Unpreserved (EG035T)							
SP01-01 - 070113, SP01-07 - 070113, SP01-11 - 070113, SP01-15 - 070113, SP01-16 - 070113, SP01-19 - 070113, SP01-24 - 070113, SP01-27 - 070113, SP01-31 - 070113, SP01-35 - 070113, SP01-40 - 070113, SP01-44 - 070113, SP01-47 - 070113, SP02-01 - 070113, SP02-04 - 070113, SP02-08 - 070113, SP02-12 - 070113, SP02-15 - 070113, SP02-20 - 070113, SP02-24 - 070113, SP02-26 - 070113, SP02-31 - 070113, SP02-36 - 070113, SP02-40 - 070113, SP02-41 - 070113, SP02-46 - 070113, SP02-50 - 070113, SP02-53 - 070113, SP02-56 - 070113, SP02-60 - 070113, SP02-64 - 070113, SP02-68 - 070113, DUP01 - 070113, DUP03 - 070113, SP01-02 - 070113, SP01-08 - 070113, SP01-14 - 070113, SP01-20 - 070113, SP01-26 - 070113, SP01-32 - 070113, SP01-38 - 070113, SP01-45 - 070113, SP02-03 - 070113, SP02-10 - 070113, SP02-16 - 070113, SP02-22 - 070113, SP02-28 - 070113, SP02-34 - 070113, SP02-39 - 070113, SP02-47 - 070113, SP02-52 - 070113, SP02-58 - 070113, SP02-63 - 070113, SP02-70 - 070113	**07-JAN-2013**	**11-JAN-2013**	04-FEB-2013	✓	**14-JAN-2013**	04-FEB-2013	✓
EG048: Hexavalent Chromium (Alkaline Digest)							
Soil Glass Jar - Unpreserved (EG048G)							
SP01-02 - 070113, SP01-08 - 070113, SP01-14 - 070113, SP01-20 - 070113, SP01-26 - 070113, SP01-32 - 070113, SP01-38 - 070113, SP01-45 - 070113, SP02-03 - 070113, SP02-10 - 070113, SP02-16 - 070113, SP02-22 - 070113, SP02-28 - 070113, SP02-34 - 070113, SP02-39 - 070113, SP02-47 - 070113, SP02-52 - 070113, SP02-58 - 070113, SP02-63 - 070113, SP02-70 - 070113	**07-JAN-2013**	**11-JAN-2013**	04-FEB-2013	✓	**11-JAN-2013**	18-JAN-2013	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)		Sample Date	Extraction / Preparation			Analysis		
			Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP066: Polychlorinated Biphenyls (PCB)								
Soil Glass Jar - Unpreserved (EP066)								
SP01-02 - 070113,	SP01-08 - 070113,	**07-JAN-2013**	**10-JAN-2013**	21-JAN-2013	✓	**11-JAN-2013**	19-FEB-2013	✓
SP01-14 - 070113,	SP01-20 - 070113,							
SP01-26 - 070113,	SP01-32 - 070113,							
SP01-38 - 070113,	SP01-45 - 070113,							
SP02-03 - 070113,	SP02-10 - 070113,							
SP02-16 - 070113,	SP02-22 - 070113,							
SP02-28 - 070113,	SP02-34 - 070113,							
SP02-39 - 070113,	SP02-47 - 070113,							
SP02-52 - 070113,	SP02-58 - 070113,							
SP02-63 - 070113,	SP02-70 - 070113							
EP068A: Organochlorine Pesticides (OC)								
Soil Glass Jar - Unpreserved (EP068)								
SP01-02 - 070113,	SP01-08 - 070113,	**07-JAN-2013**	**10-JAN-2013**	21-JAN-2013	✓	**11-JAN-2013**	19-FEB-2013	✓
SP01-14 - 070113,	SP01-20 - 070113,							
SP01-26 - 070113,	SP01-32 - 070113,							
SP01-38 - 070113,	SP01-45 - 070113,							
SP02-03 - 070113,	SP02-10 - 070113,							
SP02-16 - 070113,	SP02-22 - 070113,							
SP02-28 - 070113,	SP02-34 - 070113,							
SP02-39 - 070113,	SP02-47 - 070113,							
SP02-52 - 070113,	SP02-58 - 070113,							
SP02-63 - 070113,	SP02-70 - 070113							

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP071)							
SP01-01 - 070113, SP01-07 - 070113, SP01-11 - 070113, SP01-15 - 070113, SP01-16 - 070113, SP01-19 - 070113, SP01-24 - 070113, SP01-27 - 070113, SP01-31 - 070113, SP01-35 - 070113, SP01-40 - 070113, SP01-44 - 070113, SP01-47 - 070113, SP02-01 - 070113, SP02-04 - 070113, SP02-08 - 070113, SP02-12 - 070113, SP02-15 - 070113, SP02-20 - 070113, SP02-24 - 070113, SP02-26 - 070113, SP02-31 - 070113, SP02-36 - 070113, SP02-40 - 070113, SP02-41 - 070113, SP02-46 - 070113, SP02-50 - 070113, SP02-53 - 070113, SP02-56 - 070113, SP02-60 - 070113, SP02-64 - 070113, SP02-68 - 070113, DUP01 - 070113, DUP03 - 070113	**07-JAN-2013**	**09-JAN-2013**	21-JAN-2013	✓	**10-JAN-2013**	18-FEB-2013	✓
Soil Glass Jar - Unpreserved (EP071)							
SP01-02 - 070113, SP01-08 - 070113, SP01-14 - 070113, SP01-20 - 070113, SP01-26 - 070113, SP01-32 - 070113, SP01-38 - 070113, SP01-45 - 070113, SP02-03 - 070113, SP02-10 - 070113, SP02-16 - 070113, SP02-22 - 070113, SP02-28 - 070113, SP02-34 - 070113, SP02-39 - 070113, SP02-47 - 070113, SP02-52 - 070113, SP02-58 - 070113, SP02-63 - 070113, SP02-70 - 070113	**07-JAN-2013**	**10-JAN-2013**	21-JAN-2013	✓	**10-JAN-2013**	19-FEB-2013	✓
EP075(SIM)A: Phenolic Compounds							
Soil Glass Jar - Unpreserved (EP075(SIM))							
SP01-02 - 070113, SP01-08 - 070113, SP01-14 - 070113, SP01-20 - 070113, SP01-26 - 070113, SP01-32 - 070113, SP01-38 - 070113, SP01-45 - 070113, SP02-03 - 070113, SP02-10 - 070113, SP02-16 - 070113, SP02-22 - 070113, SP02-28 - 070113, SP02-34 - 070113, SP02-39 - 070113, SP02-47 - 070113, SP02-52 - 070113, SP02-58 - 070113, SP02-63 - 070113, SP02-70 - 070113	**07-JAN-2013**	**10-JAN-2013**	21-JAN-2013	✓	**10-JAN-2013**	19-FEB-2013	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons							
Soil Glass Jar - Unpreserved (EP075(SIM))							
SP01-01 - 070113, SP01-07 - 070113, SP01-11 - 070113, SP01-15 - 070113, SP01-16 - 070113, SP01-19 - 070113, SP01-24 - 070113, SP01-27 - 070113, SP01-31 - 070113, SP01-35 - 070113, SP01-40 - 070113, SP01-44 - 070113, SP01-47 - 070113, SP02-01 - 070113, SP02-04 - 070113, SP02-08 - 070113, SP02-12 - 070113, SP02-15 - 070113, SP02-20 - 070113, SP02-24 - 070113	**07-JAN-2013**	**09-JAN-2013**	21-JAN-2013	✓	**09-JAN-2013**	18-FEB-2013	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
SP02-26 - 070113, SP02-31 - 070113, SP02-36 - 070113, SP02-40 - 070113, SP02-41 - 070113, SP02-46 - 070113, SP02-50 - 070113, SP02-53 - 070113, SP02-56 - 070113, SP02-60 - 070113, SP02-64 - 070113, SP02-68 - 070113, DUP01 - 070113, DUP03 - 070113	**07-JAN-2013**	**09-JAN-2013**	21-JAN-2013	✓	**10-JAN-2013**	18-FEB-2013	✓
Soil Glass Jar - Unpreserved (EP075(SIM))							
SP01-02 - 070113, SP01-08 - 070113, SP01-14 - 070113, SP01-20 - 070113, SP01-26 - 070113, SP01-32 - 070113, SP01-38 - 070113, SP01-45 - 070113, SP02-03 - 070113, SP02-10 - 070113, SP02-16 - 070113, SP02-22 - 070113, SP02-28 - 070113, SP02-34 - 070113, SP02-39 - 070113, SP02-47 - 070113, SP02-52 - 070113, SP02-58 - 070113, SP02-63 - 070113, SP02-70 - 070113	**07-JAN-2013**	**10-JAN-2013**	21-JAN-2013	✓	**10-JAN-2013**	19-FEB-2013	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEX							
Soil Glass Jar - Unpreserved (EP080)							
SP02-26 - 070113, SP02-31 - 070113, SP02-36 - 070113, SP02-40 - 070113, SP02-41 - 070113, SP02-46 - 070113, SP02-50 - 070113, SP02-53 - 070113, SP02-56 - 070113, SP02-60 - 070113, SP02-64 - 070113, SP02-68 - 070113, DUP01 - 070113, DUP03 - 070113	**07-JAN-2013**	---	21-JAN-2013	----	**10-JAN-2013**	21-JAN-2013	✓
Soil Glass Jar - Unpreserved (EP080)							
SP01-01 - 070113, SP01-07 - 070113, SP01-11 - 070113, SP01-15 - 070113, SP01-16 - 070113, SP01-19 - 070113, SP01-24 - 070113, SP01-27 - 070113, SP01-31 - 070113, SP01-35 - 070113, SP01-40 - 070113, SP01-44 - 070113, SP01-47 - 070113, SP02-01 - 070113, SP02-04 - 070113, SP02-08 - 070113, SP02-12 - 070113, SP02-15 - 070113, SP02-20 - 070113, SP02-24 - 070113	**07-JAN-2013**	**09-JAN-2013**	21-JAN-2013	✓	**10-JAN-2013**	21-JAN-2013	✓
Soil Glass Jar - Unpreserved (EP080)							
SP01-02 - 070113, SP01-08 - 070113, SP01-14 - 070113, SP01-20 - 070113, SP01-26 - 070113, SP01-32 - 070113, SP01-38 - 070113, SP01-45 - 070113, SP02-03 - 070113, SP02-10 - 070113, SP02-16 - 070113, SP02-22 - 070113, SP02-28 - 070113, SP02-34 - 070113, SP02-39 - 070113, SP02-47 - 070113, SP02-52 - 070113, SP02-58 - 070113, SP02-63 - 070113, SP02-70 - 070113	**07-JAN-2013**	**10-JAN-2013**	21-JAN-2013	✓	**10-JAN-2013**	21-JAN-2013	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080: BTEXN							
Soil Glass Jar - Unpreserved (EP080)							
SP02-26 - 070113, SP02-31 - 070113, SP02-36 - 070113, SP02-40 - 070113, SP02-41 - 070113, SP02-46 - 070113, SP02-50 - 070113, SP02-53 - 070113, SP02-56 - 070113, SP02-60 - 070113, SP02-64 - 070113, SP02-68 - 070113, DUP01 - 070113, DUP03 - 070113	**07-JAN-2013**	---	21-JAN-2013	----	**10-JAN-2013**	21-JAN-2013	✓
Soil Glass Jar - Unpreserved (EP080)							
SP01-01 - 070113, SP01-07 - 070113, SP01-11 - 070113, SP01-15 - 070113, SP01-16 - 070113, SP01-19 - 070113, SP01-24 - 070113, SP01-27 - 070113, SP01-31 - 070113, SP01-35 - 070113, SP01-40 - 070113, SP01-44 - 070113, SP01-47 - 070113, SP02-01 - 070113, SP02-04 - 070113, SP02-08 - 070113, SP02-12 - 070113, SP02-15 - 070113, SP02-20 - 070113, SP02-24 - 070113	**07-JAN-2013**	**09-JAN-2013**	21-JAN-2013	✓	**10-JAN-2013**	21-JAN-2013	✓
Soil Glass Jar - Unpreserved (EP080)							
SP01-02 - 070113, SP01-08 - 070113, SP01-14 - 070113, SP01-20 - 070113, SP01-26 - 070113, SP01-32 - 070113, SP01-38 - 070113, SP01-45 - 070113, SP02-03 - 070113, SP02-10 - 070113, SP02-16 - 070113, SP02-22 - 070113, SP02-28 - 070113, SP02-34 - 070113, SP02-39 - 070113, SP02-47 - 070113, SP02-52 - 070113, SP02-58 - 070113, SP02-63 - 070113, SP02-70 - 070113	**07-JAN-2013**	**10-JAN-2013**	21-JAN-2013	✓	**10-JAN-2013**	21-JAN-2013	✓

Matrix: **SOIL**

Evaluation: × = Holding time breach ; ✓ = Within holding time.

Method / Container / Client Sample ID(s)	Sample Date	Extraction / Preparation			Analysis		
		Date extracted	Due for extraction	Evaluation	Date analysed	Due for analysis	Evaluation
EP080/071: Total Petroleum Hydrocarbons							
Soil Glass Jar - Unpreserved (EP080)							
SP02-26 - 070113, SP02-31 - 070113, SP02-36 - 070113, SP02-40 - 070113, SP02-41 - 070113, SP02-46 - 070113, SP02-50 - 070113, SP02-53 - 070113, SP02-56 - 070113, SP02-60 - 070113, SP02-64 - 070113, SP02-68 - 070113, DUP01 - 070113, DUP03 - 070113	**07-JAN-2013**	**---**	21-JAN-2013	----	**10-JAN-2013**	21-JAN-2013	✓
Soil Glass Jar - Unpreserved (EP080)							
SP01-01 - 070113, SP01-07 - 070113, SP01-11 - 070113, SP01-15 - 070113, SP01-16 - 070113, SP01-19 - 070113, SP01-24 - 070113, SP01-27 - 070113, SP01-31 - 070113, SP01-35 - 070113, SP01-40 - 070113, SP01-44 - 070113, SP01-47 - 070113, SP02-01 - 070113, SP02-04 - 070113, SP02-08 - 070113, SP02-12 - 070113, SP02-15 - 070113, SP02-20 - 070113, SP02-24 - 070113	**07-JAN-2013**	**09-JAN-2013**	21-JAN-2013	✓	**10-JAN-2013**	21-JAN-2013	✓
Soil Glass Jar - Unpreserved (EP080)							
SP01-02 - 070113, SP01-08 - 070113, SP01-14 - 070113, SP01-20 - 070113, SP01-26 - 070113, SP01-32 - 070113, SP01-38 - 070113, SP01-45 - 070113, SP02-03 - 070113, SP02-10 - 070113, SP02-16 - 070113, SP02-22 - 070113, SP02-28 - 070113, SP02-34 - 070113, SP02-39 - 070113, SP02-47 - 070113, SP02-52 - 070113, SP02-58 - 070113, SP02-63 - 070113, SP02-70 - 070113	**07-JAN-2013**	**10-JAN-2013**	21-JAN-2013	✓	**10-JAN-2013**	21-JAN-2013	✓

Quality Control Parameter Frequency Compliance

The following report summarises the frequency of laboratory QC samples analysed within the analytical lot(s) in which the submitted sample(s) was(where) processed. Actual rate should be greater than or equal to the expected rate. A listing of breaches is provided in the Summary of Outliers.

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Laboratory Duplicates (DUP)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	2	20	**10.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Moisture Content	EA055-103	6	60	**10.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	6	54	**11.1**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	2	20	**10.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
pH (1:5)	EA002	6	55	**10.9**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	2	20	**10.0**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	6	54	**11.1**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	8	61	**13.1**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	6	54	**11.1**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	6	56	**10.7**	**10.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Laboratory Control Samples (LCS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	3	54	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	3	54	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	4	61	**6.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	3	54	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	3	56	**5.4**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Method Blanks (MB)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	3	54	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Pesticides by GCMS	EP068	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	20	**5.0**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Mercury by FIMS	EG035T	3	54	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	4	61	**6.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	3	54	**5.6**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
TPH Volatiles/BTEX	EP080	3	56	**5.4**	**5.0**	✓	NEPM 1999 Schedule B(3) and ALS QCS3 requirement
Matrix Spikes (MS)							
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	1	20	**5.0**	**5.0**	✓	ALS QCS3 requirement
PAH/Phenols (SIM)	EP075(SIM)	3	54	**5.6**	**5.0**	✓	ALS QCS3 requirement
Pesticides by GCMS	EP068	1	20	**5.0**	**5.0**	✓	ALS QCS3 requirement
Polychlorinated Biphenyls (PCB)	EP066	1	20	**5.0**	**5.0**	✓	ALS QCS3 requirement
Total Mercury by FIMS	EG035T	3	54	**5.6**	**5.0**	✓	ALS QCS3 requirement
Total Metals by ICP-AES	EG005T	4	61	**6.6**	**5.0**	✓	ALS QCS3 requirement
TPH - Semivolatile Fraction	EP071	3	54	**5.6**	**5.0**	✓	ALS QCS3 requirement

Matrix: **SOIL**

Evaluation: × = Quality Control frequency not within specification ; ✓ = Quality Control frequency within specification.

Quality Control Sample Type		Count		Rate (%)			Quality Control Specification
Analytical Methods	*Method*	*QC*	*Regular*	***Actual***	***Expected***	*Evaluation*	
Matrix Spikes (MS) - Continued							
TPH Volatiles/BTEX	EP080	3	56	**5.4**	**5.0**	✓	ALS QCS3 requirement

Brief Method Summaries

The analytical procedures used by the Environmental Division have been developed from established internationally recognized procedures such as those published by the US EPA, APHA, AS and NEPM. In house developed procedures are employed in the absence of documented standards or by client request. The following report provides brief descriptions of the analytical procedures employed for results reported in the Certificate of Analysis. Sources from which ALS methods have been developed are provided within the Method Descriptions.

Analytical Methods	Method	Matrix	Method Descriptions
pH (1:5)	EA002	SOIL	(APHA 21st ed., 4500H+) pH is determined on soil samples after a 1:5 soil/water leach. This method is compliant with NEPM (1999) Schedule B(3) (Method 103)
Moisture Content	EA055-103	SOIL	A gravimetric procedure based on weight loss over a 12 hour drying period at 103-105 degrees C. This method is compliant with NEPM (2010 Draft) Schedule B(3) Section 7.1 and Table 1 (14 day holding time).
Total Metals by ICP-AES	EG005T	SOIL	(APHA 21st ed., 3120; USEPA SW 846 - 6010) (ICPAES) Metals are determined following an appropriate acid digestion of the soil. The ICPAES technique ionises samples in a plasma, emitting a characteristic spectrum based on metals present. Intensities at selected wavelengths are compared against those of matrix matched standards. This method is compliant with NEPM (1999) Schedule B(3)
Total Mercury by FIMS	EG035T	SOIL	AS 3550, APHA 21st ed., 3112 Hg - B (Flow-injection (SnCl2)(Cold Vapour generation) AAS) FIM-AAS is an automated flameless atomic absorption technique. Mercury in solids are determined following an appropriate acid digestion. Ionic mercury is reduced online to atomic mercury vapour by SnCl2 which is then purged into a heated quartz cell. Quantification is by comparing absorbance against a calibration curve. This method is compliant with NEPM (1999) Schedule B(3)
Hexavalent Chromium by Alkaline Digestion and DA Finish	EG048G	SOIL	USEPA SW846, Method 3060A. Hexavalent chromium is extracted by alkaline digestion. The digest is determined by photometrically by automatic discrete analyser, following pH adjustment. The instrument uses colour development using dephenylcarbazide. Each run of samples is measured against a five-point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Appdx. 2)
Polychlorinated Biphenyls (PCB)	EP066	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 504)
Pesticides by GCMS	EP068	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS and quantification is by comparison against an established 5 point calibration curve. This technique is compliant with NEPM (1999) Schedule B(3) (Method 504,505)
TPH - Semivolatile Fraction	EP071	SOIL	(USEPA SW 846 - 8015A) Sample extracts are analysed by Capillary GC/FID and quantified against alkane standards over the range C10 - C36. This method is compliant with NEPM (1999) Schedule B(3) (Method 506.1)
PAH/Phenols (SIM)	EP075(SIM)	SOIL	(USEPA SW 846 - 8270B) Extracts are analysed by Capillary GC/MS in Selective Ion Mode (SIM) and quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 502 and 507)
TPH Volatiles/BTEX	EP080	SOIL	(USEPA SW 846 - 8260B) Extracts are analysed by Purge and Trap, Capillary GC/MS. Quantification is by comparison against an established 5 point calibration curve. This method is compliant with NEPM (1999) Schedule B(3) (Method 501)

Preparation Methods	Method	Matrix	Method Descriptions
1:5 solid / water leach for soluble analytes	EN34	SOIL	10 g of soil is mixed with 50 mL of distilled water and tumbled end over end for 1 hour. Water soluble salts are leached from the soil by the continuous suspension. Samples are settled and the water filtered off for analysis.
Methanolic Extraction of Soils for Purge and Trap	* ORG16	SOIL	(USEPA SW 846 - 5030A) 5g of solid is shaken with surrogate and 10mL methanol prior to analysis by Purge and Trap - GC/MS.

Preparation Methods	Method	Matrix	Method Descriptions
Tumbler Extraction of Solids (Option A - Concentrating)	ORG17A	SOIL	In-house, Mechanical agitation (tumbler). 20g of sample, Na2SO4 and surrogate are extracted with 150mL 1:1 DCM/Acetone by end over end tumble. The solvent is decanted, dehydrated and concentrated (by KD) to the desired volume for analysis.
Tumbler Extraction of Solids (Option B - Non-concentrating)	ORG17B	SOIL	In-house, Mechanical agitation (tumbler). 10g of sample, Na2SO4 and surrogate are extracted with 20mL 1:1 DCM/Acetone by end over end tumble. The solvent is transferred directly to a GC vial for analysis.

Summary of Outliers

Outliers : Quality Control Samples

The following report highlights outliers flagged in the Quality Control (QC) Report. Surrogate recovery limits are static and based on USEPA SW 846 or ALS-QWI/EN/38 (in the absence of specific USEPA limits). This report displays QC Outliers (breaches) only.

Duplicates, Method Blanks, Laboratory Control Samples and Matrix Spikes

Matrix: **SOIL**

Compound Group Name	Laboratory Sample ID	Client Sample ID	Analyte	CAS Number	Data	Limits	Comment
Duplicate (DUP) RPDs							
EG005T: Total Metals by ICP-AES	ES1300228-031	SP02-64 - 070113	**Manganese**	7439-96-5	50.4 %	0-20%	**RPD exceeds LOR based limits**
Laboratory Control Spike (LCS) Recoveries							
EP075(SIM)A: Phenolic Compounds	3178622-007	----	**3- & 4-Methylphenol**	1319-77-3	120 %	72-119%	**Recovery greater than upper control limit**
EP075(SIM)B: Polynuclear Aromatic Hydrocarbons	3177911-007	----	**Acenaphthene**	83-32-9	112 %	81.5-112%	**Recovery greater than upper control limit**

- **For all matrices, no Method Blank value outliers occur.**
- **For all matrices, no Matrix Spike outliers occur.**

Regular Sample Surrogates

- **For all regular sample matrices, no surrogate recovery outliers occur.**

Outliers : Analysis Holding Time Compliance

This report displays Holding Time breaches only. Only the respective Extraction / Preparation and/or Analysis component is/are displayed.

- **No Analysis Holding Time Outliers exist.**

Outliers : Frequency of Quality Control Samples

The following report highlights breaches in the Frequency of Quality Control Samples.

- **No Quality Control Sample Frequency Outliers exist.**

Attachment C

DATA VALIDATION SUMMARY REPORT: SOIL Date: 22/01/2013

Site:	**Waterfront Precinct**	Validation Conducted by:	Bek Aagaard
Project No.:	**42213719**		
Project Manager:	**Tim Smith**	Authorised by:	Tim Smith
Matrix:	**Water**		
Laboratory:	**ALS/Envirolab**		
Lab Batch Nos:	**ES1300228 / 83927**		
Sample Dates:	**7/01/2013**		

Number of Samples Taken

Primary samples:	54
Inter-laboratory duplicates:	2
Intra-laboratory duplicates:	2

Component				Assessment		Comments
Frequency of laboratory QA/QC		OK	✓	NOT OK		
Frequency of field QA/QC		OK	✓	NOT OK		Refer to Note 1
Sample handling/preservation/holding tim		OK	✓	NOT OK		
Number of tests requested/reported		OK	✓	NOT OK		
Limits of reporting		OK	✓	NOT OK		
Blank Analysis	Field Blank	OK	✓	NOT OK		Refer to Note 2
	Rinsate Blank	OK	✓	NOT OK		
	Trip Blank	OK	✓	NOT OK		
	Method Blank	OK	✓	NOT OK		
Field duplicate RPDs		OK	✓	NOT OK		
Laboratory duplicate RPDs		OK	✓	NOT OK		Refer to Note 3
Matrix Spikes	% Recoveries	OK	✓	NOT OK		
LCS	% Recoveries	OK	✓	NOT OK		Refer to Note 4
Surrogate recoveries		OK	✓	NOT OK		

Other observations:

ES1300228

Note 1 Several analytes (Barium, Beryllium, Cobalt, Manganese, Vanadium and Hexavalent Chromium, Phenols and OC and OP pesticides) were not reported in either Intra- and Inter-laboratory field duplicate results; hence, care should be taken when interpreting results for these compounds close to the investigation levels (metals).
The presence of laboratory duplicates is considered sufficient for interpretation of the precision of the results, where no concentration of analytes in the primary samples were reported above laboratory LOR (Phenols and and OC and OP pesticides).
The frequency of Inta- and Inter-laboratory duplicates were under-reported for several analytes (TPH and BTEX). The precision of this data can be assessed as acceptable based on laboratory duplicates.

Note 2 No Field Blank, Rinsate Blank, Trip Blank or Method Blank were analysed; hence potential cross-contamination has not been assessed directly. As no samples were reported to contain BTEXN or volatile TPH and all samples were taken from the excavator's bucket, fresh gloves and placed directly into the sample container, the potential for cross-contamination is minimal; therefore, this is not considered to affect the interpretation of the results.

Note 3 Laboratory duplicate RPDs exceeded LOR based limits for Manganese in field sample SP02-64-070113. This apparent lack of precision is likely due to heterogeneity of the distribution of Manganese in soils at the site, and should be taken into consideration when evaluating individual results close to the investigation levels.

Note 4 The Laboratory Control Spike (LCS) recoveries for 3- and 4-Methylphenol and Acenaphthene were reported greater than the upper control limits by <1% in laboratory Batch ES1300228; hence, there is the potential for the results to be biased high. Due to the presence of other quality control data, including method blanks, matrix spikes and surrogate recoveries, and as these analytes were not reported above the laboratory LOR, the accuracy of the analytical data for these analytes is considered acceptable.

Summary Comments:
None

Recommended Corrective Action
None

Site: **Waterfront Precinct**
Project No.: **42213719**
Project Manager: **Tim Smith**
Matrix: **Water**
Laboratory: **ALS/Envirolab**
Lab Batch Nos: **ES1300228 / 83927**
Sample Dates: **7/01/2013**

Analytical Method	Analytical Parameter	Number of Tests Requested	Number of Tests Reported	Number of Primary Samples	Holding Times (a)	Limits of Reporting (b)	Field Blank (1 per day)		Rinsate Blank (1 per day)		Trip Blank (1 per esky with VOCs)		Method Blank (1 per batch)		Intra-Laboratory Duplicate Sample (1 in 20)		Inter-Laboratory Duplicate Sample (1 in 20)		Lab Duplicate (1 in 10)		Matrix Spike (1 in 20)		LCS (1 per batch)		Surrogates (GC-MS organics)	
							Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Number Required	Number Reported	Reported	OK
VOLATILES ANALYSIS/ALS/EP080	Benzene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	✓	✓
	Ethylbenzene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	✓	✓
	meta- & para-Xylene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	✓	✓
	Naphthalene	58	58	54	✓	✓	0	0	0	0	0	0	1	6	3	2	3	2	6	6	3	3	1	6	✓	✓
	ortho-Xylene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	✓	✓
	Toluene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	✓	✓
VOLATILES ANALYSIS/ALS/EP080/071	C6 - C10 Fraction	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	✓	✓
	C6 - C10 Fraction minus BTEX (F1)	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	✓	✓
	C6 - C9 Fraction	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	✓	✓
SOIL PREPARATION/ALS/EA055	Moisture Content (dried @ 103°C)	58	58	54	✓	✓	0	0	0	0	0	0	0	0	3	2	3	2	6	6	0	0	0	0	-	-
METALS ANALYSIS/ALS/EG005T	Arsenic	58	58	54	✓	✓	0	0	0	0	0	0	1	4	3	2	3	2	6	8	3	4	1	4	✓	×
	Barium	20	20	20	✓	✓	0	0	0	0	0	0	1	4	1	0	1	0	2	7	1	0	1	4	✓	×
	Beryllium	20	20	20	✓	✓	0	0	0	0	0	0	1	4	1	0	1	0	2	8	1	0	1	4	✓	×
	Cadmium	58	58	54	✓	✓	0	0	0	0	0	0	1	4	3	2	3	2	6	8	3	4	1	4	✓	×
	Chromium	58	58	54	✓	✓	0	0	0	0	0	0	1	4	3	2	3	2	6	8	3	4	1	4	✓	×
	Cobalt	20	20	20	✓	✓	0	0	0	0	0	0	1	4	1	0	1	0	2	8	1	0	1	4	✓	×
	Copper	58	58	54	✓	✓	0	0	0	0	0	0	1	4	3	2	3	2	6	8	3	4	1	4	✓	×
	Lead	58	58	54	✓	✓	0	0	0	0	0	0	1	4	3	2	3	2	6	8	3	4	1	4	✓	×
	Manganese	20	20	20	✓	✓	0	0	0	0	0	0	1	4	1	0	1	0	2	8	1	0	1	4	✓	×
	Nickel	58	58	54	✓	✓	0	0	0	0	0	0	1	4	3	2	3	2	6	8	3	4	1	4	✓	×
	Vanadium	20	20	20	✓	✓	0	0	0	0	0	0	1	4	1	0	1	0	2	7	1	0	1	4	✓	×
	Zinc	58	58	54	✓	✓	0	0	0	0	0	0	1	4	3	2	3	2	6	8	3	4	1	4	✓	×
METALS ANALYSIS/ALS/EG035T	Mercury	58	56	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	✓	×
SEMIVOLATILES ANALYSIS/ALS/EP075(SIM)B	Acenaphthene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	✓	✓
	Acenaphthylene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Anthracene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Benz(a)anthracene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Benzo(a)pyrene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Benzo(a)pyrene TEQ (WHO)	58	58	54	✓	✓	0	0	0	0	0	0	0	0	3	2	3	2	6	6	3	0	1	0	✓	✓
	Benzo(b)fluoranthene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Benzo(g.h.i)perylene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Benzo(k)fluoranthene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Chrysene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Dibenz(a.h)anthracene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Fluoranthene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Fluorene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Indeno(1.2.3.cd)pyrene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Naphthalene	58	58	54	✓	✓	0	0	0	0	0	0	1	6	3	2	3	2	6	6	3	3	1	6	✓	✓
	Phenanthrene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	0	1	3	✓	✓
	Pyrene	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP080/071	>C10 - C16 Fraction	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	-	-
	>C16 - C34 Fraction	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	-	-
	>C34 - C40 Fraction	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	-	-
	C10 - C14 Fraction	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	-	-
	C15 - C28 Fraction	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	-	-
	C29 - C36 Fraction	58	58	54	✓	✓	0	0	0	0	0	0	1	3	3	2	3	2	6	6	3	3	1	3	-	-
WET CHEMISTRY AND PREPARATION/ALS/EA002	pH Value	58	58	54	✓	✓	0	0	0	0	0	0	0	0	3	2	3	2	6	6	0	0	0	0	-	-
SEMIVOLATILES ANALYSIS/ALS/EP068A	4.4`-DDD	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	4.4`-DDE	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	4.4`-DDT	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	1	1	1		
	Aldrin	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	1	1	1	✓	✓
	alpha-BHC	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	alpha-Endosulfan	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	beta-BHC	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	beta-Endosulfan	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓

	cis-Chlordane	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	delta-BHC	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	Dieldrin	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	1	1	1	✓	✓
	Endosulfan sulfate	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	Endrin	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	1	1	1	✓	✓
	Endrin aldehyde	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	Endrin ketone	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	gamma-BHC	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	1	1	1	✓	✓
	Heptachlor	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	1	1	1	✓	✓
	Heptachlor epoxide	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	Hexachlorobenzene (HCB)	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	Methoxychlor	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
	trans-Chlordane	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	0	1	1	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP075(SIM)A	2.4.5-Trichlorophenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	0	1	3	✓	✓
	2.4.6-Trichlorophenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	0	1	3	✓	✓
	2.4-Dichlorophenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	0	1	3	✓	✓
	2.4-Dimethylphenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	0	1	3	✓	✓
	2.6-Dichlorophenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	0	1	3	✓	✓
	2-Chlorophenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	3	1	3	✓	✓
	2-Methylphenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	0	1	3	✓	✓
	2-Nitrophenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	3	1	3	✓	✓
	3- & 4-Methylphenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	0	1	3	✓	✓
	4-Chloro-3-Methylphenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	3	1	3	✓	✓
	Pentachlorophenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	3	1	3	✓	✓
	Phenol	20	20	20	✓	✓	0	0	0	0	0	0	1	3	1	0	1	0	2	6	1	3	1	3	✓	✓
SEMIVOLATILES ANALYSIS/ALS/EP066	Total Polychlorinated biphenyls	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	1	1	1	✓	✓
INSTRUMENT LABORATORY (NON-METALLICS)/ALS/EG048	Hexavalent Chromium	20	20	20	✓	✓	0	0	0	0	0	0	1	1	1	0	1	0	2	2	1	1	1	1	-	-

Site: **Waterfront Precinct**
Project No.: **42213719**
Project Manager: **Tim Smith**
Matrix: **Soil**
Laboratory: **ALS/Envirolab**
Lab Batch Nos: **ES1300228 / 83927**
Sample Dates: **7/01/2013**

Field Duplicates (SOIL)

			SDG	ES1300228	ES1300228			ES1300228	ES1300228		
			Sample ID	SP01-24 - 070113	DUP01 - 070113	RPD	Category1	SP01-27 - 070113	DUP03 - 070113	RPD	Category1
			Date Sampled	7/01/2013	7/01/2013			7/01/2013	7/01/2013		
Chem_Group	**ChemName**	**Units**	**LOR**								
Moisture Content	Moisture Content	%	1	**21.1**	**15.0**	**33.8**	**Fail**	8.6	10.4	18.9	Pass
PAH/Phenols (SIM)	Naphthalene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Acenaphthylene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Acenaphthene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Anthracene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Fluorene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Phenanthrene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Fluoranthene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Benz(a)anthracene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Benzo(b)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Benzo(k)fluoranthene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Benzo(a)pyrene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Benzo(a)pyrene TEQ	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Chrysene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Pyrene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Benzo(g,h,i)perylene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Dibenz(a,h)anthracene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Indeno(1,2,3-cd)pyrene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
pH (1:5)	pH (Lab)	pH Units	0.1	8.3	8.3	0	Pass	8.3	8.4	1.2	Pass
Total Mercury by FIMS	Mercury	mg/kg	0.1	<0.1	<0.1	0	Pass	<0.1	<0.1	0	Pass
Total Metals by ICP-AES	Arsenic	mg/kg	5	7	7	0	Pass	8	6	28.6	Pass
	Cadmium	mg/kg	1	<1	<1	0	Pass	<1	<1	0	Pass
	Chromium	mg/kg	2	**72**	**53**	**30.4**	**Pass-2**	**69**	**33**	**70.6**	**Fail**
	Copper	mg/kg	5	48	55	13.6	Pass	29	17	52.2	**Pass-2**
	Lead	mg/kg	5	31	25	21.4	Pass	21	17	21.1	Pass
	Nickel	mg/kg	2	10	4	85.7	**Pass-2**	4	6	40.0	**Pass-1**
	Zinc	mg/kg	**5**	**93**	**45**	**69.6**	**Pass-2**	31	44	34.7	**Pass-1**
TPH - Semivolatile Fraction	>C10-C16 fraction	mg/kg	50	<50	<50	0	Pass	<50	<50	0	Pass
	>C16-C34 fraction	mg/kg	100	<100	<100	0	Pass	<100	<100	0	Pass
	>C34-C40 fraction	mg/kg	100	<100	<100	0	Pass	<100	<100	0	Pass
	>C10-C40 fraction (sum)	mg/kg	50	<50	<50	0	Pass	<50	<50	0	Pass
	C10-C14 fraction	mg/kg	50	<50	<50	0	Pass	<50	<50	0	Pass

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Sample Dates: **7/01/2013**

Field Duplicates (SOIL)

			SDG	ES1300228	ES1300228			ES1300228	ES1300228		
			Sample ID	SP01-24 - 070113	DUP01 - 070113	RPD	Category1	SP01-27 - 070113	DUP03 - 070113	RPD	Category1
			Date Sampled	7/01/2013	7/01/2013			7/01/2013	7/01/2013		
Chem_Group	**ChemName**	**Units**	**LOR**								
	C15-C28 fraction	mg/kg	100	<100	<100	0	Pass	<100	<100	0	Pass
	C29-C36 fraction	mg/kg	100	<100	<100	0	Pass	<100	<100	0	Pass
	C10-C36 fraction (sum)	mg/kg	50	<50	<50	0	Pass	<50	<50	0	Pass
TPH Volatiles/BTEX	C6-C10 fraction (F1 minus BTEX)	mg/kg	10	<10	<10	0	Pass	<10	<10	0	Pass
	Benzene	mg/kg	0.2	<10	<10	0	Pass	<10	<10	0	Pass
	C6-C10 fraction	mg/kg	10	<0.2	<0.2	0	Pass	<0.2	<0.2	0	Pass
	Naphthalene (VOC)	mg/kg	1.0	<10	<10	0	Pass	<10	<10	0	Pass
	Toluene	mg/kg	0.5	<1	<1	0	Pass	<1	<1	0	Pass
	Ethylbenzene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	m&p-Xylene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	o-Xylene	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Total Xylenes	mg/kg	0.5	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	C6-C9 fraction	mg/kg	10	<0.5	<0.5	0	Pass	<0.5	<0.5	0	Pass
	Total BTEX	mg/kg	0.2	<10	<10	0	Pass	<10	<10	0	Pass

Pass RPD <= 30%
Pass-1 RPD > 30%, Analysis result < 10 times LOR
Pass-2 RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

Site: **Waterfront Precinct**
Project No.: **42213719**
Project Manager: **Tim Smith**
Matrix: **Soil**
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Lab Batch Nos: **ES1300228 / 83927**
Sample Dates: **7/01/2013**

Field Triplicates (SOIL)

			SDG	ES1300228	Interlab_D			ES1300228	Interlab_D	
			Sample ID	SP01-27 - 070113	Dup02	**RPD**	**Category1**	SP02-15 - 070113	Dup04	**RPD**
			Date Sampled	7/01/2013	7/01/2013			7/01/2013	7/01/2013	
Chem_Group	**ChemName**	**Units**	**LOR**							
Moisture Content	Moisture Content	%	**0.1**	8.6	8.2	4.8	Pass	16.5	15.0	9.5
PAH/Phenols (SIM)	Naphthalene	mg/kg	**1**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Acenaphthylene	mg/kg	**0.1**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Acenaphthene	mg/kg	**0.1**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Anthracene	mg/kg	**0.1**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Fluorene	mg/kg	**0.1**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Phenanthrene	mg/kg	**0.1**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Fluoranthene	mg/kg	**0.1**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Benz(a)anthracene	mg/kg	**0.1**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Benzo(b)fluoranthene	mg/kg	**0.5**	<0.5	-	-				
	Benzo(k)fluoranthene	mg/kg	**0.5**	<0.5	-	-				
	Benzo(a)pyrene	mg/kg	**0.5**	<0.5	<0.05	0	Pass	<0.5	<0.05	0
	Benzo(a)pyrene TEQ	mg/kg	**0.5**	<0.5	<0.5	0	Pass	<0.5	<0.5	0
	Chrysene	mg/kg	**0.5**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Pyrene	mg/kg	**0.5**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Benzo(g,h,i)perylene	mg/kg	**0.5**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Dibenz(a,h)anthracene	mg/kg	**0.5**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
	Indeno(1,2,3-cd)pyrene	mg/kg	**0.5**	<0.5	<0.1	0	Pass	<0.5	<0.1	0
pH (1:5)	pH (Lab)	pH Units	**0.1**	8.3	8.2	1.2	Pass	6.0	6.8	12.5
Total Mercury by FIMS	Mercury	mg/kg	**0.1**	<0.1	<0.1	0	Pass	<0.1	<0.1	0
Total Metals by ICP-AES	Arsenic	mg/kg	**4**	8.0	6.0	29	Pass	<5	<4	0
	Cadmium	mg/kg	**0.5**	<1	<0.5	0	Pass	<1	<0.5	0
	Chromium	mg/kg	**1**	**69.0**	**40.0**	**53**	**Fail**	**49.0**	**48.0**	2
	Copper	mg/kg	**1**	29.0	29.0	0	Pass	**12.0**	**13.0**	8
	Lead	mg/kg	**1**	21	18.0	15	Pass	<5	**6.0**	18
	Nickel	mg/kg	**1**	4.0	5.0	22	Pass	**6.0**	**8.0**	29
	Zinc	mg/kg	**1**	31.0	37	18	Pass	**29.0**	**23.0**	23
TPH - Semivolatile Fraction	>C10-C16 fraction	mg/kg	**50**	<50	<50	0	Pass	<50	<50	0
	>C16-C34 fraction	mg/kg	**100**	<100	<100	0	Pass	<100	<100	0
	>C34-C40 fraction	mg/kg	**100**	<100	<100	0	Pass	<100	<100	0
	>C10-C40 fraction (sum)	mg/kg	**50**	<50	NA	NA	-	<50	NA	-
	C10-C14 fraction	mg/kg	**50**	<50	<50	0	Pass	<50	<50	0

Site: **Waterfront Precinct**
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Sample Dates: **7/01/2013**

Field Triplicates (SOIL)

			SDG	ES1300228	Interlab_D			ES1300228	Interlab_D	
			Sample ID	SP01-27 - 070113	Dup02	**RPD**	**Category1**	SP02-15 - 070113	Dup04	**RPD**
			Date Sampled	7/01/2013	7/01/2013			7/01/2013	7/01/2013	
Chem_Group	**ChemName**	**Units**	**LOR**							
	C15-C28 fraction	mg/kg	**100**	<100	<100	0	Pass	<100	<100	0
	C29-C36 fraction	mg/kg	**100**	<100	<100	0	Pass	<100	<100	0
	C10-C36 fraction (sum)	mg/kg	**50**	<50	NA	NA	-	<50	NA	-
TPH Volatiles/BTEX	C6-C10 fraction (F1 minus BTEX)	mg/kg	**25**	<10	<25	0	Pass	<10	<25	0
	Benzene	mg/kg	**0.2**	<0.2	<0.2	0	Pass	<0.2	<0.2	0
	C6-C10 fraction	mg/kg	**25**	<10	NA	0	Pass	<10	NA	0
	Naphthalene (VOC)	mg/kg	**1**	<1	<25	0	Pass	<1	<25	0
	Toluene	mg/kg	**0.5**	<1	<0.5	0	Pass	<1	<0.5	0
	Ethylbenzene	mg/kg	**1**	<0.5	<1	0	Pass	<0.5	<1	0
	m&p-Xylene	mg/kg	**2**	<0.5	<1	0	Pass	<0.5	<1	0
	o-Xylene	mg/kg	**1**	<0.5	<2	0	Pass	<0.5	<2	0
	Total Xylenes	mg/kg	**0.5**	<0.5	NA	0	Pass	<0.5	NA	0
	C6-C9 fraction	mg/kg	**25**	<10	<25	0	Pass	<10	<25	
	Total BTEX	mg/kg	**0.2**	<10	NA	0	Pass	<10	NA	0

Pass RPD <= 30%
Pass-1 RPD > 30%, Analysis result < 10 times LOR
Pass-2 RPD <= 50%, Analysis result > 10 times LOR and < 20 times LOR

Attachment D

General UCL Statistics for Data Sets with Non-Detects		
User Selected Options		
From File	WorkSheet.wst	
Full Precision	OFF	
Confidence Coefficient	95%	
Number of Bootstrap Operations	2000	

Arsenic

General Statistics

Number of Valid Data	54	Number of Detected Data	33
Number of Distinct Detected Data	10	Number of Non-Detect Data	21
		Percent Non-Detects	38.89%

Raw Statistics		**Log-transformed Statistics**	
Minimum Detected	5	Minimum Detected	1.609
Maximum Detected	18	Maximum Detected	2.89
Mean of Detected	8.03	Mean of Detected	2.038
SD of Detected	2.721	SD of Detected	0.292
Minimum Non-Detect	5	Minimum Non-Detect	1.609
Maximum Non-Detect	5	Maximum Non-Detect	1.609

UCL Statistics

Normal Distribution Test with Detected Values Only		**Lognormal Distribution Test with Detected Values Only**	
Shapiro Wilk Test Statistic	0.82	Shapiro Wilk Test Statistic	0.914
5% Shapiro Wilk Critical Value	0.931	5% Shapiro Wilk Critical Value	0.931
Data not Normal at 5% Significance Level		**Data not Lognormal at 5% Significance Level**	
Assuming Normal Distribution		**Assuming Lognormal Distribution**	
DL/2 Substitution Method		DL/2 Substitution Method	
Mean	5.88	Mean	1.602
SD	3.446	SD	0.597
95% DL/2 (t) UCL	6.665	95% H-Stat (DL/2) UCL	6.957
Maximum Likelihood Estimate(MLE) Method		Log ROS Method	
Mean	5.799	Mean in Log Scale	1.751
SD	3.734	SD in Log Scale	0.451
95% MLE (t) UCL	6.65	Mean in Original Scale	6.37
95% MLE (Tiku) UCL	6.748	SD in Original Scale	3.022
		95% t UCL	7.058
		95% Percentile Bootstrap UCL	7.028
		95% BCA Bootstrap UCL	7.136
		95% H UCL	7.157
Gamma Distribution Test with Detected Values Only		**Data Distribution Test with Detected Values Only**	
k star (bias corrected)	10.24	**Data do not follow a Discernable Distribution (0.05)**	
Theta Star	0.784		
nu star	676		
A-D Test Statistic	1.212	**Nonparametric Statistics**	
5% A-D Critical Value	0.747	Kaplan-Meier (KM) Method	
K-S Test Statistic	0.747	Mean	6.852
5% K-S Critical Value	0.153	SD	2.563

56	**Data not Gamma Distributed at 5% Significance Level**										SE of Mean	0.354
57											95% KM (t) UCL	7.445
58	**Assuming Gamma Distribution**										95% KM (z) UCL	7.435
59	Gamma ROS Statistics using Extrapolated Data										95% KM (jackknife) UCL	7.441
60	Minimum	0.000001									95% KM (bootstrap t) UCL	7.621
61	Maximum	18									95% KM (BCA) UCL	7.667
62	Mean	5.163									95% KM (Percentile Bootstrap) UCL	7.574
63	Median	6									95% KM (Chebyshev) UCL	8.396
64	SD	4.249									97.5% KM (Chebyshev) UCL	9.064
65	k star	0.201									99% KM (Chebyshev) UCL	10.38
66	Theta star	25.66										
67	Nu star	21.73									**Potential UCLs to Use**	
68	AppChi2	12.13									95% KM (BCA) UCL	7.667
69	95% Gamma Approximate UCL (Use when n >= 40)	9.245										
70	95% Adjusted Gamma UCL (Use when n < 40)	9.398										
71	**Note: DL/2 is not a recommended method.**											
72												
73	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
74	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
75	**For additional insight, the user may want to consult a statistician.**											
76												
77												
78	**Barium**											
79												
80	**General Statistics**											
81	Number of Valid Data	20									Number of Detected Data	18
82	Number of Distinct Detected Data	12									Number of Non-Detect Data	2
83											Percent Non-Detects	10.00%
84												
85	**Raw Statistics**										**Log-transformed Statistics**	
86	Minimum Detected	20									Minimum Detected	2.996
87	Maximum Detected	460									Maximum Detected	6.131
88	Mean of Detected	115									Mean of Detected	4.367
89	SD of Detected	117.2									SD of Detected	0.861
90	Minimum Non-Detect	10									Minimum Non-Detect	2.303
91	Maximum Non-Detect	10									Maximum Non-Detect	2.303
92												
93												
94	**UCL Statistics**											
95	**Normal Distribution Test with Detected Values Only**										**Lognormal Distribution Test with Detected Values Only**	
96	Shapiro Wilk Test Statistic	0.74									Shapiro Wilk Test Statistic	0.95
97	5% Shapiro Wilk Critical Value	0.897									5% Shapiro Wilk Critical Value	0.897
98	**Data not Normal at 5% Significance Level**										**Data appear Lognormal at 5% Significance Level**	
99												
100	**Assuming Normal Distribution**										**Assuming Lognormal Distribution**	
101	DL/2 Substitution Method										DL/2 Substitution Method	
102	Mean	104									Mean	4.091
103	SD	115.9									SD	1.176
104	95% DL/2 (t) UCL	148.8									95% H-Stat (DL/2) UCL	261.3
105												
106	Maximum Likelihood Estimate(MLE) Method										Log ROS Method	
107	Mean	97.36									Mean in Log Scale	4.164
108	SD	121.7									SD in Log Scale	1.03
109	95% MLE (t) UCL	144.4									Mean in Original Scale	104.5
110	95% MLE (Tiku) UCL	142.5									SD in Original Scale	115.4

111											95% t UCL	149.2
112											95% Percentile Bootstrap UCL	148.9
113											95% BCA Bootstrap UCL	159.7
114											95% H UCL	205.6
115												
116	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
117					k star (bias corrected)	1.261	**Data appear Gamma Distributed at 5% Significance Level**					
118					Theta Star	91.22						
119					nu star	45.38						
120												
121					A-D Test Statistic	0.711	**Nonparametric Statistics**					
122					5% A-D Critical Value	0.757	Kaplan-Meier (KM) Method					
123					K-S Test Statistic	0.757	Mean	105.5				
124					5% K-S Critical Value	0.207	SD	111.7				
125	**Data appear Gamma Distributed at 5% Significance Level**						SE of Mean	25.71				
126							95% KM (t) UCL	150				
127	**Assuming Gamma Distribution**						95% KM (z) UCL	147.8				
128	Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	149.2				
129					Minimum	0.000001	95% KM (bootstrap t) UCL	192.8				
130					Maximum	460	95% KM (BCA) UCL	155.5				
131					Mean	103.5	95% KM (Percentile Bootstrap) UCL	149.5				
132					Median	60	95% KM (Chebyshev) UCL	217.6				
133					SD	116.4	97.5% KM (Chebyshev) UCL	266.1				
134					k star	0.31	99% KM (Chebyshev) UCL	361.3				
135					Theta star	333.9						
136					Nu star	12.4	**Potential UCLs to Use**					
137					AppChi2	5.492	95% KM (Chebyshev) UCL	217.6				
138					95% Gamma Approximate UCL (Use when n >= 40)	233.7						
139					95% Adjusted Gamma UCL (Use when n < 40)	250.1						
140	**Note: DL/2 is not a recommended method.**											
141												
142	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
143	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
144	**For additional insight, the user may want to consult a statistician.**											
145												
146												
147	**Chromium**											
148												
149	**General Statistics**											
150					Number of Valid Observations	54	Number of Distinct Observations	33				
151												
152	**Raw Statistics**						**Log-transformed Statistics**					
153					Minimum	18	Minimum of Log Data	2.89				
154					Maximum	83	Maximum of Log Data	4.419				
155					Mean	43.15	Mean of log Data	3.69				
156					Geometric Mean	40.04	SD of log Data	0.391				
157					Median	38.5						
158					SD	17.08						
159					Std. Error of Mean	2.324						
160					Coefficient of Variation	0.396						
161					Skewness	0.748						
162												
163	**Relevant UCL Statistics**											
164	**Normal Distribution Test**						**Lognormal Distribution Test**					
165					Lilliefors Test Statistic	0.147	Lilliefors Test Statistic	0.0849				

Lilliefors Critical Value	0.121	Lilliefors Critical Value 0.121
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**
Assuming Normal Distribution		**Assuming Lognormal Distribution**
95% Student's-t UCL	47.04	95% H-UCL 47.6
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL 53.47
95% Adjusted-CLT UCL (Chen-1995)	47.22	97.5% Chebyshev (MVUE) UCL 57.93
95% Modified-t UCL (Johnson-1978)	47.08	99% Chebyshev (MVUE) UCL 66.7
Gamma Distribution Test		**Data Distribution**
k star (bias corrected)	6.49	**Data appear Gamma Distributed at 5% Significance Level**
Theta Star	6.648	
MLE of Mean	43.15	
MLE of Standard Deviation	16.94	
nu star	700.9	
Approximate Chi Square Value (.05)	640.5	**Nonparametric Statistics**
Adjusted Level of Significance	0.0456	95% CLT UCL 46.97
Adjusted Chi Square Value	638.9	95% Jackknife UCL 47.04
		95% Standard Bootstrap UCL 46.84
Anderson-Darling Test Statistic	0.713	95% Bootstrap-t UCL 47.28
Anderson-Darling 5% Critical Value	0.752	95% Hall's Bootstrap UCL 47.3
Kolmogorov-Smirnov Test Statistic	0.101	95% Percentile Bootstrap UCL 47.07
Kolmogorov-Smirnov 5% Critical Value	0.121	95% BCA Bootstrap UCL 47.07
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 53.28
		97.5% Chebyshev(Mean, Sd) UCL 57.66
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 66.28
95% Approximate Gamma UCL (Use when n >= 40)	47.22	
95% Adjusted Gamma UCL (Use when n < 40)	47.34	
Potential UCL to Use		Use 95% Approximate Gamma UCL 47.22

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Copper

General Statistics

Number of Valid Observations	54	Number of Distinct Observations 36

Raw Statistics		**Log-transformed Statistics**
Minimum	9	Minimum of Log Data 2.197
Maximum	204	Maximum of Log Data 5.318
Mean	33.39	Mean of log Data 3.222
Geometric Mean	25.07	SD of log Data 0.684
Median	21.5	
SD	35.21	
Std. Error of Mean	4.792	
Coefficient of Variation	1.055	
Skewness	3.361	

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**
Lilliefors Test Statistic	0.244	Lilliefors Test Statistic 0.124

221				Lilliefors Critical Value	0.121					Lilliefors Critical Value	0.121
222	**Data not Normal at 5% Significance Level**						**Data not Lognormal at 5% Significance Level**					
223												
224	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
225				95% Student's-t UCL	41.41					95% H-UCL	38.3
226	**95% UCLs (Adjusted for Skewness)**									95% Chebyshev (MVUE) UCL	45.48
227				95% Adjusted-CLT UCL (Chen-1995)	43.61					97.5% Chebyshev (MVUE) UCL	51.52
228				95% Modified-t UCL (Johnson-1978)	41.78					99% Chebyshev (MVUE) UCL	63.4
229												
230	**Gamma Distribution Test**						**Data Distribution**					
231				k star (bias corrected)	1.801		**Data do not follow a Discernable Distribution (0.05)**					
232				Theta Star	18.54							
233				MLE of Mean	33.39							
234				MLE of Standard Deviation	24.88							
235				nu star	194.5							
236				Approximate Chi Square Value (.05)	163.3		**Nonparametric Statistics**					
237				Adjusted Level of Significance	0.0456					95% CLT UCL	41.27	
238				Adjusted Chi Square Value	162.5					95% Jackknife UCL	41.41	
239										95% Standard Bootstrap UCL	41.23	
240				Anderson-Darling Test Statistic	2.321					95% Bootstrap-t UCL	46.71	
241				Anderson-Darling 5% Critical Value	0.764					95% Hall's Bootstrap UCL	52.05	
242				Kolmogorov-Smirnov Test Statistic	0.166					95% Percentile Bootstrap UCL	41.89	
243				Kolmogorov-Smirnov 5% Critical Value	0.123					95% BCA Bootstrap UCL	44.24	
244	**Data not Gamma Distributed at 5% Significance Level**									95% Chebyshev(Mean, Sd) UCL	54.27	
245										97.5% Chebyshev(Mean, Sd) UCL	63.31	
246	**Assuming Gamma Distribution**									99% Chebyshev(Mean, Sd) UCL	81.06	
247				95% Approximate Gamma UCL (Use when n >= 40)	39.78							
248				95% Adjusted Gamma UCL (Use when n < 40)	39.98							
249												
250	**Potential UCL to Use**									Use 95% Chebyshev (Mean, Sd) UCL	54.27	
251												
252	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
253	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
254	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
255												
256												
257	**Lead**											
258												
259	**General Statistics**											
260				Number of Valid Data	54					Number of Detected Data	52	
261				Number of Distinct Detected Data	32					Number of Non-Detect Data	2	
262										Percent Non-Detects	3.70%	
263												
264	**Raw Statistics**						**Log-transformed Statistics**					
265				Minimum Detected	5					Minimum Detected	1.609	
266				Maximum Detected	336					Maximum Detected	5.817	
267				Mean of Detected	28.54					Mean of Detected	2.892	
268				SD of Detected	47.56					SD of Detected	0.842	
269				Minimum Non-Detect	5					Minimum Non-Detect	1.609	
270				Maximum Non-Detect	5					Maximum Non-Detect	1.609	
271												
272												
273	**UCL Statistics**											
274	**Normal Distribution Test with Detected Values Only**						**Lognormal Distribution Test with Detected Values Only**					
275				Lilliefors Test Statistic	0.31					Lilliefors Test Statistic	0.0821	

276				5% Lilliefors Critical Value	0.123					5% Lilliefors Critical Value	0.123
277	**Data not Normal at 5% Significance Level**						**Data appear Lognormal at 5% Significance Level**					
278												
279	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
280				DL/2 Substitution Method						DL/2 Substitution Method	
281				Mean	27.57					Mean	2.819
282				SD	46.92					SD	0.908
283				95% DL/2 (t) UCL	38.26					95% H-Stat (DL/2) UCL	33.4
284											
285				Maximum Likelihood Estimate(MLE) Method						Log ROS Method	
286				Mean	26.51					Mean in Log Scale	2.817
287				SD	47.6					SD in Log Scale	0.914
288				95% MLE (t) UCL	37.36					Mean in Original Scale	27.57
289				95% MLE (Tiku) UCL	36.31					SD in Original Scale	46.92
290										95% t UCL	38.26
291										95% Percentile Bootstrap UCL	39.37
292										95% BCA Bootstrap UCL	48.07
293										95% H UCL	33.57
294											
295	**Gamma Distribution Test with Detected Values Only**						**Data Distribution Test with Detected Values Only**					
296				k star (bias corrected)	1.172		**Data appear Lognormal at 5% Significance Level**					
297				Theta Star	24.36							
298				nu star	121.8							
299												
300				A-D Test Statistic	2.102		**Nonparametric Statistics**					
301				5% A-D Critical Value	0.774					Kaplan-Meier (KM) Method	
302				K-S Test Statistic	0.774					Mean	27.67
303				5% K-S Critical Value	0.126					SD	46.43
304	**Data not Gamma Distributed at 5% Significance Level**									SE of Mean	6.38
305										95% KM (t) UCL	38.35
306	**Assuming Gamma Distribution**									95% KM (z) UCL	38.16
307				Gamma ROS Statistics using Extrapolated Data						95% KM (jackknife) UCL	38.34
308				Minimum	0.000001					95% KM (bootstrap t) UCL	54.52
309				Maximum	336					95% KM (BCA) UCL	40.89
310				Mean	27.48					95% KM (Percentile Bootstrap) UCL	39.09
311				Median	17					95% KM (Chebyshev) UCL	55.48
312				SD	46.97					97.5% KM (Chebyshev) UCL	67.51
313				k star	0.574					99% KM (Chebyshev) UCL	91.15
314				Theta star	47.86						
315				Nu star	62.01		**Potential UCLs to Use**					
316				AppChi2	44.9					95% KM (Chebyshev) UCL	55.48
317				95% Gamma Approximate UCL (Use when n >= 40)	37.96							
318				95% Adjusted Gamma UCL (Use when n < 40)	38.3							
319	**Note: DL/2 is not a recommended method.**											
320												
321	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
322	**These recommendations are based upon the results of the simulation studies summarized in Singh, Maichle, and Lee (2006).**											
323	**For additional insight, the user may want to consult a statistician.**											
324												
325												
326	**Manganese**											
327												
328	**General Statistics**											
329				Number of Valid Observations	20					Number of Distinct Observations	18	
330												

Raw Statistics		**Log-transformed Statistics**
Minimum	37	Minimum of Log Data 3.611
Maximum	419	Maximum of Log Data 6.038
Mean	124.6	Mean of log Data 4.655
Geometric Mean	105.1	SD of log Data 0.583
Median	109.5	
SD	85.17	
Std. Error of Mean	19.05	
Coefficient of Variation	0.684	
Skewness	2.328	

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**
Shapiro Wilk Test Statistic	0.774	Shapiro Wilk Test Statistic 0.971
Shapiro Wilk Critical Value	0.905	Shapiro Wilk Critical Value 0.905
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**
Assuming Normal Distribution		**Assuming Lognormal Distribution**
95% Student's-t UCL	157.5	95% H-UCL 165.1
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL 196.9
95% Adjusted-CLT UCL (Chen-1995)	166.5	97.5% Chebyshev (MVUE) UCL 228.7
95% Modified-t UCL (Johnson-1978)	159.1	99% Chebyshev (MVUE) UCL 291.2
Gamma Distribution Test		**Data Distribution**
k star (bias corrected)	2.668	**Data appear Gamma Distributed at 5% Significance Level**
Theta Star	46.68	
MLE of Mean	124.6	
MLE of Standard Deviation	76.25	
nu star	106.7	
Approximate Chi Square Value (.05)	83.88	**Nonparametric Statistics**
Adjusted Level of Significance	0.038	95% CLT UCL 155.9
Adjusted Chi Square Value	82.28	95% Jackknife UCL 157.5
		95% Standard Bootstrap UCL 154.7
Anderson-Darling Test Statistic	0.406	95% Bootstrap-t UCL 177.2
Anderson-Darling 5% Critical Value	0.747	95% Hall's Bootstrap UCL 299.9
Kolmogorov-Smirnov Test Statistic	0.156	95% Percentile Bootstrap UCL 158.3
Kolmogorov-Smirnov 5% Critical Value	0.195	95% BCA Bootstrap UCL 166.8
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 207.6
		97.5% Chebyshev(Mean, Sd) UCL 243.5
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 314
95% Approximate Gamma UCL (Use when n >= 40)	158.5	
95% Adjusted Gamma UCL (Use when n < 40)	161.5	
Potential UCL to Use		Use 95% Approximate Gamma UCL 158.5

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Nickel

General Statistics

Number of Valid Observations	54	Number of Distinct Observations 10

	A	B	C	D	E	F	G	H	I	J	K	L
386	**Raw Statistics**						**Log-transformed Statistics**					
387					Minimum	3					Minimum of Log Data	1.099
388					Maximum	17					Maximum of Log Data	2.833
389					Mean	6.13					Mean of log Data	1.742
390					Geometric Mean	5.707					SD of log Data	0.365
391					Median	5						
392					SD	2.607						
393					Std. Error of Mean	0.355						
394					Coefficient of Variation	0.425						
395					Skewness	1.784						
396												
397	**Relevant UCL Statistics**											
398	**Normal Distribution Test**						**Lognormal Distribution Test**					
399					Lilliefors Test Statistic	0.224					Lilliefors Test Statistic	0.197
400					Lilliefors Critical Value	0.121					Lilliefors Critical Value	0.121
401	**Data not Normal at 5% Significance Level**						**Data not Lognormal at 5% Significance Level**					
402												
403	**Assuming Normal Distribution**						**Assuming Lognormal Distribution**					
404					95% Student's-t UCL	6.723					95% H-UCL	6.666
405	**95% UCLs (Adjusted for Skewness)**										95% Chebyshev (MVUE) UCL	7.45
406					95% Adjusted-CLT UCL (Chen-1995)	6.805					97.5% Chebyshev (MVUE) UCL	8.037
407					95% Modified-t UCL (Johnson-1978)	6.738					99% Chebyshev (MVUE) UCL	9.191
408												
409	**Gamma Distribution Test**						**Data Distribution**					
410					k star (bias corrected)	6.779	**Data do not follow a Discernable Distribution (0.05)**					
411					Theta Star	0.904						
412					MLE of Mean	6.13						
413					MLE of Standard Deviation	2.354						
414					nu star	732.1						
415					Approximate Chi Square Value (.05)	670.3	**Nonparametric Statistics**					
416					Adjusted Level of Significance	0.0456					95% CLT UCL	6.713
417					Adjusted Chi Square Value	668.7					95% Jackknife UCL	6.723
418											95% Standard Bootstrap UCL	6.688
419					Anderson-Darling Test Statistic	2.43					95% Bootstrap-t UCL	6.853
420					Anderson-Darling 5% Critical Value	0.752					95% Hall's Bootstrap UCL	6.835
421					Kolmogorov-Smirnov Test Statistic	0.211					95% Percentile Bootstrap UCL	6.759
422					Kolmogorov-Smirnov 5% Critical Value	0.121					95% BCA Bootstrap UCL	6.759
423	**Data not Gamma Distributed at 5% Significance Level**										95% Chebyshev(Mean, Sd) UCL	7.676
424											97.5% Chebyshev(Mean, Sd) UCL	8.345
425	**Assuming Gamma Distribution**										99% Chebyshev(Mean, Sd) UCL	9.659
426					95% Approximate Gamma UCL (Use when n >= 40)	6.695						
427					95% Adjusted Gamma UCL (Use when n < 40)	6.711						
428												
429	**Potential UCL to Use**										Use 95% Student's-t UCL	6.723
430											or 95% Modified-t UCL	6.738
431												
432	**Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.**											
433	**These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)**											
434	**and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.**											
435												
436												
437	**Zinc**											
438												
439	**General Statistics**											
440					Number of Valid Observations	54					Number of Distinct Observations	37

	Raw Statistics	
Minimum	10	
Maximum	335	
Mean	54.33	
Geometric Mean	40.42	
Median	44.5	
SD	52.45	
Std. Error of Mean	7.137	
Coefficient of Variation	0.965	
Skewness	3.413	

Log-transformed Statistics	
Minimum of Log Data	2.303
Maximum of Log Data	5.814
Mean of log Data	3.699
SD of log Data	0.755

Relevant UCL Statistics

Normal Distribution Test	
Lilliefors Test Statistic	0.2
Lilliefors Critical Value	0.121
Data not Normal at 5% Significance Level	
Assuming Normal Distribution	
95% Student's-t UCL	66.28
95% UCLs (Adjusted for Skewness)	
95% Adjusted-CLT UCL (Chen-1995)	69.61
95% Modified-t UCL (Johnson-1978)	66.83

Lognormal Distribution Test	
Lilliefors Test Statistic	0.0817
Lilliefors Critical Value	0.121
Data appear Lognormal at 5% Significance Level	
Assuming Lognormal Distribution	
95% H-UCL	66.69
95% Chebyshev (MVUE) UCL	79.94
97.5% Chebyshev (MVUE) UCL	91.43
99% Chebyshev (MVUE) UCL	114

Gamma Distribution Test	
k star (bias corrected)	1.75
Theta Star	31.04
MLE of Mean	54.33
MLE of Standard Deviation	41.07
nu star	189
Approximate Chi Square Value (.05)	158.2
Adjusted Level of Significance	0.0456
Adjusted Chi Square Value	157.4
Anderson-Darling Test Statistic	0.757
Anderson-Darling 5% Critical Value	0.764
Kolmogorov-Smirnov Test Statistic	0.112
Kolmogorov-Smirnov 5% Critical Value	0.123
Data appear Gamma Distributed at 5% Significance Level	
Assuming Gamma Distribution	
95% Approximate Gamma UCL (Use when n >= 40)	64.91
95% Adjusted Gamma UCL (Use when n < 40)	65.23
Potential UCL to Use	

Data Distribution	
Data appear Gamma Distributed at 5% Significance Level	
Nonparametric Statistics	
95% CLT UCL	66.07
95% Jackknife UCL	66.28
95% Standard Bootstrap UCL	65.92
95% Bootstrap-t UCL	73.22
95% Hall's Bootstrap UCL	117.8
95% Percentile Bootstrap UCL	67.2
95% BCA Bootstrap UCL	70.11
95% Chebyshev(Mean, Sd) UCL	85.44
97.5% Chebyshev(Mean, Sd) UCL	98.9
99% Chebyshev(Mean, Sd) UCL	125.3
Use 95% Approximate Gamma UCL	64.91

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

Vanadium

General Statistics

Number of Valid Observations	20	Number of Distinct Observations	17

Raw Statistics		**Log-transformed Statistics**
Minimum	28	Minimum of Log Data 3.332
Maximum	189	Maximum of Log Data 5.242
Mean	81.3	Mean of log Data 4.313
Geometric Mean	74.66	SD of log Data 0.425
Median	73.5	
SD	35.88	
Std. Error of Mean	8.023	
Coefficient of Variation	0.441	
Skewness	1.403	

Relevant UCL Statistics

Normal Distribution Test		**Lognormal Distribution Test**
Shapiro Wilk Test Statistic	0.898	Shapiro Wilk Test Statistic 0.98
Shapiro Wilk Critical Value	0.905	Shapiro Wilk Critical Value 0.905
Data not Normal at 5% Significance Level		**Data appear Lognormal at 5% Significance Level**
Assuming Normal Distribution		**Assuming Lognormal Distribution**
95% Student's-t UCL	95.17	95% H-UCL 98.82
95% UCLs (Adjusted for Skewness)		95% Chebyshev (MVUE) UCL 115.9
95% Adjusted-CLT UCL (Chen-1995)	97.19	97.5% Chebyshev (MVUE) UCL 130.9
95% Modified-t UCL (Johnson-1978)	95.59	99% Chebyshev (MVUE) UCL 160.3
Gamma Distribution Test		**Data Distribution**
k star (bias corrected)	5.157	**Data appear Gamma Distributed at 5% Significance Level**
Theta Star	15.76	
MLE of Mean	81.3	
MLE of Standard Deviation	35.8	
nu star	206.3	
Approximate Chi Square Value (.05)	174.1	**Nonparametric Statistics**
Adjusted Level of Significance	0.038	95% CLT UCL 94.5
Adjusted Chi Square Value	171.7	95% Jackknife UCL 95.17
		95% Standard Bootstrap UCL 94.38
Anderson-Darling Test Statistic	0.264	95% Bootstrap-t UCL 98.32
Anderson-Darling 5% Critical Value	0.745	95% Hall's Bootstrap UCL 104.9
Kolmogorov-Smirnov Test Statistic	0.124	95% Percentile Bootstrap UCL 94.95
Kolmogorov-Smirnov 5% Critical Value	0.194	95% BCA Bootstrap UCL 96.95
Data appear Gamma Distributed at 5% Significance Level		95% Chebyshev(Mean, Sd) UCL 116.3
		97.5% Chebyshev(Mean, Sd) UCL 131.4
Assuming Gamma Distribution		99% Chebyshev(Mean, Sd) UCL 161.1
95% Approximate Gamma UCL (Use when n >= 40)	96.36	
95% Adjusted Gamma UCL (Use when n < 40)	97.67	
Potential UCL to Use		Use 95% Approximate Gamma UCL 96.36

Note: Suggestions regarding the selection of a 95% UCL are provided to help the user to select the most appropriate 95% UCL.
These recommendations are based upon the results of the simulation studies summarized in Singh, Singh, and Iaci (2002)
and Singh and Singh (2003). For additional insight, the user may want to consult a statistician.

C15-C28 fraction

General Statistics

Number of Valid Data	54	Number of Detected Data	1

	A	B	C	D	E	F	G	H	I	J	K	L
551					Number of Distinct Detected Data	1				Number of Non-Detect Data		53
552										Percent Non-Detects		98.15%
553												
554	**Warning: Only one distinct data value was detected! ProUCL (or any other software) should not be used on such a data set!**											
555	**It is suggested to use alternative site specific values determined by the Project Team to estimate environmental parameters (e.g., EPC, BTV).**											
556												
557	**The data set for variable C15-C28 fraction was not processed!**											