



Environmental Management Plan

Management of the Collection & Transport of Contaminated Waste

- Sewerage Sludge and Residues (including nightsoil and Septic Tank Content);
- Soils containing hydrocarbons;
- Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals; and
- Soils containing copper

PREPARED BY:	BRAD SLY, ENVIRONMENTAL MANAGER MIKE EXCAVATIONS
APPROVED BY:	MICHAEL PAPANDONAKIS
VERSION & REVIEW	V1 Next review: 27/01/2018

**NO PART OF THIS PLAN MAY BE REPRODUCED IN ANY FORM
WITHOUT THE PRIOR PERMISSION FROM MANAGEMENT**



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

1 Our Policy

Mike Excavations is a Darwin based specialist plumber that specialises in demolition, civil construction and hydraulics works to support the Power and Water Corporation.

Mike Excavation recognises the importance of protecting the environment from detrimental effects that may result from the company's business activities. Minimising the risk to all stakeholders will be given top priority in Company plans, procedures, programs and training activities.

To achieve and maintain high environmental management standards, Mike Excavation and employees will specifically:

- Comply with applicable laws and regulations relating to the environment.
- Cooperate with authorities and stakeholders in the development of standards aimed at further improving the protection of the environment.
- Work to prevent all incidents and harmful environmental emissions by a process of continual improvement involving consultation and cooperation with all employees, stakeholders and authorities.
- Implement methods and strategies for preventing pollution, reducing wastes and conserving natural resources.
- Ensure that it has systems in place to identify, control and monitor environment risks arising from its operations
- Ensure that all company employees and contractors are trained and competent in the use of the HSE management system and that they are aware of their responsibilities.
- Ensure contractors WHSE systems comply with our standards and that procedures are implemented for managing the potential negative impact their products and service may have on the environment.
- Work to foster cooperation and trust through open and proactive communications with employees, contractors, the community and environmental regulating authorities.

All employees will;

- follow all environmental practices, objectives and instructions
- report any environmental incidents resulting from work practices/equipment/conditions to their supervisor
- perform all work duties in a manner that promotes care for the environment



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

1.1 EMP Objectives



The EMP Objectives for this plan is to;

- Manage collection of contaminated waste soils
- Manage onsite temporary stock-pile management
- Manage security of exposure to contaminated material the environment
- Manage transport from site to approved waste management facility
- Manage the cleaning of vehicles and transport methods



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

Contents

1	Our Policy	2
1.1	EMP Objectives	3
2	Introduction	6
3	Description	6
3.1	Approvals	6
4	Responsibility	7
	Distribution List	7
	Organisational Structure & Responsibility	8
5	Operational Control	10
5.1	Manage collection of waste and contaminated soil	10
5.2	Testing of waste prior to contact with & waste transfer	10
5.3	Manage onsite temporary stock-pile management	10
5.4	Manage security of exposure to contaminated material the environment	10
5.5	Manage transport from site to approved waste management facility	10
5.6	Manage the cleaning of vehicles and transport methods	11
5.7	Monitoring and Record Keeping	11
6	Environmental Safeguards	12
	Community Liaison.....	12
	Air Quality	12
	Noise and Vibration	12
	Vegetation and Fauna	12
	Heritage.....	12
	Waste Management	12
	Hazardous Materials	13
7	Non Conformance and Corrective Actions	14
8	Environmental Management Plan Consultation & Communication	15
9	Emergency Response	16
	Emergency Response Plan	17
	Responsible Persons, Emergency Contacts & Response	18
10	Environmental Monitoring Plan.....	19
	Daily Observations	19



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

Audits	19
11 Legislation	20
Appendix A – Risk Assessment.....	21
Appendix B –Approvals	23
Appendix C – Induction Record.....	24



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

2 Introduction

The Environmental Management Plan (EMP) has been prepared by HSE Management Australia (HSEMA) for Mike Excavations

The EMP provides a framework for environmental management to be implemented by all contractors working on the site.

3 Description

Collection & transport of contaminated waste; including sewerage sludge and residues (including nightsoil and septic tank content), soils containing hydrocarbons, soils containing copper and Waste from the production, formulation and use of biocides and phytopharmaceuticals;

- Collection will include excavation with mechanical excavation and vacuum excavation
- Material management will include temporary stock-piles, site security and transport loading; stockpiling shall be utilised when waste is wet
- Transport will include transport method, transport route, dumping and vehicle cleaning
- Dumping will include approved waste management facilities, approvals and record management

3.1 Approvals

To be obtained:

- EPA License for Collection & Transport of Sewerage Sludge and Residues (including night soil and Septic Tank Content)
- EPA License for Collection & Transport of Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals
- EPA License for Collection & Transport of waste soils containing hydrocarbons
- EPA License for Collection & Transport of waste soils containing copper
- Authority to dump waste at Shoal Bay Waste Management Facility



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

4 Responsibility

The Project Manager (PM) is directly accountable to the Managing Director.

The PM is responsible for the preparation, control, implementation and maintenance of this environmental Management Plan (herein referred to as the Plan).

The Project Manager PM is also responsible for:

- ▶ Maintaining an up to date version of this Plan
- ▶ Retaining all obsolete pages of the Plan for a minimum of 7 years to demonstrate a record of Environmental management practices
- ▶ Make available a copy of the current version of the Plan to subcontractors and other interested parties (e.g. Regulators, client organisation, etc.)
- ▶ Reviewing the Plan on an annual basis or earlier if required by changes to the project, changes of legislation or identified deficiencies

The Project Manager will assist, review and approve the development, maintenance and implementation of the Plan.

The Project Manager will distribute the plan internally and externally after approval from the Managing Director

Distribution List

Only “controlled” copies of this Plan are issued internally.

The Plan is to be made available to relevant personnel and parties and the distribution shall be under the strict control of the Project Manager. Distribution is controlled by the Project Manager in liaison with the Managing Director and a record is maintained of all Plan holders.

DISTRIBUTION LIST

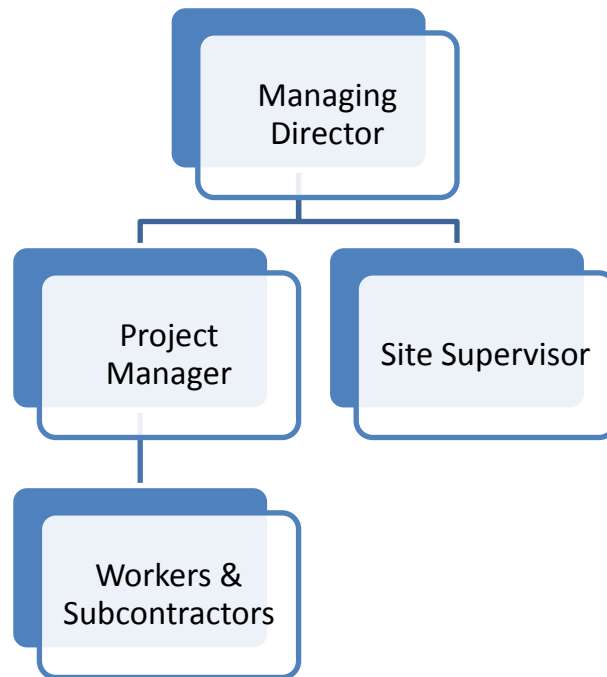
Date of Issue	Version No.	Issued to	Approved by	Control Status
			PROJECT MANAGER	CONTROLLED



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

Organisational Structure & Responsibility



Managing Director

- Establish overall direction of company;
- Develop Environmental Policy in line with company direction;
- Assess Environmental System performance;
- Address issues identified in Environmental System performance audits;
- Ensure that business, program, legal, and regulatory system requirements are identified, analysed and addressed;
- Monitor overall Environmental Management System performance;
- Ensure that Environmental System specifications meet requirements;
- Develop and propose budget for Environmental System implementation and operation;
- Develop and propose budget for training of staff, as required;
- Involve stakeholders in the development of standards, procedures, and guidelines;
- Ensure that effective interfaces exist among management systems;

Project Manager

- Develop environmental objectives, targets and programs;
- Prepare and maintain Environmental Management Systems;
- Prepare and maintain Environmental Management Implementation Plan;
- Assure regulatory compliance;
- Ensure safe, effective, and legally compliant operations, preventing pollution, minimising waste, and conserving resources;
- Ensure continual improvement of Environmental Management System;
- Develop staff capability to meet future needs by building new competencies, maintaining an appropriately trained and motivated staff, and supporting their long-term professional development;



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

- Develop training schedules for staff;
- Identify client's expectations;
- Identify suppliers' expectations;
- Communicate Environmental Management System requirements to team members;
- Ensure the quality of products and services;
- Identify hazards on projects, and ensure that they are mitigated and can be adequately controlled.

Site Supervisor

- Recommend staffing actions.
- Develop capabilities of staff and other resources by ensuring that staff are competent, trained, and qualified for assigned work, and by managing staff, information, facilities, and equipment;
- Assign work to qualified staff with authorities to meet accountabilities;
- Advise and assist staff in developing solutions to customer needs;
- Monitor staff progress on assigned work;
- Ensure that staff comply with work policies, Codes of Practice, standards and procedures and other regulations;
- Help staff identify their role in the overall strategy and direction of the company;
- Provide high quality performance feedback to individual staff members;
- Ensure that staff are effectively utilised, rewarded, and motivated;
- Support the professional development of staff consistent with company and personal development goals;
- Ensure mitigation for all identified hazards



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

5 Operational Control

5.1 Manage collection of waste and contaminated soil

The collection of waste must be performed in strict adherence to the EPA License, WHS procedures and specific environmental processes established for the project.

Management of the collection of the waste must be planned and managed in compliance with the planning outputs, such as the Project EMP

Consultation with stakeholders, monitoring of compliance to the Project EMP and regular reviews of project outputs and the Risk Register must occur.

5.2 Testing of waste prior to contact with & waste transfer

Waste to be collected and transported to Shoal Bay Waste Management Facility must;

- Be tested for heavy metal levels by a NATA accredited laboratory who shall provide the test result to Mike Excavations,
- Be approved as acceptable for dumping by Shoal Bay Management Facility, and
- Be of a safe level to collect and transport on public roads (EPA License to Collect & Transport)

5.3 Manage onsite temporary stock-pile management

- No material is to remain stockpiled on site overnight without authorisation, isolation and security.
- Temporary stockpiles may be present in an appropriate location, until dry enough to load and transport without a risk of seepage from the transport.
- Temporary stockpiles are to be:
 - located at least 2m from any hazardous material storage area, retained vegetation and drainage lines;
 - located up-slope of appropriate sediment control measures; and
 - no taller than 2m in height.
- If considered necessary, the stockpiles should be covered with a plastic covering until removal.

5.4 Manage security of exposure to contaminated material the environment

Only authorised personnel shall be permitted onsite.

Security of the site under control of Mike Excavations will be managed through traffic and access management, including barricades, signage and personnel assigned to direct authorised and unauthorised persons.

5.5 Manage transport from site to approved waste management facility

Transport from site the waste facility is by use of appropriate vehicles, trained personnel and on a route that suits the outputs of the project best;

- Sealed dump trucks, with covers
- Dump truck fitted with rubber anti-seepage seals on the tipping gates to prevent spill during transportation
- Experienced, licensed drivers familiar with use of Shoal Bay Waste Management Facility
- Drivers inducted to project EMP
- Route determined considering traffic, potential incidents and suitability for trucks allocated to project



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

5.6 Manage the cleaning of vehicles and transport methods

- Trucks shall be cleaned before leaving site and entering roadway to avoid contaminants fall onto roadway and entering storm-water;
 - Wheels and wheel bay, and
 - External body

5.7 Monitoring and Record Keeping

- Daily inspections of worksite for evidence or risks of non-compliance to Plan
- Daily visual inspections of all storm-water runoff discharged from the Site to ensure no contaminants are discharged offsite.
- Inspection of site preparation measures that are to be implemented for >25mm/24hr rain event 'stop works' to ensure minimisation of soil transport offsite

Records shall be maintained onsite and available on request. Records shall include;

- Site monitoring inspections
- Cleaning of vehicle records
- Non-conformances and corrective actions
- Complaints
- Audit results



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

6 Environmental Safeguards

Community Liaison

- Community notification in the form of signage
- Signs will be displayed at either side of works to advise others on works in progress
- Any complaints received will be recorded and provided to the Client within one working day

Air Quality

- Prevention of dust is to be achieved by;
 - Wetting down of dusty surfaces on days that wind greater than 20km/hr is forecast
 - Materials transported between sites covered
 - Drive on sealed roads rather than unsurfaced where possible
- Where dust generation becomes an issue light water spray will be used to control dust.
- Machines will be serviced regularly to reduce excess fumes

Noise and Vibration

- Mobile plant will regularly maintained and fumes will be directed away from work areas as required
- Mobile plant will only be used as required and will be turned off when not in use.
- Machines will be serviced regularly to reduce excess noise, work will be carried out in prescribed hours, ear protection will be used as required and others will be warned of high level of noise works nearby.

Vegetation and Fauna

- Trees to be retained are to be marked with suitable non-inflaming, easily visible and removable means of identification. Identification is to be completely removed on completion of site work.
- The potential impact to flora and fauna given the limited area and habitats is considered to be low. Every step will be taken to ensure this is maintained during the project.
- Work will be kept within the designated construction site. No access outside of these areas unless prior approval is granted

Heritage

- The initial inspection shows no historical and/or cultural heritage values near the work area.
- Should any items be encountered which is suspected to be of heritage value or cultural significance, works are to STOP and reported immediately, all efforts are to be made to protect from damage or disturbance.
- All personnel working on site will be advised of their responsibilities regarding cultural heritage and made aware of any sites/areas which must be avoided or protected including Sacred Sites identified on the Aboriginal Areas Protection Authority Certificates.

Waste Management

- Comply with the requirements of the WMPC Act; including the removal from the site and disposal of all waste materials, including green waste, food scraps and other putrescible wastes, construction waste, chemicals and effluent in an appropriate manner, in approved legal waste disposal sites or facilities.
- Maintain a Waste Management Register for the duration of the Contract, to record the types, amounts and locations of waste reused, recycled, stockpiled and / or disposed of.



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

Hazardous Materials

- Hazardous substances and Dangerous Goods must not be used without reference to the safety data sheet (SDS) to ensure that use is in accordance with the manufacturer's instructions taking particular account of recommendations for:
- Storage requirements
- Precautions for use, especially requirements for ventilation and personal protection equipment,
- Health effects including short and long term effects and risks associated with inhalation, ingestion and skin or eye contact
- First aid and emergency requirements.
- Hazardous substances and Dangerous Goods used or stored on site must be entered into the site chemical register.
- SDS must be readily accessible to users.
- All containers of hazardous substances and Dangerous Goods including decanted containers must be labelled and carry the minimum set of risk phrases and safety phrases. When Hazardous Substances/Dangerous Goods are brought onto the work site by contractors arrangements must be made to the storage and use locations in consultation with Site Manager or Supervisor.
- A register of Hazardous Substances/Dangerous Goods including SDS's is to be maintained at the site office within the WHS&E documentation. Subcontractor will maintain an on-site register and SDS for each substance. Subcontractor employees will be made aware of and follow precautions outlined in the SDS and know how to respond in an emergency with the handling or storage of the substance.



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

7 Non Conformance and Corrective Actions

All environmental incidents and non-conformances shall be reported to Site Manager for immediate action to reduce impact of incident. The incident is advised to the Client's Representative as soon as is possible and/or within 24 hours at the latest of the incident occurring. All major incidents are reported to EPA immediately. All incidents are reported in writing and investigated. This report is available to the Client and Regulator.

- 1 Manage incident; including immediate containment controls
 - 2 Report incident
 - 3 Investigate incident
 - 4 Introduce corrective actions compliant with Standard Specification document issued by DIPL
 - 5 Monitor corrective actions for effectiveness
 - 6 Review and amend all procedures associated with the incident to prevent recurrence
-
- All major spills must be reported to NTEPA within 24 hours
 - All spills must be reported to client representative as soon as possible or within 24 hours at the latest



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

8 Environmental Management Plan Consultation & Communication

- Workers will receive an Environmental Induction (Appendix C - Induction Record);
 - Responsibilities
 - Environmental responsibilities
 - Site rules
 - Reporting
 - Environmental hazards
 - Spill containment and clean-up
 - Authorities and record management
 - Plant & equipment use, cleaning and refueling



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

9 Emergency Response

Mike Excavations management of environmental emergencies during this project deals with:

- Being prepared for emergencies and
- Responding to and managing emergencies.

Training Requirements

All personnel normally working in any of the sites run by Mike Excavations shall be inducted in the following emergency management information:

- The general information contained within this document;
- The key personnel roles and responsibilities;
- Emergency exit locations and paths;
- Assembly/Muster point locations;
- Fire Fighting equipment locations; and
- The written procedures applicable for the emergency or evacuation.

All staff will be asked, at the completion of the induction, to sign a statement advising that they have read the emergency evacuation procedures, understood the emergency evacuation procedures, had any questions they had answered adequately by the organisation/manager, and understand their responsibilities and role, in the event of an emergency.

Emergency Drills

Emergency drills will comprise of a walk through by the Supervisor, who will ensure that all persons on site are aware of the evacuation procedure requirements or a drill with no notification to simulate a scenario where no notification would have been given.

Fire

- Assess the situation and the potential for evacuation;
- Remove anyone in the immediate vicinity, if it is safe to do so;
- If trained in the use of fire extinguishers, and if fire or smoke is localised endeavour to extinguish the fire;
- Notify the Site Manager/Supervisor/Foreman;
- Site Manager/Supervisor/Foreman to assess situation, and commence evacuation if deemed necessary:
 - Notify all persons to leave the work area calmly and assemble at muster points;
 - Notify emergency services via 000.
- If trained in the use of fire extinguishers, the Site Manager/ Supervisor/Foreman may endeavour to extinguish the fire, with the assistance of other staff under his or her direction, only if it is deemed safe to do so by the Chief Fire Warden;
- Staff to ensure that all persons are moved towards the assembly/ muster point/s;
- Ensure no person re-enter the site
- Wait for Emergency Services to arrive and assess;
- Wait for the “ok” from Emergency Services before re-entering the building/ site or allowing any person entry; ;
- Should any personal belongings of the persons be within the building/ site, (after the Emergency Services “ok” has been given) re-enter the building/ site and obtain personal belongings; and
- Complete an incident / accident report form.



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

Emergency Response Plan

Spill

- Assess the situation and if necessary, isolate the area.
- Contact Emergency Services – telephone 000 and arrange to meet the emergency service at the scene if necessary;
- Use the chemical spill kit if necessary;
- Establish bunting to prevent spill reaching waterways/drains;
- Refer SDS for emergency procedures and first aid requirements;
- Notify the Supervisor/Site Manager/Foreman;
- If required, implement the Evacuation Checklist.

Biological Spill

- Assess the situation and if necessary, isolate the area.
- Establish bunting to prevent contaminant from spreading.
- Notify the **First Aider** who will implement infection control procedures.
- If sharps are discovered, do not pick up without using appropriate personal protective clothing and equipment.
- If a syringe is discovered and if safe to do so, pick the syringe by the barrel end and drop it gently (pointy end downwards), into a bottle or jar and secure the lid.
- If you injure yourself, immediately wash the injured area with copious amounts of warm water and soap and apply a dressing;
- Seek medical advice immediately. (Keep the syringe for testing.)
- Call your State's Syringe Disposal Helpline for assistance if required.

Sudden Discovery of Hazardous Substances (i.e. such as asbestos)

- Stop work immediately if suspected hazardous material is discovered;
- Evacuate immediate area;
- Isolate/barricade the area;
- Refer to SWMS for controls ;
- Report incident immediately to Supervisor/Site Manager/Foreman;
- Arrange for assessment by licensed assessor – deem as hazardous until assessment completed



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

Responsible Persons, Emergency Contacts & Response

EMERGENCY CONTACTS	
EMERGENCIES	000 OR (112-mobile phones)
FIRE	000 or 8946 4107
POLICE	000 or 131 444
AMBULANCE	000
NT EMERGENCY SERVICE (NTES) RESCUE FROM HEIGHTS	131 444 (or 000 landline / 112 mobile phones)
HOSPITAL: Royal Darwin Hospital	08 8922 8888
MEDICAL ASSISTANCE: Cavanagh Clinic	08 8981 8566
NT WorkSafe (Incident Notification)	1800 019 115
POISON INFORMATION LINE	1800 251 525 or 131 126
PowerWater	1800 245 090
EPA / Pollution Hotline	1800 064 567 or 8999 3747
TELSTRA (Line Damage)	132 203
OzHelp	1300OZHELP (1300 694 357) or 0488 440 532
DIAL BEFORE YOU DIG	1100
HEALTH DIRECT 24 hour medical advice	1800 022 222
SNAKES ON SITE / SNAKES NT	1800 453 210 / 0409 326 307
Translating and Interpreting Service	131450



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

10 Environmental Monitoring Plan

Daily Observations

Daily observations will be conducted by the Supervisor to monitor:

- General work practices and environmental compliance
- Visual checks of environmental controls
- Environmental hazards and risks

Audits

EMP audits are carried out to verify whether activities:

- comply with this EMP;
- This EMP has been properly implemented and maintained; and
- All outstanding actions arising from previous audits are implemented.

Audit Schedule

- First EMP audit to be conducted within 28 days of job start-up
- Audits of EMP at 8 week intervals



PROJECT ENVIRONMENTAL MANAGEMENT PLAN V1

Management of the Collection & Transport of Sewerage Sludge and Residues (including nightsoil and Septic Tank Content) and Waste from the Production, Formulation and Use of Biocides and Phytopharmaceuticals

11 Legislation

Northern Territory Legislation

Soil

- Waste Management and Pollution Control Act (NT)
 - Section 30 - Licences
 - Part 6 – Environmental Audits
 - Part 10 Div II - PANs
- Waste Management and Pollution Control (Administration) Regulations (NT)
 - Audits of contaminated sites (Northern Territory EPA 2014)
 - Contaminated Land Framework (Northern Territory EPA 2014)

Waste

- Waste Management and Pollution Control Act (NT)
- Transport of Dangerous Goods by Road and Rail (National Uniform Legislation) Regulation (NT)

Appendix A – Risk Assessment

In order to manage environmental risk and comply with the duty of care as defined by the Environmental Protection Act, it is important to identify the potential environmental hazards associated with a project, assess the environmental risks involved, and develop controls to eliminate, or minimise, residual environmental risk. In accordance with AS/NZS ISO 31000:2009 Risk Management – Principles and Guidelines, a project hazard identification and risk assessment process has been undertaken in order to assess and adequately manage the risks posed to the environment by the various construction activities associated with the project.

The results of this risk assessment process are shown the Environmental Risk Register in which unmitigated project specific environmental hazards were assessed. In undertaking this risk assessment, likelihood levels, consequence levels and risk criteria based on the requirements of AS/NZS ISO 31000:2009, as shown in **tables below**, were used to assess the environmental risk rating for each identified hazard. The resultant risk rating of identified hazards is presented in the **Risk register**

Note that in cases where the likelihood and consequence of risks relating to one hazard varied, the most conservative figure was used.

It is a responsibility to ensure the identified residual risks, documented in the **Risk Register** below, are monitored, reassessed and mitigated.

		CONSEQUENCE				
		1	2	3	4	5
LIKELIHOOD	E	MEDIUM 10	MEDIUM 12	HIGH 17	EXTREME 23	EXTREME 25
	D	LOW 6	MEDIUM 11	HIGH 16	VERY HIGH 20	EXTREME 24
	C	LOW 4	LOW 7	HIGH 15	VERY HIGH 19	VERY HIGH 22
	B	LOW 2	LOW 5	MEDIUM 9	HIGH 14	VERY HIGH 21
	A	LOW 1	LOW 3	MEDIUM 8	HIGH 13	HIGH 18

Likelihood Rating	Description
E - Almost Certain	The event is expected to occur in most circumstances At least once every year
D - Likely	The will probably occur in most circumstances Once every 2 – 5 years
C - Moderate	The event might occur at some time Once every 5 – 10 years
B - Unlikely	The event could occur at some time Once every 10 -30 years
A - Rare	The event could occur on in exceptional circumstances Once in 30 years or greater

Scope of Risk Assessment:

- Collection & transport of sewerage sludge and residues including nightsoil and septic tank content
- Collection and transport waste from the production, formulation and use of biocides and phyto-pharmaceuticals

Method:

- Excavation with mechanical excavators or vacuum trucks
- Transport is with covered dump trucks

Hazard	Risk	Risk assessment/risk Controls		
		Unmitigated Environmental Risk Rating	Management Measures/Controls	Mitigated Environmental Risk Rating
Excavation of known contaminated soil - Release of contaminants through disturbance of contaminated soils	<ul style="list-style-type: none"> ▪ Displacement of sediment and contaminated soil material across the Site during earthworks, particularly during storm events. ▪ Adverse impacts to surface and groundwater quality in the downstream receiving environment. 	Very High 22 5(C)	<ul style="list-style-type: none"> ▪ Minimise disturbance of uncontaminated areas where possible. ▪ Ensure contaminated material is stored in temporary stockpiles, and are appropriately contained until they are removed from site daily. ▪ Material is to be removed from site daily – no stockpiles of contaminated material are to be left on site overnight. 	Medium 9 3(B)
Noise impacts to surrounding community	<ul style="list-style-type: none"> ▪ Noise impacts to sensitive receptors 	Low 5 (B2)	<ul style="list-style-type: none"> ▪ Works are conducted within specified operating hours, and ▪ Noise mitigation measures are to be implemented where practical 	Low 5 (B2)
Dust emission impacts to surrounding community	<ul style="list-style-type: none"> ▪ Impact to sensitive receptors. ▪ Environmental nuisance caused by dust and fumes 	Low 5 (B2)	<ul style="list-style-type: none"> ▪ Minimise the area of exposed surfaces at any one time where possible. ▪ Implement dust suppression or cease activities during periods of high wind 	Low 5 (B2)
Hazardous materials storage	<ul style="list-style-type: none"> ▪ Contamination of surrounding soil, surface water and ▪ Contamination of surrounding soil, surface water and 	Medium 9 3(B)	<ul style="list-style-type: none"> ▪ Control of storage and quantities of hazardous materials stored at any one time. ▪ Store substances in accordance with the relevant Australian standards. ▪ Make spill kits readily available in areas where hazardous materials are stored or used. 	Low 5 (B2)
Transport of extracted contaminated material; inclusive of sewerage sludge and residues (including nightsoil and septic tank contents)	<ul style="list-style-type: none"> ▪ Contamination of surrounding areas through poor handling and management of contaminated material. ▪ Spread of waste material causing environmental harm or nuisance due to lack of suitable on-site waste management practices. 	Medium 9 3(B)	<ul style="list-style-type: none"> ▪ Contaminated material is to be removed from site daily, in appropriately contained transport with cover ▪ Make spill kits readily available in areas where hazardous materials are stored or used. ▪ Material dumped at approved waste management facility; Shoal Bay Waste Management Facility ▪ Dump trucks cleaned at waste management facility before being covered and returning to roadway 	Low 5 (B2)

Appendix B –Approvals

<to be inserted>

Appendix C – Induction Record

INDUCTION RECORD				
PROJECT NAME:				
PERSONAL DETAILS				
WORKER NAME:		DOB:		
CONTACT NUMBER:		DO YOU IDENTIFY YOURSELF AS INDIGENOUS? OPTIONAL TO ANSWER		
EMERGENCY CONTACT DETAILS				
NEXT OF KIN:		CONTACT NUMBER:		
KNOWN MEDICAL ISSUES				
<input type="checkbox"/> ASTHMA <input type="checkbox"/> DIABETIC <input type="checkbox"/> NECK INJURY <input type="checkbox"/> BACK INJURY <input type="checkbox"/> NONE KNOWN <input type="checkbox"/> OTHER				
TRAINING AND COMPETENCIES				
	NUMBER/TYPE	CHECKED	NUMBER/TYPE	CHECKED
WHITE CARD:		<input type="checkbox"/>	OCHRE CARD:	<input type="checkbox"/>
HIGH RISK:		<input type="checkbox"/>	TRADE QUAL:	<input type="checkbox"/>
INDUCTION	INSTRUCTION			INITIAL
CONTACT/CONSULTATION	Advise site contact / access to legislation / toolbox talk			
SITE TOUR	Amenities / Lunch Room / Services / Toilets/ Parking/ Access to Legislation / Critical Incident Counselling EASA 1800 193 123			
EMERGENCY PROCEDURES	Emergency procedure / Environmental Procedures / location of muster point			
FIRST AID / FIRE	Locations of First aid kits/First aiders/Fire extinguishers			
ENVIRONMENTAL MANAGEMENT	Environmental Procedures/ Responsibilities / Containment / Spill Kits / Reporting			
RESTRICTED AREAS	Explain areas to access and those that are restricted/ NO bad language/water main/Work area			
INCIDENT/HAZARD REPORTING	All incidents/hazards including near miss must be reported			
SITE SPECIFIC RULES	Indigenous community / working near children			
PPE	Hi vis shirt/vest, Steel caps, Hard hat – eye, hand, respiratory protection			
SWMS	All workers read understand and are signed on to SWMS			
HAZARDS TO BE AWARE OF	SITE RULES			INITIAL
MOBILE PLANT	Prestart on plant before use, report all issues to supervisor, licensed to operate plant, stay safe distance & in line of site, communicate with operator, adhere to TMP			
ELECTRICAL/EQUIPMENT	3 Monthly test and tag, check equipment prior to use, guarding in place, warn others in area of noise/ dust, leads off ground, use welding screens			
FALL FROM HEIGHT	DO NOT access any unprotected edges, use platform ladders, use harness, DO NOT modify scaffold, Report live edges			
FALLING OBJECTS	Isolate below work areas, wear hard hat, keep items away from edges			
HOUSEKEEPING	Clean as you go, keep access ways clear, use bins			
HAZARDOUS SUBSTANCES	Use non-hazardous substance, wear PPE, ventilated area, SDS, wash hands after use			
MANUAL HANDLING	Use mechanical aids, Use team lifts, correct lifting techniques – straight back, bent knees, loads to body, lift within your capacity			
EXCAVATION	Isolate work areas with barriers, bench/batter/shore as required			