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APPENDIX 'E'

Uruti Environmental / Safety Management Plan Interface [P-751-20-D]

HEALTH SAFETY ENVIRONMENT INTERFACE DOCUMENT

URUTI ENVIRONMENTAL MANAGEMENT PLAN

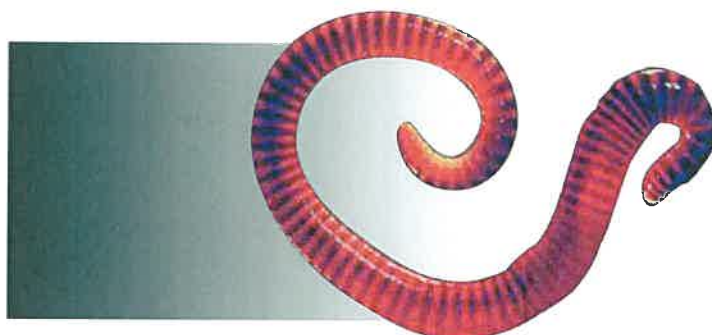
Appendix '3-A' to Uruti Consent Compliance Plan

Uruti Remediation Site

August 2014

Rev D – ISSUE FOR USE

Prepared by:		
David Gibson	Issue date	04/09/2017
Remediation (NZ) Ltd	Revision	D
New Plymouth		



Remediation (NZ) Ltd.

Think of it as a State of the Art Fertiliser Production Facility

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DOCUMENT MANAGEMENT

RECORD OF ISSUES

Rev	Date	Description	Author	Approved
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DISTRIBUTION LIST FOR CONTROLLED COPIES

Controlled Copy #	Issued To:
1.	Remediation Intranet
2.	General Manager-Operations
3.	Uruti Site Manager
4.	Uruti Site Office
5.	Taranaki Regional Council
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8.	
9.	
10.	

1. INTRODUCTION

This environmental management plan is set out in three parts;

- Consents and Consultation
- Waste Management;
- Spill Contingency.

This document has been provided to;

- Identify environmental management applicable to the site;
- Provide a guideline for environmental standards and best practice;
- Ensure environmental effects (hazards) associated with the remediation of waste have been identified and that effective strategies for managing these are in place;
- Identify waste streams and the management of these;
- Provide procedures and guidelines for action in the event of a hydrocarbon or hazardous substance spill;

Figure 1 Remediation (NZ) Ltd Environmental Policy



Environmental Policy

Remediation NZ Ltd is committed to conducting all operations in an environmentally responsible manner.

Procedures and Guidelines:

To fulfil these objectives the Company will:

- Avoid the pollution of land, water and air by conformance with regulatory guidelines and industry standards applicable to all areas of operation;
- Identify sites of archaeological, historical and natural significance, which could be impacted by the Company's operations and minimise their disturbance;
- Ensure that incidents, near misses, concerns and complaints are recorded adequately, investigated and appropriate procedures implemented;
- Inform all employees and contractors of their environmental and cultural heritage responsibilities;
- Ensure that all operational sites have a waste management plan and that waste generated by operations is disposed of in a safe and environmentally efficient manner and in conformance with relevant environmental legislations.
- Distribute appropriate guidelines, regulations and publications;
- Protect native flora and fauna in all areas of operations;
- Develop and comply with codes of practice required by the regulating authorities which minimise environmental impacts from all field operations.

Any personnel failing to comply with the requirements of this policy will be subject to disciplinary actions including, where necessary, dismissal, in accordance with the Company's procedures.

Application of this policy resides with Remediation NZ management and with all employees sharing responsibility for its implementation.

Approved by the Board of Directors:

Signed by:

Kerry O'Neill
Managing Director

1.1 REGULATORY REQUIREMENTS

The primary environmental legislation for our activities is the Resource Management Act, 1991. Under this legislation local body land use requirements are managed under the consenting process.

In addition to the RMA, the following legislation is applicable to relevant environmental aspects of the project:

- Biosecurity Act 1993;
- Hazardous Substances and New Organisms Act (HSNO) 1996; and
- Radioactive Substances Act 1965.

1.2 CONSENTS AND CONSULTATION

1.2.1 Consents

The Uruti remediation site comes under the jurisdiction of local government:

- Taranaki Regional Council (TRC); and

Consents granted for the Uruti are listed in the following table;

Table 1: Consent Details

Consent #	Detail	Authority
5838-2 TRC	To discharge treated stormwater and leachate, including organic material, from composting operations onto and into land and into an unnamed tributary of the Haehunga Stream in the Mimi catchmentalso 2642838E-6246759N	TRC
5839-2 TRC	To discharge emissions into the air, namely odour and dust, from composting operations.	
5938-1	To erect, place, use and maintain a twin culvert in, on and over the bed of the Haehunga Stream in the Mimi catchment for vehicle access purposes.	
6211-1	To realign and divert the Haehunga Stream in the Mimi catchment for land improvement purposes	
6212-1	To erect, place, use and maintain a culvert and associated structure(s) in the bed of the Haehanga Stream in the Mimi catchment for access purposes.	

1.2.2 Consultation

Consultation was undertaken as part of the consenting process. Our staff have managed land owner interaction and addressed issues such as increased traffic movements/road usage, noise, dust and lights.

A number of groups, individuals and organisations have been consulted in regards to the development of the site and the planned waste disposal. These have included;

- Other landowners and occupiers within 550m;
- TRC; and NTDC.

- SITE LOCATION AND LAYOUT

Figure 2 Site Location

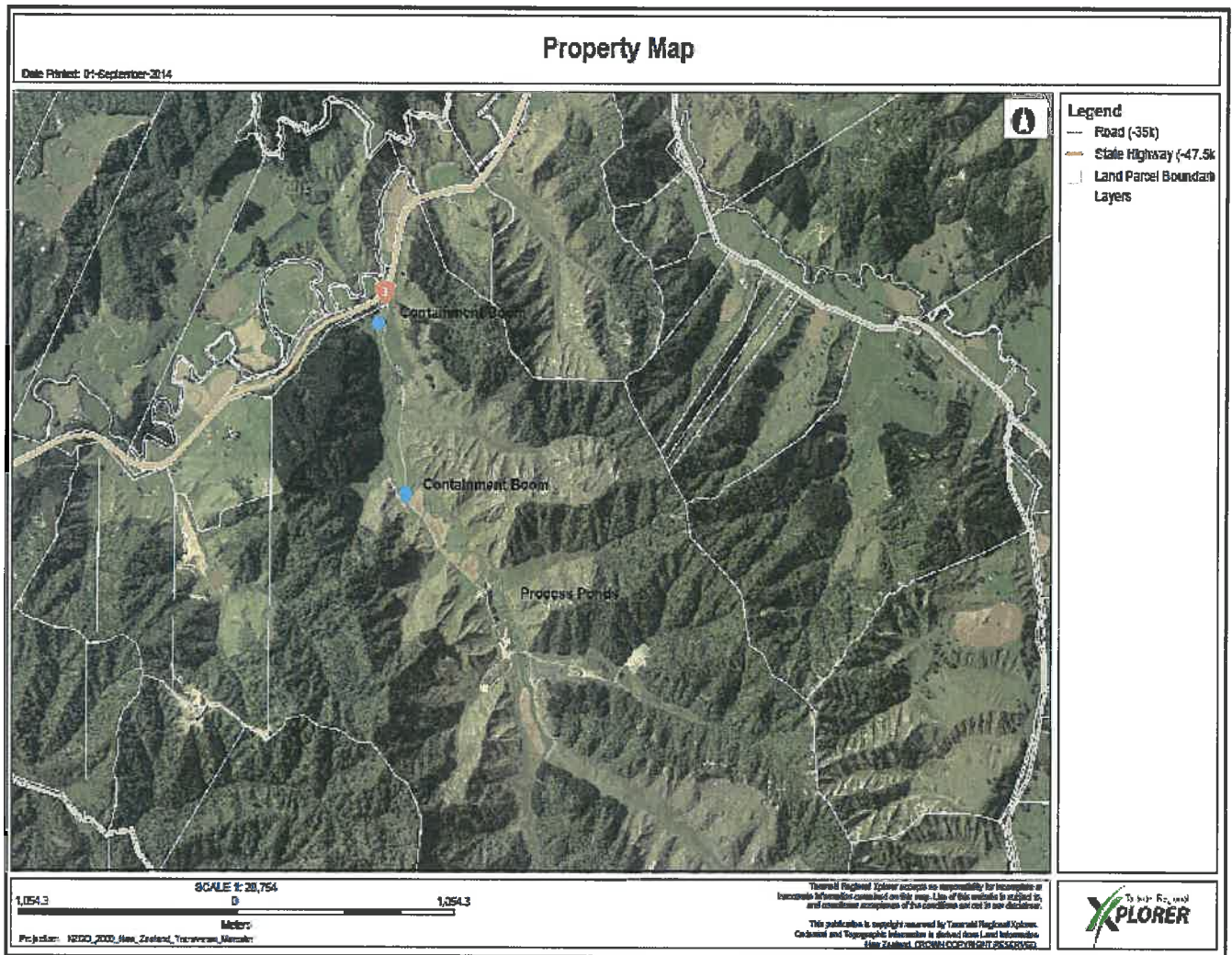
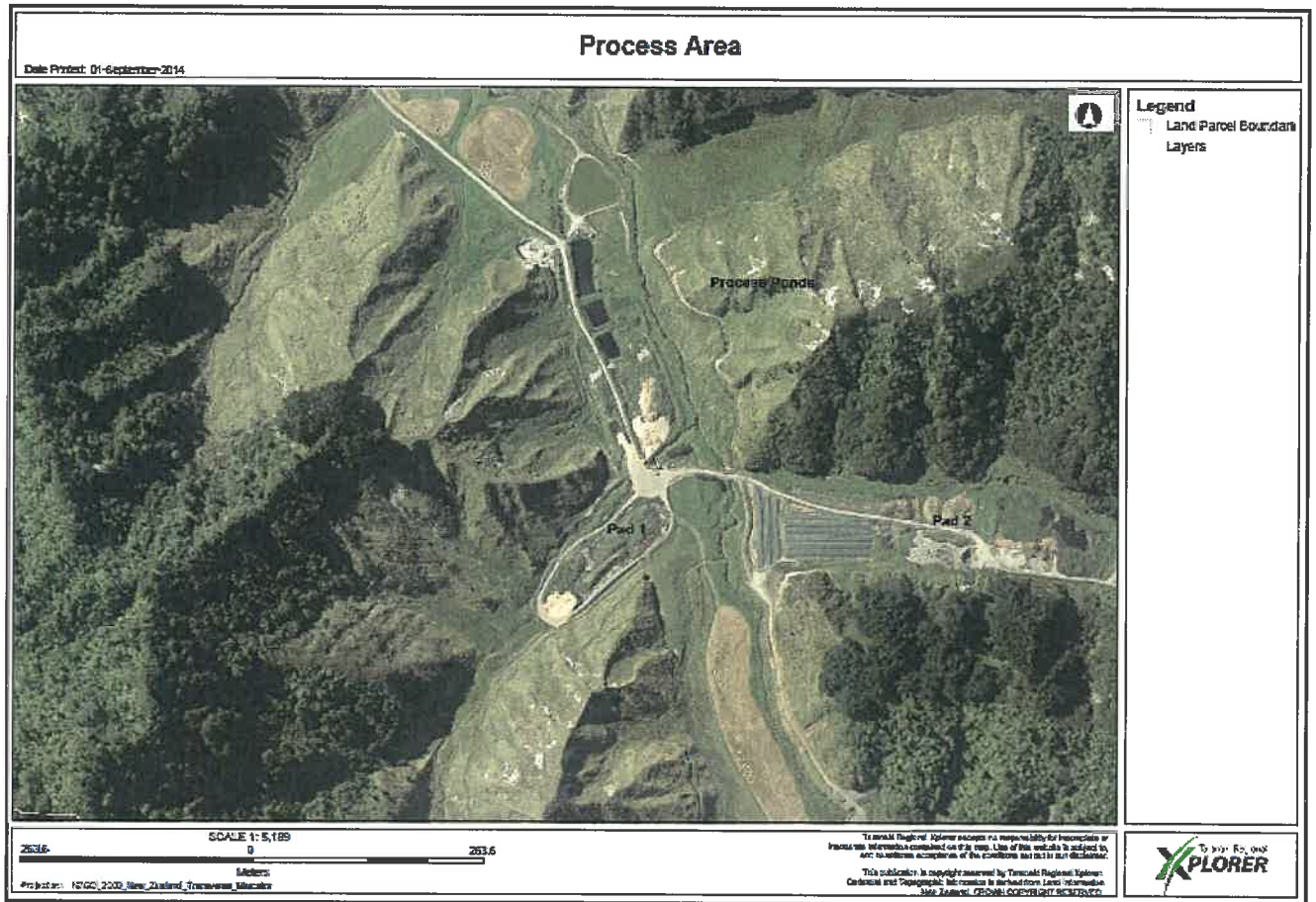


Figure 3 Pad Layout



WASTE MANAGEMENT

1.3 WASTE INVENTORY

1.3.1 Drilled Cuttings and Associated Fluids.

Drill cuttings will be disposed of on site by mixing with sawdust and composting. Resource consent has been completed for this process. Oil that is separated is held in 1,250litre tote tanks until removed for disposal of contents.

1.3.2 Other Waste Inventory

The following wastes shall be collected on site and disposed of by approved waste management contractors.

Table 2: Waste Inventory

Material/Substance	Details/Comments	Hazardous or non-hazardous	Option for Disposal
General waste	Waste from site office, etc General packaging Collected in general waste skip (with lid) on site	Non	Disposal at approved facility
Residual mud chemicals	Excess mud ingredients Not hazardous chemicals that may still pose a threat to handlers or environment should be disposed of as hazardous waste.	Addressed as Hazardous	Remediated on site
Recyclable - Aluminium cans, glass, paper, plastic	To be sorted into wheelie bins	Non	Removed as sorted wheelie bins & taken to recycle centre
Metal scrap	Storage in open skip	Non	Disposal at approved scrap metal merchant
Plastics	Fastenings, wrapping, containers (non hazardous)	Non	Disposal at approved facility
Wooden material	Dunnage, pallets, crates No burning permitted on site	Non	Disposal at approved facility
Gases	Acetylene, Nitrogen	Haz	Cylinder returned to supplier
Flammable Liquids	Alcohol, ester, ethenes Hydrocarbons, ketones Solvents general Fuel Halogenated solvents (TCE/TCA) shall be stored separately from other solvents	Haz	Waste Mgt to manage. Shall be recycled where possible by distillation
Oils	Lubricating oil Hydraulic oil Drip trays shall capture potential leak points and contained as per waste oil. Bunded pallets or drum bunds shall be used on site	Haz	Disposal at approved facility
Oil rags/filters	Collected in marked wheelie bin & removed from site frequently	Haz	Waste Mgt to manage. Oil is distillation by process
Oxidising Agents	Chlorates and perchlorate Hydrogen peroxide Nitrate Permanganates Inorganic peroxides Chemicals to be separated. Any stored oxidizer shall be segregated from other waste & substance storage	Haz	Contractor to manage
Corrosive Materials	Alkalis, caustics, Ammonia solution	Haz	Contractor to manage
Batteries	Containing heavy metals & Acids	Haz	Disposal at approved facility
Empty containers of Haz materials	Segregated. Care to be taken not to mix	Haz	Contractor to manage

Note: 'Approved' shall be interpreted as an authorised and consented facility.

Burning of waste is not permitted on the Uruti site.

'Domestic' wastes generated on site shall be placed in a skip. This skip shall be marked as 'General' waste, include an effective lid and be maintained in good condition. Good housekeeping shall be maintained around the waste collection point and any spills or leakage immediately cleaned-up regardless of their nature.

Waste management requirements shall be covered within the site induction. All visitors and contractors entering site shall be informed of the correct procedures for waste disposal. Signs and posters are located on the HSE/site noticeboard as a prompt for correct waste handling and housekeeping.

1.4 WASTE MINIMISATION AND RECYCLING

It is Remediation's policy is to minimise the amount of waste generated at the Uruti site and to recycle where possible:

- The use of polystyrene foam food containers and beverage cups is discouraged. The site shall be provided with paper/cardboard alternatives;
- Unused material shall be managed by the project manager and returned to the supplier;
- Scrap metal will be collected and transported to an authorised scrap metal merchant.

1.5 MONITORING AND IMPROVEMENT

Written records are required for all aspects of waste management and minimisation, so to conform to local regulations and ensure procedures are in place to minimise the potential of environmental impact. The Site Manager is responsible for maintaining the written record of wastes leaving the site. A review and auditing process on these practices ensures waste minimisation policies are not only upheld, but also continually improved on by Remediation NZ.

An audit shall be undertaken of waste management process annually to monitor compliance and to maximize opportunities for improvement.

Mishandling, or mismanagement of waste streams shall constitute an 'event' and as such shall be reported and recorded to facilitate continual improvement and prevention of similar occurrences.

2. SPILL PREVENTION AND MANAGEMENT

Remediation (NZ) Ltd shall operate its field activities in a way which minimises the risk of hydrocarbon/hazardous substance spills. Precautions are being further implemented during the operational activities to minimise the risk of a spill.

Operating procedures aim to eliminate such spills however should a discharge occur, Remediation defines in this plan the appropriate procedures to be implemented to mitigate impact and affect clean-up.

The primary objective, in the event of a discharge, is to ensure the safety of people, both on-site personnel and the general public. Having assured that the safety criteria have been met, this plan defines how a discharge will be managed.

2.1 SPILL CONTINGENCY PLAN

2.1.1 Local Authorities Alert

All spills regardless of size and effectiveness of clean-up shall be reported to the TRC.

Table 3: Authority Alerts – Order of Priority

#	Contact	Phone
1	Police – (if spill on Uruti Road) New Plymouth Station Duty Senior Sergeant	111 06 273 8318 06 278 0260
2	Fire Service (if spill on main road) All areas	111
3	Civil Defence – Emergency General enquiries	111 0800 900 047
4	Taranaki Regional Council Environmental Hotline	0800 736 222
5	Department of Labour General Enquiries Ross Madgwick	0800 20 90 20 027 296 9674 06 759 9412
6	Department of Conservation	06 759 0350

2.1.2 Types of Spills – Action According to Type

2.1.2.1 Type I

Small spillage of hydrocarbon product which covers an area less than 200 sq metres and does not enter the perimeter drains, which can readily be controlled or contained and removed or cleaned up by onsite personnel.

- Stop spillage (turn off valve etc)
- Contain spill
- Apply absorbents (sawdust, straw)
- Remove soiled absorbents and polluted top soil
- Check Operations Procedures to prevent a similar accident recurring

A Type I spillage shall be controlled and cleaned up by the site team. The spill shall be reported to TRC.

2.1.2.2 Type II

A medium sized spillage of hydrocarbons or hazardous substances which cover an area greater than 200 sq metres and/or enters the perimeter drains requiring some minor outside assistance.

- Attempt to stop spillage - conduct preventative earthworks if necessary
- Raise site alarm - report immediately to Site Manager/General Manager Operations
- Apply absorbents
- Call for Vacuum Truck to clean perimeter drains
- Remove soiled surface materials to approved disposal facility

A Type II spillage requires all Remediation staff on site to provide assistance. Site Manager shall assume control of containment and cleanup, or in his absence, the Brixton Site Manager.

2.1.2.3 Type III

A major spill which cannot be controlled or contained within the processing site, e.g. bund rupture/fuel or chemical transfer event and requires outside assistance.

Remediation Site Supervisor takes control of site containment, alerting appropriate authorities, co-ordinating all action.

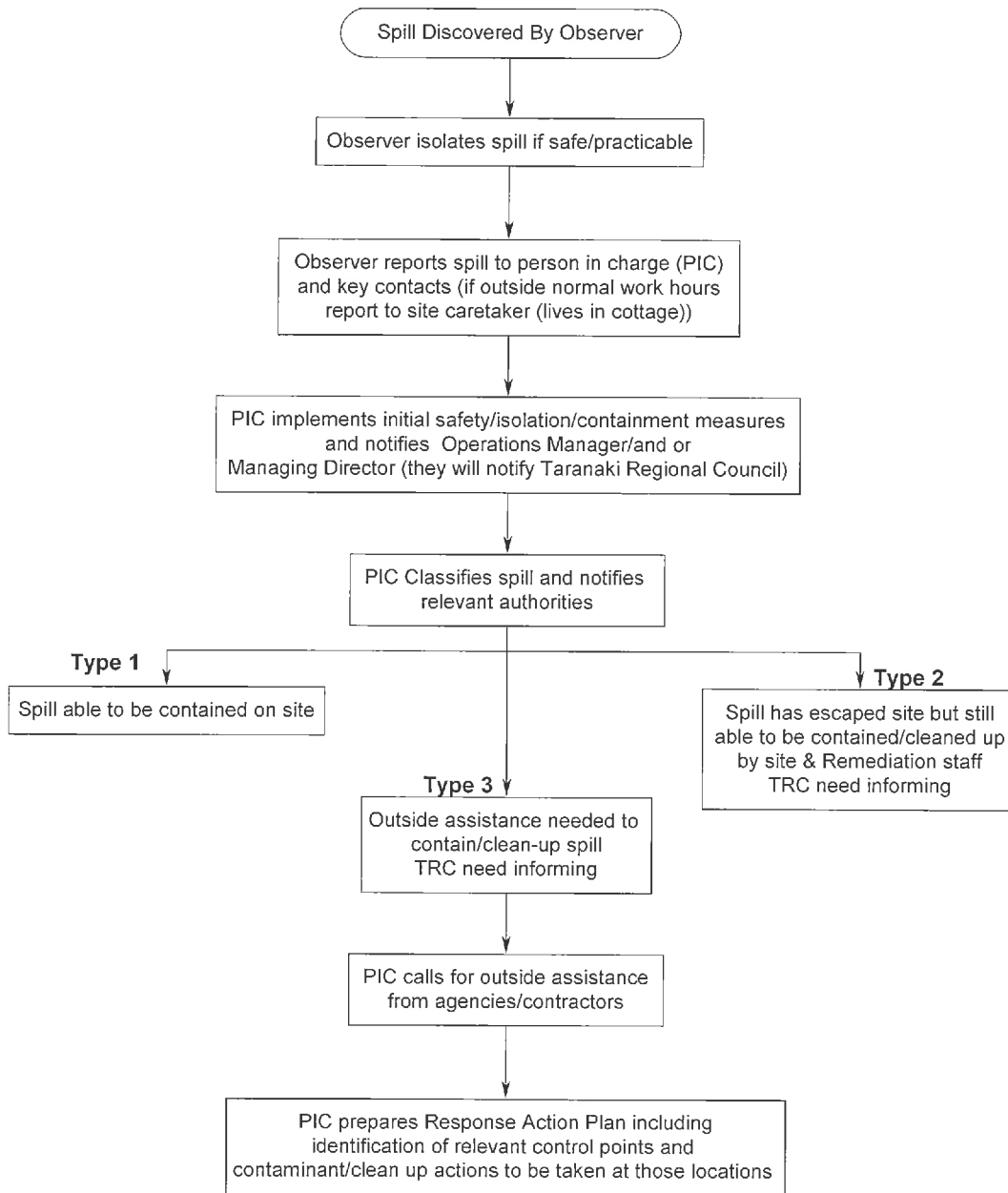
The following actions shall be initiated;

- Ensure immediate safety of site personnel and general public
- Assign duties and responsibilities to all onsite personnel
- Determine action priorities
- Initiate actions to control spill
- Assess outside equipment requirements
- Mobilise contractors with spill control capabilities
 - Earthmoving contractor
 - Tanker trucks
 - Vacuum pumps
 - Absorbent material
 - Tarankai Regional Council - Spill response kit
- Advise Authorities (as detailed in Table 1)
 - Emergency Services
 - TRC
 - Department of Conservation
- Commence Earthworks
 - Divert spills to the process ponds
 - Mobilise spill observers with communication system
 - Block spill flow paths with soil
 - Spread absorbent materials

Figure 4 Remediation (NZ) Ltd Uruti Spill Contingency Plan

Remediation (NZ) Ltd Uruti Spill Action Chart-Initial Response

Approved by: General Manager-Operations 25th August 2014



Contact List

Site Manager: 0274 731 805 (Key Contact)
 General Manager-Operations: 0274 712 012 (Key Contact)
 Managing Director: 021 283 6300
 Taranaki Regional Council: 0800 736 222
 Suction Truck : Matt Hareb 027 415 9398

2.2 SOURCES OF SPILLS

Spills have the potential to occur from the following:

- Irrigation ponds storage;
- Fuel tanks, lubricant storage,
- Transport and transfer of fuel/chemicals;
- Overflow of perimeter drains, pits and ponds during inclement weather;

2.2.1 Preventative Action

Potential sources of hazardous substance and hydrocarbon spills have been assessed during the HAZID workshop and recorded within the hazard register (Appendix 3, Part 1 HSE Management and Interface). Handling operations are continually monitored to identify risk areas and improvement opportunities.

Site staff to perform daily checks of potential hazardous areas and report their status via the daily report and using the Remediation Check sheet

2.2.2 Clean Up Methods- Reference

The spill event, substance spilt and factors influencing the effectiveness of containment and severity/consequence will vary. In this regard the authority for techniques and methods of spill clean-up shall be guided by the TRC.

2.2.3 Oil Containment and Recovery Equipment Inventory

2.2.3.1 Onsite

The Uruti Emergency Spill Kit (x1) contains the following:

Item	Quantity
240Lt Wheelie Bin—labelled, colour red	1
Mini bales Enviropeat (@50Lt)	4
2400mmx65mm sock	6
560mmx360mm pillow	2
Aprons	2
Gloves	2
Safety Glasses	2
Knife	1
Face Masks	2
Brush	1
Shovel	1
Rubbish Bags	10

2.2.3.2 TRC Equipment

TRC have a comprehensive Oil Spill Response Kit and access to oil spill equipment in New Plymouth. In the event that spill containment and clean-up exceeds the capabilities of the site resources this equipment shall be mobilised.

The Taranaki Regional Council spill trailer is based at the TRC, 47 Cloten Road, Stratford, Phone: 06-765 7127 (24hours).

Table 4: Equipment on TRC Spill Trailer

Equipment	Quantity	Equipment	Quantity
River Boom 8 m	6	Pliers	1
Anchors	2	Crescents	2
Foot pump for booms	1	Small hammer	1
Skimmer (small)	1	Disposable gloves	6 pr
Sorbant Boom 3 metres	1	Hacksaw	1
Sorbant pads	100	Pinchbar	1
Blue suction hose	2	Trailer ties	2
Fire hose 70mm x 25m	2	Screwdriver set	1
Adaptor for fire hose	1	Spade	2
Non-return valve	1	Square mouth shovel	2
Rope 12mm x 125m	2	Sledge hammer	1
Rubber inner tube for float	1	Shovels	2
Drum pump	1	2" Diaphragm motorized pump	1
Dispersant – Gamlin	20 litres	Petrol container (5 litres)	1
Warratahs	2 bundles	Trailer cover	1
Towing bridges	7	Boat (punt)	1
Gumboots	3 pr	Oars	2
Overalls	1 pr	Life jackets	2
Hardhats	7	Boom winder handles	2
Safety glasses	6 pr	2,200 litres flexidam with decanter tap	1
Claw hammer	2	Reduction pipe with tap	1

3. SPILL CONTACT LIST

The Site Manager should be the focal point for **any** external communication.

The first contact in each organisation should be contacted. The other numbers are back-ups only. First contacts for immediate response are noted in red.

Table 5: Spill Emergency Contact Directory

Organisation & Address	Key Contact	Phone	Mobile or Alternative Ph	Fax	Email
Emergency Services					
Ambulance , Fire, Police	111 (all areas)				
Police New Plymouth		06 759 5500			
Fire Service		06 757 3860			
Regulatory Authorities					
Taranaki Regional Council 47 Cloten Rd, Stratford	Environmental Hotline	0800 736 222			
	Office	06 765 7127		06 765 5097	info@trc.govt.nz www.trc.govt.nz
New Plymouth District Council	24 hour contact	06 759 6060			contact@stdc.govt.nz
Department of Labour	General Enquiries	0800 20 90 20			
	Ross Madgwick High Hazards Advisor, Petroleum & Geothermal	027 296 9674	06 759 9412		ross.madgwick@dol.govt.nz
Department of Conservation		06 759 0350			

Organisation & Address	Key Contact	Phone	Mobile or Alternative Ph	Fax	Email
Spill Resources					
Earth moving – M Hareb	Matt Hareb	027 415 9398			
Absorbant materials					
Vaccum truck - Contract Resources	Andrew Greehill	021 242 8074			
Local Support O&G Related					
Origin Energy Resources NZ Ltd	Reception	06 769 9800		06 769 9804	
Shell Todd Oil Services (STOS)	Switch	06 758 7609		06 757 7301	
	Emergency Response Coordinator	026 256 0347 (24/7)	027 422 723 (24/7)		
Todd Petroleum Mining Co Ltd		06 759 5350		06 757 8006	energy@tpm.co.nz
Greymouth Petroleum		06 755 1998		06 755 1416	admin@greymouthpetroleum.co.nz
Remediation Support (must be called)					
Operations Manager	David Gibson	0274 712 012			
Managing Director	Kerry O'Neill	021 283 6300			
Brixton Site Manager	Tom Tester	021 745 953			