Prodigy Gold

WASTE MANAGEMENT PLAN

Table of Contents

1. COMMITMENT AND POLICY 4
   1.1 Context 4
   1.2 Project Background 5
   1.3 Objectives 6
   1.4 Safety 6
2. WASTE MANAGEMENT 7
   2.1 Types of Waste 7
   2.2 Black Water (sewage) 7
   2.3 Grey water 8
   2.4 Food waste 8
   2.5 Biodegradable domestic and office waste 8
   2.6 Non-biodegradable domestic and office waste 9
   2.7 Green Waste 9
   2.8 Waste oils and other lubricants 9
   2.9 Spilled fuel 10
   2.10 Used engine coolant 10
   2.11 Oil and fuel filters, hydraulic hoses, used rags 10
   2.12 Used absorbent materials 11
   2.13 Hydrocarbon-contaminated soil 11
   2.14 Chemical contaminated soil 12
   2.15 Scrap metals 12
   2.16 Used tyres 13
   2.17 Batteries 13
   2.18 Drums and containers 13
   2.19 PVC pipes, polyethylene pipes 14
   2.20 Dust 14
   2.21 Exhaust gases, smoke 14
   2.22 Brackish water 15
3. WASTE REDUCTION 15
   3.1 Recycling 15
   3.2 Waste minimisation strategies 15
4. BIOREMEDIATION 16
5. MONITORING 16
   5.1 Groundwater 16
6. EMERGENCY MANAGEMENT 16
7. WASTE MANAGEMENT PLAN SUMMARY 17

8. REFERENCES 18
8.1 Legislation 18
9. DOCUMENT CONTROL AND REVISION HISTORY 18
9.1 Document information 18
9.2 Revisions 18
9.3 Read by 18

1. COMMITMENT AND POLICY

1.1 Context

Prodigy Gold NL (Prodigy Gold) is an exploration company located in Darwin, Northern Territory with an extensive portfolio of tenements in the Greater Tanami region of the Northern Territory (Figure 1).

This Waste Management Plan (WMP) has been prepared by Prodigy Gold in support of the Company's Authorisations to undertake exploration work on tenements held in the Greater Tanami Region.

This WMP describes the framework employed by Prodigy Gold for management of waste product on site, including safeguards and controls developed to ensure environmental impacts are minimised and outlines monitoring procedures and environmental management throughout the project areas.

The WMP will be reviewed regularly to maintain relevance to all aspects of the project as part of the Prodigy Gold's review of its Mining Management Plans within the Greater Tanami Region.

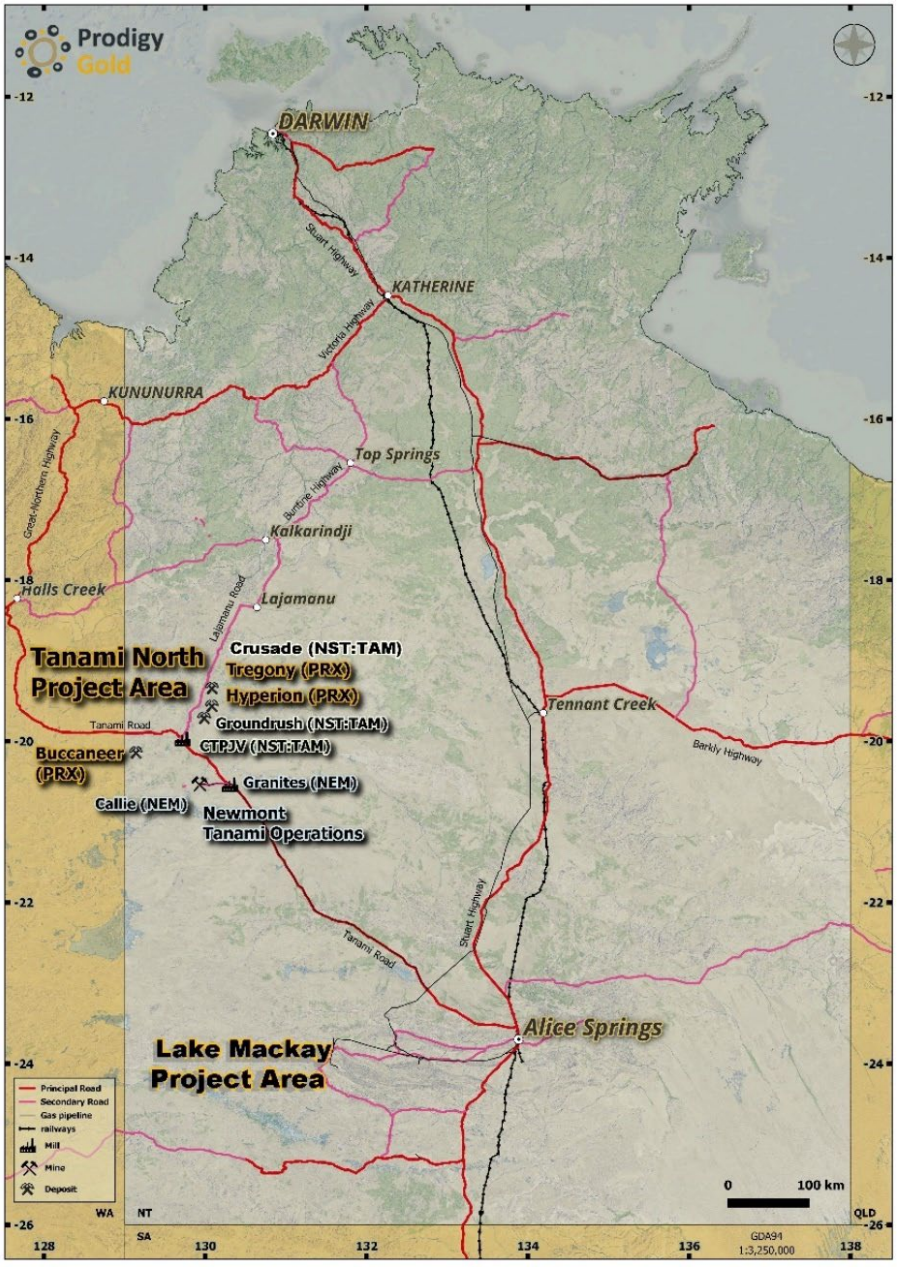

Figure 1 Regional location of Prodigy Gold's projects

1.2 Project Background

Prodigy Gold's project areas are located NW of Alice Springs (Figure 1) and to the east of the Northern Territory and Western Australian border. The site is accessed from east and west by the Tanami Road, which runs Northwest from Alice Springs to the Northern Territory and Western Australian border (Figure 2). The project areas can also be accessed Lajamanu Road which heads south from the community of Lajamanu which is north of the Tregony camp.

Prodigy Gold is active in the Tanami Region of the Northern Territory. The Tanami Region is divided into several sub-projects each with its own Mining Management Plan or plan in preparation. Those sub-projects are shown in Figure 2 and noted as:

- Tanami North Project area (Previously Suplejack Project)
- Hyperion Project area
- Tanami Project area – Currently included in the Stockton Mining Sales agreement.
- Lake Mackay Project area

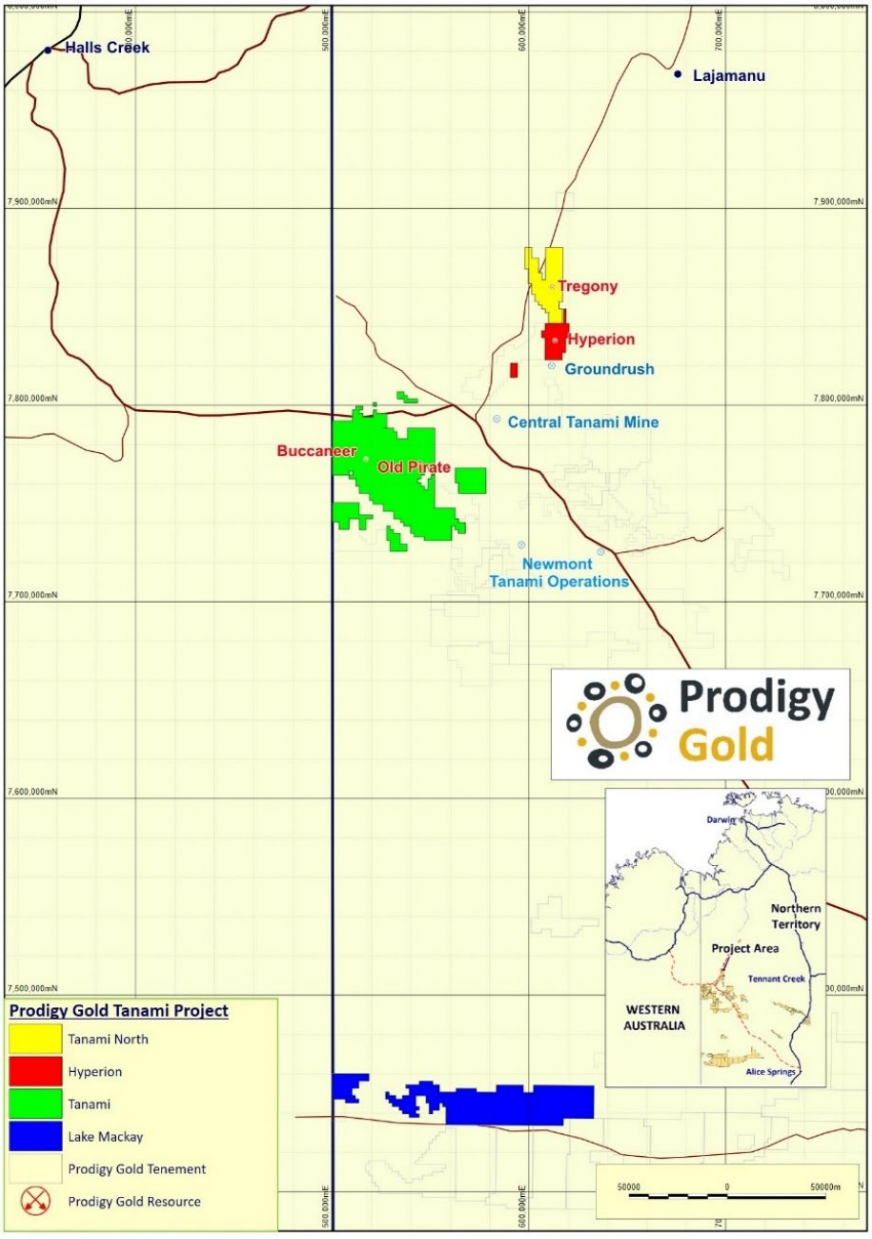

Figure 2 Prodigy Gold's Tanami Projects

1.3 Objectives

This document has been developed by Prodigy Gold NL (Prodigy Gold) to provide the staff and contractors based at any of their projects with information and understanding of wase handing best practices. The objective of this Waste Management Plan (WMP) is to:

- To avoid and minimise the production of waste.
- To prevent wastes from contaminating the surrounding environment.
- To manage and control disposal of all wastes.
- To maximise the recycling/re-use of waste wherever possible.

The management plan is intended to achieve efficient waste management by:

- Optimising the processes/products that produce minimal waste requiring disposal
- Not contaminating surrounding environment
- Maximising the principles of avoid, reduce, reuse and recycle wherever possible
- Safely disposing of non-reusable and non-recyclable materials:
- Identifying the types and sources of waste produced;
- Detailing the methods of disposal for each identified waste product;
- Outlining waste reduction methods;
- Detailing monitoring requirements and methods for a number of waste products;
- Outlining clean up and remediation techniques for potential spills and leaks of various waste products; and
- Setting methods and targets for the reduction of waste production.

1.4 Safety

All works are to be undertaken in a safe manner incorporating the use of Personal Protective Equipment (PPE) and Job Safety Analysis (JSA) prior to the commencement of each task.

2. WASTE MANAGEMENT

2.1 Types of Waste

Table 1.1 Expected waste products and potential for pollution.

Waste Product	Source	Potential for Pollution
Black water (sewage)	Camp and site toilets	Yes
Grey water	Showers, camp kitchen	Yes
Food waste	Kitchen, exploration work areas	No
Biodegradable domestic and office waste (paper, cardboard)	Camp, offices, workshop,	No
Non-biodegradable domestic and office waste (glass, aluminium, plastic, printer cartridges)	Camp, offices, workshop, exploration work areas	No
Green waste (weed collection etc)	Camp, exploration work areas	No
Oil and lubricants	Workshop, generators, exploration work areas.	Yes
Spilled fuel	Workshop, generators, exploration work areas.	Yes
Spilled chemicals	Plant	Yes
Hydrocarbon-contaminated soil	Fuel farm, generators, exploration work areas	Yes
Chemical-contaminated soil	exploration work areas	Yes
Coolant	Workshop	Yes
Oil and fuel filters	Workshop	Yes
Used absorbents	Workshop	No
Scrap metals	Workshop, exploration work areas	No
Tyres	Workshop	Possible
Batteries	Workshop	Yes
Drums and containers (steel and plastic)	Workshop	No
Plastic sample bags	Exploration	Yes
Exhaust gases	Generators, equipment, vehicles	Yes

2.2 Black Water (sewage)

Black water is all liquid and solid waste from any latrine and or ablution facility.

Key Objective:

To ensure health and environmental issues related to the disposal of sewage waste are eliminated.

Source:

Camp and site ablution facilities.

Potential issues:

- Pathogens (viral and bacterial).
- Increased nitrogen and phosphorous levels.
- Offensive smell.

Management methods:

Weekly inspections of onsite septic tanks to ensure operational. If issues recognized then plumber to be contacted to source issues and repair.

The treated solid material will be removed from the system as required and transferred off site.

2.3 Grey water

Grey water is the liquid discharge from domestic uses such as from the laundry, showers, dishwashing and hand washing basins.

Key Objective:

To ensure no adverse environmental effects result from the disposal of grey water.

Source:

Camp ablution facilities and kitchen.

Potential issues:

- Increase in nitrogen and phosphorous levels in the soil and groundwater.

Management methods:

Grey water will also be directed to the sewage treatment facility/septic and recycled.

The bore used for drinking water production at the Wilsons camp to be sampled to monitor the levels of nitrogen and phosphorous, indicating leaching from irrigation water at the surface. Water at Tregony is sourced from a bore several kilometers from the location of the camp and piped to the tanks for use.

2.4 Food waste

Key Objective:

To dispose of food waste in a manner that ensures no odour or insect vectors are produced and prevents access by animals to a food source.

Source:

Camp kitchen and exploration work areas.

Potential issues:

- Pathogens.
- Offensive smell.
- Increase in numbers of feral species (ie. cats/dingoes) resulting from increased food availability.

Management methods:

Food waste is to be disposed of at the site landfill facility and will be burnt regularly to prevent access by animals.

The landfill area at Wilsons camp will be fenced to prevent rubbish being blown into the surrounding environment. At Tregony the food waste will regularly be burnt to reduce interaction with pests.

2.5 Biodegradable domestic and office waste

Predominately paper and cardboard.

Key Objective:

To eliminate onsite disposal of paper and cardboard by recycling.

Source:

Camp, workshop and offices.

Potential issues:

- Rubbish blowing around the site.
- High volumes of waste material going to landfill.

Management methods:

Wastepaper may be disposed of in either of two ways:

1. Shredding and composting with green waste produced on site; and
2. Packaging and removing from site for recycling.
3. If not suitable to remove from site the burning an be an option

2.6 Non-biodegradable domestic and office waste

This includes plastic, aluminium, glass, printer cartridges, polystyrene.

Key Objective:

Minimise the quantity of waste produced and ensure wherever possible that non-biodegradable materials used are recyclable.

Source:

Kitchen, camp, offices.

Potential issues:

High volumes of non-biodegradable waste material going to landfill.

Management methods:

Ensure that the packaging of purchased items are easily recyclable. Glass is to be avoided as it is one of the most expensive products to recycle. Drink bottles and cans be baled for transport off site and returned to an authorised recycler for deposit scheme refunds.

2.7 Green Waste

Key Objective:

Ensure disposal of non-native green waste, such as weed collection, does not result in the spread of potential weed species.

Source:

Weed removal around site.

Potential issues:

- Spread of seeds/cuttings resulting in growth of non-native species in other areas.

Management methods:

Weeds collected should be placed in the burn pit area in camp and incinerated as soon as practical. If large volumes are collected and it is too large to burn then these weeds should be buried deep below the surface at a depth sufficient to prevent emergence of vegetative shoots or seedings.

2.8 Waste oils and other lubricants

Key Objective:

Prevent contamination of the surrounding environment and maximise recycling or reuse of waste oils.

Source:

Workshop, exploration work areas and generators.

Potential issues:

- Soil and water contamination.

Management methods:

Waste oils and other lubricants are to stored in an appropriately bunded facility before being transported off site for recycling by a suitable service provider.

2.9 Spilled fuel

Key Objective:

Implement means of minimising the incidences of fuel spillage and ensure rapid and appropriate action is carried out for any fuel spills.

Source:

Primarily from refuelling activity, but also within workshop, generators and exploration work areas.

Potential issues:

- Soil and groundwater contamination

Management methods:

Spill cleanup equipment will be readily available in all locations where refuelling occurs. Training will be provided to all personnel in the effective use of the cleanup equipment available. Most refuelling will be undertaken on a purpose-built concrete apron that will contain spills and direct all waste to the fuel bund.

2.10 Used engine coolant

Key Objective:

Prevent soil and groundwater contamination by ensuring adequate means of storage, handling and offsite disposal.

Source:

Workshop

Potential issues:

- Soil and ground water contamination.

Management methods:

Used engine coolant is to be stored in 205lt drums within an appropriately bunded area until it can be removed from site for treatment by a suitable service provider.

2.11 Oil and fuel filters, hydraulic hoses, used rags

Key Objective:

Ensure appropriate storage and handling of used filters.

Source:

Workshop

Potential issues:

- Hydrocarbon contamination of soil and groundwater.

Management methods:

There are two possible methods for handling of used oil and fuel filters:

1. They are to be drained and then high-temperature incinerated using a Turbo Burner; or
2. They are to be contained within a storage bin before being transported offsite for disposal by a suitable service provider.

Hydraulic hoses and used rags are to be contained within a storage bin before being transported offsite for disposal by a suitable service provider.

2.12 Used absorbent materials

Key Objective:

Ensure used absorbent materials are suitably stored and treated to prevent pollution of the surrounding environment .

Source:

Workshop, fuel farm, operational areas.

Potential issues:

- Hydrocarbon contamination of soil and groundwater.

Management methods:

Organic and polypropylene absorbents are to be used on site. Organic absorbents will be disposed of onsite using bioremediation techniques. A bioremediation area will be constructed for this purpose. Used polypropylene absorbents may be disposed of by high-temperature incineration in a Turbo Burner or off-site by a suitable service provider.

2.13 Hydrocarbon-contaminated soil

Key Objective:

Ensure rapid and effective treatment of soils contaminated by hydrocarbon spills.

Source:

Fuel farm, exploration work areas, workshop.

Potential issues:

- Hydrocarbon contamination of soil and groundwater.

Management methods:

Refuelling areas, the workshop and service vehicles will be equipped with spill kits to enable quick response to fuel and oil spills. This will assist in minimising the extent of soil contamination in the event of a spill.

All site personnel will undergo basic training in the use of the materials available on site as part of the environmental induction. Hydrocarbon-contaminated soil is to be removed immediately and transported to the bioremediation area for disposal.

2.14 Chemical contaminated soil

Key Objective:

Ensure rapid, safe and effective treatment of soils contaminated by chemical spills.

Source:

Workshop, exploration work areas.

Potential issues:

- Chemical contamination of soil and groundwater.

Management methods:

Any areas where chemicals are to be used, stored or handled are to have suitable spill kits on hand to enable rapid response to spills that may occur.

Chemical contaminated soil is to be removed and disposed of in the bioremediation area for disposal.

2.15 Scrap metals

Key Objective:

Ensure all scrap metal is recycled or reused.

Source:

Workshop, exploration work areas.

Potential issues:

- Wasted resources.
- Unnecessary disposal in landfill.

Management methods:

A laydown area has been designated for the sorting and storage of scrap metals at the Old Pirate Mine site and the Tregony camp workshop area.

Metals are to be sorted into the following groups:

- Aluminium;
- Copper (electrical cable, plumbing/gas fittings);
- Hardened steel (ripper boots, bucket teeth, cutting edges);
- Cast iron/steel (engine blocks, pump housings);
- Chrome magnesium steel (rams, pumps);
- General iron (roof/wall sheeting, construction materials).

Scrap metal is to be removed from site when sufficient quantities are available to make transportation cost effective. Alternatively, it could be removed from site gradually as backloads.

2.16 Used tyres

Key Objective:

Eliminate onsite disposal.

Source:

Workshop

Potential issues:

- Below ground tyre fires.
- Soil contamination.
- Higher than necessary levels of waste disposed in landfill.

Management methods:

All used tyres are to be transported offsite for appropriate disposal. It may be possible to arrange for used tyres to be taken by the provider as a back logged transported item.

2.17 Batteries

Key Objective:

Ensure safe storage of used batteries until such time that they are transported from site for recycling.

Source:

Vehicles and machinery.

Potential issues:

- Short term - Acid seepage from batteries resulting in localised soil contamination.
- Long term - Heavy metal contamination of soil.

Management methods:

Used batteries are to be stored within a suitable bunded area to prevent soil contamination. Concrete facilities are not suitable as acid leaking from batteries will react and eventually degrade the containment area. A variety of acid resistant portable bunds are available for this purpose.

Used batteries are to be periodically removed from site for recycling by an appropriate service provider. Pallets of batteries must be plastic wrapped, securely restrained and are to remain bunded during transport.

2.18 Drums and containers

Key Objective:

Recycle drums and containers to eliminate disposal in landfill.

Source:

Workshop, kitchen.

Potential issues:

- High volume of non-biodegradable waste going to landfill.
- Contamination of soil and ground water as a result of seepage from buried containers.

Management methods:

Steel drums can be removed from site whole for recycling or reuse, or crushed and disposed of as scrap metal.

Plastic containers can be removed from site whole for recycling although it may be more economical to crush/shred them prior to transport.

2.19 PVC pipes, polyethylene pipes

Key Objective:

Eliminate disposal of PVC and poly pipes in landfill.

Source:

Construction/demolition, dewatering operations.

Potential issues:

- High volume of non-biodegradable waste going to landfill.

Management methods:

Pipes should be stockpiled for onsite reuse and/or bulk removal from site for recycling when volumes allow, full recycling plant now established in Darwin.

2.20 Dust

Key Objectives:

Minimise dust production.

Source:

Camp, exploration work areas.

Potential issues:

- Degradation of flora.
- Safety issues (visibility).
- Health issues (eye, ear and chest infections).

Management methods:

Vegetation retained wherever possible.

Rehabilitation of completed/obsolete areas as quickly as possible.

2.21 Exhaust gases, smoke

Key Objective:

Minimise potential health effects and Greenhouse gas emissions as a result of exhaust gases.

Source:

Vehicles, generators, equipment

Potential issues:

- Greenhouse gas emissions.
- Asphyxiation (in enclosed areas).

Management methods:

Ensure adequate ventilation where machinery operates within enclosed areas.

Greenhouse gas emissions can be minimised by:

- regularly servicing engines to ensure maximum efficiency from vehicles.
- using energy efficient appliances (i.e. solar-hot water systems, LED light globes).
- fitting timer switches to eliminate lights, air conditioners etc being in constant use (where appropriate).

2.22 Brackish water

Key Objective:

Ensure the surrounding environment is not adversely impacted by brackish groundwater.

Source:

Exploration works.

Potential issues:

- Poor vegetation health as a result of groundwater leaving sites.

Management methods:

Ensure exploration sites are set up correctly with a sump for collection of all groundwater during drilling to minimise the chances for brackish water interacting with surrounding vegetation.

3. WASTE REDUCTION

3.1 Recycling

Prodigy Gold aims to establish a culture whereby all waste products are recycled or reused.

Bins for the disposal of recyclable materials will be provided in convenient locations at the camp.

3.2 Waste minimisation strategies

To assist in minimising the production of waste the following strategies will be implemented by the company.

- Reuseable Crib packs will be supplied.
- A limited number of “take away” containers will be provided for short-term contractors.
- Disposable cups and plastic bags will not be provided.
- Paper bags can be provided for packing lunches etc.
- Recycling stations will be located around the camp for the disposal of drinking containers.

- Education to promote waste reduction and recycling will be an important part of ensuring success of the program.

4. BIOREMEDIATION

Bioremediation will be used for treatment of all hydrocarbon contaminated soils and biodegradable absorbent materials.

An area has been constructed for this purpose near the fuel farm at Tregony and within the Old Pirate Mining Area. These areas will be managed to ensure that all contaminated soil is not left to risk further environmental damage.

5. MONITORING

5.1 Groundwater

Groundwater monitoring (sampling and analysis) from bores is to be conducted as required.

An objective of monitoring water quality will be to determine whether seepage is occurring. Analysis will be conducted to determine levels of:

- pH;
- TDS;
- EC;
- AS;
- Pb;
- Ni;
- Cr;
- Nitrates
- phosphartes; and
- Hardness.

The levels of nitrates and phosphates in the groundwater near the camp will be of particular interest. Treated wastewater will initially be discharged to an evaporation area and subsequently could conceivably leach into the water table.

Additionally, the quality of the camp groundwater at Wilsons is to be tested as per the Australian Drinking Water Guidelines 2004. Total N and Total P will be included to provide a baseline for comparison. Bore water at Tregony is not used for human consumption, this water will be sourced from other locations or sources.

Where there is uncertainty of water quality at camps, commercial drinking water will be supplied.

6. EMERGENCY MANAGEMENT

Emergency response procedures for large fuel or chemical spills will form part of the site Emergency Response Plan. Basic training in the use of the spill control/cleanup equipment on site will be provided as part of the site induction.

Essentially the procedure for both chemical and hydrocarbon spills is:

- Control the spill at the source;
- Contain the spill to prevent it spreading; and

- Clean up the spill, including contaminated soil and other materials.

The materials and methods used for cleanup of each type of spill will vary depending on the nature and quantity of the product. Sufficient materials must be on hand to cater for a plausible “worst case scenario” of each product stored on site. Spill kits are available at re-fueling points as these areas are seen as a higher risk scenario in terms of potential for hydrocarbon spills.

Safety must be taken into consideration when dealing with chemical or hydrocarbon spills.

Sand will likely be the most readily available material for the initial containment of spills and suitable machinery will be on hand to assist. The contaminated material would then be taken to the bioremediation lay down area (land farm).

7. WASTE MANAGEMENT PLAN SUMMARY

WASTE MANAGEMENT	
OBJECTIVES	To avoid and minimise the production of waste. To prevent wastes from contaminating the surrounding environment. To manage and control disposal of all wastes. To maximise the recycling/re-use of waste wherever possible.
TARGETS	Achieve efficient waste management by: • optimising the processes/products that produce minimal waste requiring disposal • not contaminating surrounding environment • maximising the principles of avoid, reduce, reuse and recycle wherever possible • safely disposing of non-reusable and non-recyclable materials. • identify the types and sources of waste produced; • detail the methods of disposal for each identified waste product; • outline waste reduction methods; • detail monitoring requirements and methods for a number of waste products; • outline clean up and remediation techniques for potential spills and leaks of various waste products; and • set methods and targets for the reduction of waste production.
ACTIONS	Employ principles of avoid, reduce, reuse and recycle wherever possible. All non-biodegradable waste (e.g. plastic, steel, aluminium) is removed from drill sites and mobile camp and relocated to Permanent Camps or a waste recycling facility (i.e. Alice Springs Council Waste Site or Halls Creek Waste Facility). Certain waste materials (i.e. cardboard, food scraps) will be burnt on site in a designated burn pit to reduce the risk of attracting fauna. Waste that may cause contamination (e.g. waste oils) is to be stored appropriately (see Dangerous Goods Management) and removed from site for disposal of at a suitable facility in Halls Creek, Alice Springs or Darwin. Wastewater from toilets will be managed via a leach system. Grey water from showers and kitchen caravan will be sent from an approved portable septic tank to a leach drain away from camp as approved by the Department of Health.

MONITORING	Regular inspections/audits by the Site Supervisor of camp and operational areas to ensure that waste is being managed appropriately. Records kept of waste disposed to licenced facilities.
REVIEW & REPORTING	Include summary of inspections/audits and waste management activities (including recycling) in annual MMP update.

8. REFERENCES

8.1 Legislation

- *NT Mineral Title Act 2010* (NT)
- *NT Mining Management Act 2011* (NT)
- *NT Water Act 1992* (NT)
- *Work Health and Safety (National Uniform Legislation) Act 2011* (NT)

9. DOCUMENT CONTROL AND REVISION HISTORY

9.1 Document information

PROPERTY	VALUE
Approved by	Managing Director
Document Owner	Exploration Manager
Effective Date	01/01/2024
Keywords	

9.2 Revisions

VERSION	DATE REVIEWED	REVIEW	NATURE OF THE AMENDMENT
1			
2			
3			
4			

9.3 Read by

READ BY	SIGNATURE	DATE
G Ferris		15/01/2024