Aeris
TRITTON OPERATIONS

Pollution Incident Response Management Plan

Tritton Mine (ML1544), Murrawombie Mine (ML1280) and North East Mine (ML1383)

JANUARY 2016

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1. INTRODUCTION

1.1. PURPOSE

The purpose of this Pollution Incident Response Management Plan (PIRMP) is to ensure that in the event of reportable pollution event; Tritton Mine (TM) employees manage the situation quickly and effectively, limiting the impact on employees, environment, landholders, reputation and assets.

1.2. SCOPE

This plan applies to all personnel at TM, which includes the Tritton mine site, Murrawombie and North East mine sites. This document is designed so that the site has a standardised response to a reportable pollution event. For minor, non-reportable spill events see the Spill Response procedure (TRL-ENV-PRO-004).

All onsite visitors must be under the direction of a fully inducted TM employee or contractor, who will be responsible for the visitor at all times, including during an emergency or crisis.

This document refers to response actions for site-based personnel only. Any large-scale incidents will require the Corporate Crisis Management Team (CMT) to convene. Guidance on the CMT is contained in the Aeris Resources Limited Crisis Management Plan.

It is important to note that this document was written to provide specific advice as directed by the Protection of the Environment Operations (General) Amendment (Pollution Incident Response Management Plans) Regulation 2012 and is to be made publicly available upon request. It is an overarching document outlining the response to a reportable pollution event as defined below. Procedures regarding incidents where an emergency has been declared are documented in the site Emergency Management Plan and other related documents.

1.3. REFERENCES

This plan meets requirements of the following:

- Protection of the Environment Operations Act 1997;
- Protection of the Environment Operations (General) Amendment (Pollution Incident Response Management Plans) Regulation 2012;
- Straits Health, Safety and Environment Management Procedure – No. 10, Emergency Preparedness and Response; and
- Environmental Protection Licences 11254 and 4501.

1.4. DEFINITIONS

Term	Definition
Reportable pollution event	An event that may cause material harm to the environment.
Material harm	An event that involves actual or potential harm to the health or safety of human beings or to ecosystems that is not **trivial**, or Incidents that are categorised as "Moderate" or higher as described in TM Escalation Procedure appended to the Pollution Incident Notification (TRL-ENV-PRO-003) procedure.
Minor spills	Incidents that are categorised as "Insignificant" or "Minor" as described in the TM Escalation Procedure appended to the Pollution Incident Notification (TRL-ENV-PRO-003) procedure.
Significant amount	Depending on the solution involved but 1000L can be used as a guide. A significance judgment is to be made by TM Environment personnel and/or the General manager.

2. RESPONSIBILITIES

Role	Responsibilities
Managers	Ensure adequate resources and training is made available to all employees and contractors to enable compliance with this plan. Ensure all employees and contractors comply with this procedure.
Superintendents	Determine training needs to ensure employees understand the hazards and their obligations in respect to the response to a reportable pollution event.
Supervisors	Conduct regular site inspections to minimize the risk of environmental incidents and ensure incidents are communicated immediately to the Environment Team and other relevant persons.
Environment Team	Coordinate communication to the relevant authorities and key stakeholders and provide assistance in the management of a reportable pollution event. Ensure this document is reviewed annually.
All Staff and Contractors	Must comply with this plan and act in a manner which reduces the risk of a reportable incident from occurring.

3. HAZARDS

As defined above, a reportable incident is one that is not "trivial" or has a potential risk categorised as "moderate" or higher using the TM Escalation Procedure appended to the Pollution Incident Notification (TRL-ENV-PRO-003) procedure. Examples of these incidents are as follows:

- Significant amounts of tailings decant water outside the compacted footprint;
- Tailings infrastructure failure causing significant amounts of tailings to discharge onto earthen surfaces or waterways;
- Containment dam wall failures;
- Any discharge of contaminants (including copper concentrate) off a current operating lease; and
- Rupturing of above ground diesel tanks.

The hazards associated with these activities are tabled below (Table 1). All other hazardous materials are kept in minor storage.

Table 1 Hazard Inventory

Material	Location	Quantity	Hazard
Tailings	Tailings infrastructure including the TSF and related pipework	Variable	heavy metal toxicity
Copper concentrate	Concentrator and transport to rail load out yard	Variable	heavy metal toxicity
Diesel	Tritton Mine	130,000 max	hydrocarbon
	Girilambone Mine	61,000 max	hydrocarbon
	Hartmans Pit	61,000 max	hydrocarbon
Contaminated waters	Tritton containment dam		heavy metal toxicity
	TSF decant	Variable	heavy metal toxicity
	Girilambone containment dam	Variable	heavy metal toxicity and low pH

Tailings is classified as a miscellaneous dangerous good and contains residual waste materials from the copper concentration process which is predominately composed of waste rock with minor milling process constituents including lime, flotation reagent, flocculent and an anti-scaling agent. The hazard associated with a tailings spill is heavy metal loading of the receiving environment causing toxicity. For details on the human and ecological risk and handling instructions for this material refer to the product MSDS attached (appendix 1).

Copper concentrate is classified as a miscellaneous dangerous good with sulfur (30-40%), iron (30-32%) and copper (24-26%) being the dominant components. The hazard associated with a

concentrate spill is heavy metal loading of the receiving environment causing toxicity. For details on the human and ecological risk and handling instructions of this material refer to the product MSDS attached (appendix 2).

Diesel is not classified as a dangerous good but is classified as a hazardous good. The hazard associated with a diesel spill is hydrocarbon contamination causing ecological toxicity. For details on the human and ecological risk and handling instructions of this material refer to the product MSDS attached (appendix 3).

Contaminated waters contain variable levels of pH and heavy metal concentrations which if released to the environment or ingested by humans can be toxic. These waters are not classified due to their inherent variability but may be considered hazardous for the purposes of this document.

For details concerning the likelihood of such hazards occurring and the controls in place to prevent or reduce the pollution event from occurring refer to the current TM Risk Register of which an excerpt may be found in appendix 4.

4. TRAINING

Training is essential in maintaining a high level of response management capability. All Mine personnel receive an introduction to pollution response management during their induction. This training includes as a minimum:

- Pollution incident notification procedure;
- Types of incidents requiring regulatory notification; and
- General emergency response training

TM has an Emergency Response Team for responding to incidents that trigger site emergency procedures. Members are given training at regular intervals to be able to effectively deal with potential scenarios inherent to TM activities. Potential risks are highlighted in the TM site risk register and training needs are determined through this process. Training is delivered by experienced personnel with a combination of in-house and external providers. Further details on site emergency response procedures may be found in the site EMP.

5. DUST MITIGATIONS MEASURES

For dust mitigation TM utilize water carts around the surface operations, along with sprinklers on the conveyor belts, crushers and the decline. Sprinklers are also positioned on top of the heap leach pads to reduce the effects of dust.

6. POLLUTION INCIDENT RESPONSE

Reportable pollution incidents that do not trigger site emergency procedures are detailed below in two categories to maintain compliance with the site EMP;

6.1. TAILINGS SPILL

Examples of a tailings spill include, but are not limited to:

- ☐ Dam wall failure and release
- ☐ Major pump failure/Pump house loses power
- ☐ Pipe rupture and release

First person on scene:

- ☐ Stop work in the area and turn off all machinery and vehicles
- ☐ Report spill to your supervisor
- ☐ Remove injured people from danger and render first aid
- ☐ Wear appropriate PPE as per the product MSDS and if possible, attempt to stop the flow
- ☐ If possible, contain the spill with barriers, earth bunds and block drains
- ☐ Await further assistance and / or instructions from Supervisor/ Superintendent, HSET Department or attending Emergency Services
- ☐ Be prepared to handover the scene to Emergency Services and assist as directed.

Supervisor:

- ☐ Ensure all actions above have been carried out
- ☐ Take control of the area and inform the HSET Department and Department Manager
- ☐ Attempt to stop the flow of the material and contain the spill if safe to do so
- ☐ Commence clean-up if possible
- ☐ Establish an exclusion zone around the spill and post sentries if required. Deny access to the area to non-essential personnel
- ☐ Carry out instructions from HSET or Emergency Services
- ☐ Maintain control of the area until relieved

Important considerations:

- ☐ If the spill is uncontrollable activate site emergency procedures
- ☐ If necessary, temporarily slow down or shut down concentrator operations
- ☐ Mobilize heavy equipment to assist with clean up, as required
- ☐ Additional equipment or personnel may be required to assist with clean-up
- ☐ If clean-up is remote or lengthy, consider the welfare of clean-up teams
- ☐ Names and details of fatalities should not be stated over the radio
- ☐ Don’t provide details of fatalities or injured people to family, friends, members of the public or media
- ☐ Once the response is over, preserve the scene to ensure it remains unchanged
- ☐ Begin recording details of the incident and prepare for incident reporting and investigation activities i.e. what occurred, date, time, location, list of witnesses.

6.2. OTHER HAZARDOUS MATERIALS SPILL

Examples of a hazardous material spill include, but are not limited to:

- ☐ Hazardous chemical spill
- ☐ Concentrate spill
- ☐ Flammable substance spill
- ☐ Corrosive substance spill
- ☐ Hydrocarbon spill

First person on scene:

- ☐ Stop work in the area and turn off all machinery and vehicles
- ☐ Evacuate area if material causes dangerous fumes, especially if spill is in confined space or non-ventilated area
- ☐ Remove injured people from danger and render first aid
- ☐ For flammable materials, identify and remove any sources of ignition
- ☐ Turn off any air conditioners and exhaust fans and close all windows and doors
- ☐ Notify your Supervisor when safe to do so
- ☐ If possible, contain the spill with barriers, earth bunds and block drains.
- ☐ Attempt to clean the spill area if:
    - Sufficient amounts of the correct absorbent materials are available
    - The appropriate PPE is available and worn
    - Adequate disposal containers are available for chemical and absorbent materials
- ☐ Warn others of the danger and keep people clear of the area. Notify staff and visitors to muster to a central point if required
- ☐ Remain upwind of fumes and smoke
- ☐ Await further assistance and / or instructions from Supervisor/ Superintendent, HSET Department or attending Emergency Services

Supervisor:

- ☐ Ensure all actions above have been carried out
- ☐ Take control of the area and inform the HSET Department and Department Manager
- ☐ Ensure people have been evacuated to a safe location (upwind and uphill) for materials that cause dangerous fumes, especially if spill is in confined space or non-ventilated area
- ☐ Attempt to identify the hazardous material and collect the MSDS sheets
- ☐ Attempt to stop the flow of the material and contain the spill
- ☐ Establish an exclusion zone around the spill and post sentries if required. Be prepared to deny access to the area to non-essential personnel
- ☐ Carry out instructions from HSET or Emergency Services
- ☐ Maintain control of the area until relieved

Important considerations:

- ☐ Notify environmental personnel and use spill kits where appropriate.
- ☐ Additional equipment or personnel may be required to assist with clean-up
- ☐ If clean-up is remote or lengthy, consider the welfare of clean-up teams
- ☐ Names and details of fatalities should not be stated over the radio
- ☐ Don’t provide details of injured people to family, friends, members of the public or media
- ☐ Once the response is over, preserve the scene to ensure it remains unchanged
- ☐ Begin recording details of the incident and prepare for incident reporting and investigation activities i.e. what occurred, date, time, location, list of witnesses.

6.3. NOTIFICATIONS

Anyone observing a reportable incident is to report it immediately using the following Pollution Incident Notification (TRL-ENV-PRO-003) procedure, refer to Appendix 5.

6.4. SITE PLANS

For locations of potentially affected zones for a given pollution event see Appendix 6 for the Tritton site and Appendix 7 for the Girilambone site. For a description of the Girilambone mining area and Tritton mining area see Plan 2 and 2b respectively.

7. INCIDENT CONCLUSION

The termination of the incident response will be at the discretion of the Mine Manager or designate. As soon as practicable after the conclusion of the incident TM will undertake the following:

- Conduct an internal investigation into the incident and make recommendations;
- Audit of the response by all teams will be reviewed; and
- Reviewed the effectiveness of all related procedures and practices.

8. DOCUMENT REVISION

The document will be revised annually. This ensures relevant site personnel are familiar with their roles and responsibilities regarding a reportable pollution event and contact details to relevant authorities and key stakeholders are up to date.

9. RECORDS

All records associated with a reportable incident are located electronically M:\HSET\03_Environmental\4.0 Operation\4.9 Incidents. Records associated with document revision or incident reviews are captured within the sites incident management software (In Control).

10. DOCUMENTS

- Tritton Mines Emergency Response Plan
- Tritton Mines Risk Register
- TRL-ENV-PRO-003 Pollution Incident Notification