

Summary of Magellan's Response to Condition 12

Condition 12 of Magellan Metals' approval to transport lead carbonate concentrate from its mine-site at Wiluna through the Port of Fremantle requires the company to develop a detailed Emergency Response Plan (ERP). The specific conditions related to the ERP are outlined below, while the remainder of this document summarises Magellan's plans for meeting the conditions. The full plan is available on www.magellanmetals.com.au.

SUMMARY OF CONDITIONS

The list below sets out the range of areas in which conditions have been applied to the sealed shipment process by the Minister for Environment.

CONDITION 1

Implementation

CONDITION 2

Proponent Commitments

CONDITION 3

Proponent

CONDITION 4

Commencement

CONDITION 5

Compliance Reporting

CONDITION 6

Dust control - Health, Hygiene and Environmental Management Program

CONDITION 7

Decommissioning and Rehabilitation Plan

CONDITION 8

Subterranean Fauna (Stygofauna) Sampling Plan

CONDITION 9

Health, Hygiene and Environmental Monitoring Program

CONDITION 10

Accredited Auditor

CONDITION 11

Public reporting of outcomes of auditing and monitoring

CONDITION 12

Emergency Response Plan

CONDITION 13

Performance review

CONDITION 14

Performance Bond

CONDITION 15

Definitions

12 Emergency Response Plan

- 1-1 *In the event that material containing lead carbonate is released from a shipping container into the environment at any point between the time the shipping container leaves the mine-site and the time it is removed from the State, the proponent shall ensure that all lead carbonate is removed from the affected environment.*
- 1-2 *Prior to removing shipping containers of lead carbonate concentrate from the mine-site at any time after 1 January 2009, the proponent shall develop a detailed Emergency Response Plan to the requirements of the Minister for Environment on advice of the CEO, Fire and Emergency Service Authority, the Port Authority and relevant Local Governments. The Emergency Response Plan shall include:*
- 1. emergency response procedures to respond to the release of material containing lead carbonate from the shipping containers at any point between the time the shipping container leaves the mine-site and the time it is removed from the State;*
 - 2. emergency response procedures to respond to the release of material containing lead carbonate from the sealed bags into the shipping container at any point between the time the shipping container leaves the mine-site and the time it is removed from the State;*
 - 3. post-incident clean up sampling to determine the effectiveness of the clean up; and*
 - 4. procedures for reporting to the Department of Environment and Conservation the relevant Local Government Authority.*
- 1-3 *The proponent shall implement the Emergency Response Plan required by Condition 12-2.*
- 1-4 *Revisions of the Emergency Response Plan may be approved by the Minister for Environment on advice of the CEO, Fire and Emergency Services Authority, the Port Authority and relevant Local Governments.*
- 1-5 *The proponent shall implement revisions of the Emergency Response Plan required by Condition 12-4.*

The Emergency Response Plan (ERP)

The ERP outlines the responsibilities of everyone involved in the transport of lead carbonate concentrate from the Wiluna mine-site until it is loaded onto ships at the Port of Fremantle.

The objectives of the ERP are to:

- ensure adequate emergency preparedness in case of any spill of lead carbonate concentrate
- facilitate a rapid and effective emergency response and recovery
- in an emergency minimise any adverse effects on human health, property or the environment
- ensure satisfactory clean up of any areas affected during a spill or the recovery process
- communicate vital information in a timely manner to all relevant persons involved in the transport emergency.

Safety Priorities

Magellan's safety priorities during an emergency are to:

- protect human health
- prevent lead carbonate concentrate contact with the surrounding environment
- recover any spilled lead carbonate concentrate where practicable.

Magellan's priorities post-emergency are:

- report to relevant authorities
- monitor impacts and recovery
- review emergency response procedures
- implement corrective action programs if necessary.

Overview of transport, storage and shiploading

The key points relating to transport and storage are:

- the locked shipping containers containing sealed bulk bags will travel approximately 400km by triple-road train trucks from the Magellan mine-site to Leonora
- at Leonora, a top-lifting container-handling machine will transfer the containers to a designated secure storage area approximately 2km north-west of the town
- the containers will be lifted with a top-lifting container-handling machine onto rail wagons (two single-stacked containers per wagon) and transported approximately 850km by rail to the Port of Fremantle
- at the Port, the containers will be unloaded (near Berths 6 and 7) to a hardstand area using a top-lifting container-handling machine
- the containers will then be delivered from the hardstand area to either Patrick (Berths 7 to 10) or Dubai Ports World (Berths 4 to 6) stevedore terminals. Containers will be moved within the Port using a top-lifting container-handling machine. At the stevedore terminal they will be placed in export stacks
- for ship loading, the containers will be towed beneath the loading crane at the wharf's edge to be lifted and stowed on the vessel.

Magellan Metals Role

Magellan is responsible for ensuring all organisations involved in and relevant to the transport process have the equipment, knowledge, capability and procedures in place to undertake their ERP roles. This includes the contractors indicated on this page, and Local Governments.

Specifically, Magellan is responsible for:

- providing specific product and safety/handling advice to all relevant parties including the Approved Responder, Emergency Responder (see definitions on the following page), emergency services and any other parties involved in managing any loss of product along the transport route

- loading sealed bags of lead carbonate concentrate into locked containers after vacuuming the outside of the bags, then onto trucks using top-lifting container-handling equipment and washing the containers and trucks prior to leaving the mine-site
- contracting an Approved Responder (Australian Railways Group) to control the clean up response that may result from an incident at any location between the mine-site and the entry point to land owned by the Port of Fremantle
- appointing an Emergency Responder for emergency response within the Port of Fremantle
- reporting all lead carbonate concentrate spills to the Fire and Emergency Services Authority (FESA), Department of Environment and Conservation (DEC), Department of Mines and Petroleum (DMP), Department of Health (DoH) and relevant Local Governments.

Magellan has direct responsibility for emergency response within its mine and mineral lease boundaries. This is not addressed within this ERP.

Australian Railroad Group (ARG) Role

ARG is responsible for emergency response during:

- transport of containers by truck from the mine-site to Leonora
- storage of containers at Leonora before being loaded onto trains
- loading of containers onto trains at Leonora for transport to the Port of Fremantle
- transport of containers from Leonora to the Port of Fremantle.

WestNet Rail (WestNet) Role

WestNet Rail operates and maintains the main rail which ARG will use to transport lead carbonate concentrate to the Port of Fremantle. WestNet Rail will respond to and manage the incident site of any rail freight incidents including earthquake, fire, flood, derailments, spills and/or leaks, collision with infrastructure, collision with rolling stock or vehicles. ARG will cooperate with WestNet to isolate and contain the lead carbonate concentrate spill. ARG will be responsible for the clean up of the spill and removing rolling stock.

ARG Spill Clean Up Team (SCUT) Role

ARG's SCUT will undertake or direct the emergency response and clean up. The SCUT consists of a minimum of six ARG personnel located at Welshpool, Kalgoorlie and Picton. Additional resources, including clean up contractors, plant operating personnel, waste management contractors, environmental consultants and other specialists may be engaged to assist with the clean up and any monitoring. The need for additional resources will be determined if the immediate resources available to ARG are not suitable.

Intermodal Link Services (ILS) Role

ILS is responsible for the initial emergency response during:

- offloading containers from the trains at the rail terminal at the Port of Fremantle
- transport of containers to the hardstand areas at Patrick (Berths 7 to 10) and Dubai Ports World (Berths 4 and 5).

Patrick and Dubai Ports World Role

Patrick and Dubai Ports World are responsible for the initial emergency response during:

- movement of containers into discharge stacks
- storage of containers within discharge stacks
- loading of containers onto ships for export.

Approved Responder Role

The Approved Responder provides resources as soon as practicable to eliminate or reduce to an acceptable level, the risk associated with a dangerous situation involving the transportation of dangerous goods. ARG has applied to the Department of Mines and Petroleum for permission to become an Approved Responder.

Emergency Responder Role

An Emergency Responder appointed by Magellan will be responsible for the clean up of any lead carbonate concentrate spill and the subsequent post-incident sampling should a spill occur within the Port.

Fire and Emergency Services Authority (FESA) Role

Under the Western Australian Hazardous Materials Emergency Management Plan (WESTPLAN – HAZMAT) (FESA 2005), the Fire and Emergency Services Authority (FESA) must be notified of any emergency involving hazardous materials, including lead carbonate concentrate. FESA will undertake any actions required to render the situation 'safe for recovery' so that the designated Spill Clean Up Team (SCUT) and Emergency Responder can undertake clean up and recovery. FESA's priority will be to ensure lead carbonate concentrate spillage will not enter or harm the environment. FESA will not play any part in the clean up.

Fremantle Ports Role

ILS, Patrick or Dubai Ports World will advise Fremantle Ports of any lead carbonate concentrate incident within the Port. Fremantle Ports staff will not be responsible for containment or clean up, but will be available to provide port specific information, management of shipping operations and incident management support personnel as required.

Resources

Personal Protective Equipment

ARG, ILS, Patrick and Dubai Ports World and Patrick will have appropriate Personal Protective Equipment (PPE) available to their personnel in the event of a lead carbonate concentrate spill, including overalls, gloves, eye protection and a P3 respirator. PPE will be kept in central locations at several sites, and in train and truck cabins, to enable immediate access to PPE.

Spill Kits

All organisations responsible for the emergency response to a lead carbonate concentrate spill will have spill kits readily available. These kits have been designed specifically to assist with the safe and efficient containment of lead carbonate concentrate spills. ARG's spill kits will also contain equipment for the clean up of a spill.

In addition to the equipment at ARG depots, in the unlikely event of a major spill, it may be necessary to obtain additional equipment for clean up. This equipment may include, but will not be limited to, mobile plant, a washdown facility and vacuum cleaner/s.

Emergency response procedures

Emergency response actions have been prepared to encompass all potential incidents occurring during each separate stage of the transportation of lead carbonate concentrate. There are common elements to the emergency response actions for each transportation stage. The rail transport is the key stage that has attracted most community interest so it is detailed here as an example.

Emergency response actions for incidents occurring on the main rail

Trigger	Action	Responsibility
Incident which has potential to result in a lead carbonate concentrate spill (driver unharmed)	Notify WestNet Rail Operations Manager as soon as practicable and provide the following details: <ul style="list-style-type: none">where the incident happenedthe date and time of the incidentthe nature of the incidentthe dangerous goods being transported when the incident occurredany other details the Operations Manager may require.	Train Driver
	Notify the WestNet Rail Incident Manager who will attend the incident site as soon as practicable.	Operations Manager Incident Manager
	Determine whether a spill has occurred and to what extent it has occurred following notification.	Train Driver
Spill detected	Notify FESA, Magellan and ARG Risk and Environment Manager of a HAZMAT incident.	Incident Manager
	Notify ARG's Spill Clean up Team (SCUT).	Risk and Environment Manager
	Notify DEC (Pollution Response Unit), appropriate Regional DEC Office and relevant Local Governments of a HAZMAT incident.	Magellan
	Control the source of spill.	FESA
	Establish a hazard zone to exclude non-emergency personnel.	FESA/ARG

Trigger	Action	Responsibility
Spill detected (continued)	If recovery of the spill is not immediately possible, prevent the further spread of the spill by one or a combination of the following, depending on conditions: <ul style="list-style-type: none"> waterproof tarpaulins or plastic sheeting sandbags or bunding chemical tarpaulin dampening of product with spray. 	FESA
	Secure spill site, ensure spill is contained and site is 'safe for recovery' and clean up to commence.	FESA
	Clean up spill as per clean up procedures.	SCUT
	Conduct post clean up sampling to ensure effective clean up of spill has occurred.	SCUT
	Investigate the cause of the incident and establish an action plan to reduce risk of incident re-occurring.	ARG Magellan
	Complete incident report forms.	ARG Magellan
	Provide an environmental incident report to DEC and DMP regarding the incident response.	Magellan
Container compromised but no outside leak detected	Determine the risk of lead carbonate concentrate leakage within container.	FESA
Risk of broken bags within container confirmed	Notify Magellan and ARG Risk and Environment Manager of container damage.	Incident Manager
	Clean-up and containment of spilled lead carbonate concentrate will occur as per clean-up procedures. Unbroken bags are to be inspected to ensure integrity of bag and that there is no lead carbonate concentrate on the outside of the bags or within the container (if the container is not compromised). If the container is compromised, the clean and sealed bags will be transferred into another clean and non-compromised container, prior to any further transport commencing.	ARG SCUT Magellan FESA

Fire Emergencies

Lead carbonate concentrate is a non-combustible solid and there is no fire or explosion hazard associated with the compound. However, in the unlikely event that a fire breaks out as part of an incident where there is also a risk of a lead carbonate concentrate spill, FESA's immediate response will be to contain and extinguish the fire. The containment of a lead carbonate concentrate spill will be secondary, but efforts to prevent contamination of drains and waterways from runoff will occur. Full protective equipment will be worn, including Self Contained Breathing Apparatus when combating fire as lead carbonate concentrate evolves highly toxic lead oxide fumes when heated at very high temperatures. Water fog will be used to cool intact containers.

Clean up procedures

Actions for the clean up of a lead carbonate concentrate spill

Key Action	Description
Recovery of product	Persons responsible for clean up will wear appropriate PPE.
	Collect all spilled product and any suspected contaminated soil by one or a combination of the following: <ul style="list-style-type: none"> hand tools including shovels, scoops and brooms vacuums bobcat front-end loader mechanical lifting equipment.
	Place and seal in bulk bags all material (including containment equipment such as bunds, levees, sandbags tarpaulins, plastic sheeting and flagging tape) that may be contaminated.
	Place and seal any damaged bulk bags and their contents in new or repaired bulk bags.
	Transfer all bulk bags to an undamaged freight container for transfer back to the Magellan mine-site.

Key Action	Description
Clean up of recovery equipment	If not already available, construct a washdown facility in the area for the purpose of cleaning equipment. This may include a bunded impervious area with a sump to contain washdown water.
	Wash all mobile equipment used, prior to leaving the area.
	Remove residues and wipe down handtools and signage used in recovery using damp cloths or rags, and return to spill kits.
Clean up of recovery equipment (continued)	Remove all PPE.
	Place overalls, gloves and head cover into a plastic bag for disposal at the Magellan mine-site.
	Wipe down eye protection, respirators and steel cap boots and return to spill response kit.
	Place all rags, cloths and wipes into plastic bags for disposal at the Magellan mine-site.
	Seal and label all plastic bags containing contaminated material with: "Clean up equipment for disposal at Magellan mine-site: Contact OHS & E Manager". Write the contact details of the OHS & E Manager on the bags.
	Close, lock and placard all containers that will be returning to the Magellan mine-site.
Removal and disposal	Return all sealed bulk bags and plastic bags containing spilled product and contaminated material to the Magellan mine-site.
Reporting	Provide progress reports to DEC and other relevant authorities under WESTPLAN – HAZMAT (FESA 2005).

Post-clean up sampling

Sampling will be carried out to validate the effectiveness of clean up in accordance with State Government guidelines and Australian Standards. At a minimum, sampling shall be undertaken at the site of the spill and within a 20 metre radius around the spill site.

If sampling indicates Magellan lead remains in the surrounding environment, the DEC will be notified immediately. Magellan will then develop a site management plan, in consultation with the DEC, including a detailed site investigation, risk assessment, validation and auditing process.

Post-incident management

Post-incident management will include a review and analysis, investigations into the cause(s) of the incident, developing a Preventative Action Plan to address cause(s) of the incident and reduce the risk of reoccurrence, and preparing an Environmental Incident Report for the relevant authorities. FESA and Local Governments will be consulted with as part of this process.

Environmental Incident Report

An Environmental Incident Report will be prepared by Magellan, including:

- incident details and description
- details of any environmental damage/impact
- details of clean up and validation undertaken
- cause(s) and factors contributing to the incident
- outcomes of the review of training, management and response procedures
- action plan (if required) to address causes(s) of the incident and reduce risk of reoccurrence.

The Incident Report will be prepared within three weeks of the incident and be provided to the DEC, DMP and relevant parties involved in the emergency. Reports will be available on the Magellan website and provided to the Fremantle Ports Inner Harbour Community Liaison Group and Local Governments.

Exercises

Emergency exercises are essential to test this ERP. Magellan will ensure that contractors conduct an annual simulated emergency response exercise. A review of the emergency response will be undertaken and a report circulated. The SCUT and the Emergency Responder will conduct more frequent exercises as required by the Department of Minerals and Petroleum. Magellan has, and will continue to conduct routine desktop and simulation exercises in metropolitan and non-metropolitan areas in consultation with local emergency response groups and FESA, and extra exercises as required by relevant Local Governments.