Magellan METALS

Explaining Baseline Lead Levels

Overview

Magellan Metals' baseline sampling program was designed to establish existing lead levels along the transport route from the company's mine site near Wiluna to Fremantle Port, prior to the first sealed shipment of lead carbonate concentrate.

One of the key Ministerial conditions of Magellan's approval to transport sealed shipments is that lead monitoring results during transport operations must not exceed the baseline levels.

By identifying the existing lead levels along the 1250 kilometre long road and rail corridor from the mine site to Fremantle Port, the State Government's regulatory authorities and Magellan have been able to set defined, local lead baseline levels that must not be exceeded during the transport process.

Sampling program

Baseline samples were taken along the road corridor from the Magellan mine site to the rail terminal at Leonora, and along the rail corridor from Leonora to Fremantle Port, including within the port area on land and in water.

From the baseline sampling, a 'trigger' level has been determined for each sampling site by adopting the highest level recorded at each site before transport commences. Any 'exceedance' of the trigger level during transport operations requires Magellan to undertake a range of actions that are set out in its approval conditions from the State Government.

If the results of regular monitoring identify that a lead level has exceeded the trigger level at a specific site, then isotopic testing of the sample from that site will be used to determine whether the lead is from the Magellan mine. Isotope testing will differentiate Magellan lead from other sources of lead and is a process used throughout the world to identify the source of various materials.

If it is found that the lead does not come from Magellan's operations, the local lead level identified will become the new trigger level for that site.

Sample sites

Hundreds of samples were taken along the road and rail corridor and at Fremantle Port. The locations included:

- 21 dust sampling sites along the rail corridor
- 5 air quality sampling sites at Fremantle Port
- 19 rainwater tank sites along the rail corridor
- 251 soil sites along the road and rail corridor
- 15 drainage sumps at Fremantle Port
- 20 marine sediment sites at Fremantle Port.

A baseline lead level has now been established and a trigger level assigned to every one of the above sites for air, water, soil and sediment monitoring. In addition, a trigger level has also been established for air quality monitoring to be undertaken inside containers during the sealed shipments. These containers will be selected at random by the Independent Inspector.

Understanding the baseline tables

The baseline tables highlight the general locality of the sampling, and the specific location using GPS points. They also show the full range of baseline sampling results at each site, as well as the trigger levels adopted for each site.

If the trigger levels change it will be a consequence of further sampling that identifies non-Magellan lead. A change to a trigger level should not be interpreted as lead contamination, given there is a range of natural lead levels in the environment.

The wide range of baseline lead levels discovered during the sampling program is evidence of the different levels of lead along the transport route prior to Magellan's project commencing. If the trigger level at any site changes, the tables below will be updated accordingly on the Magellan website at www.magellanmetals.com.au.

Air Quality Monitoring Inside Containers

Location	Lead Result (mg/m3)
Shipping Container	0.02