

Explaining Operational Sampling Lead Levels

What are Magellan's lead monitoring requirements?

Magellan's approval to export sealed shipments of lead carbonate through Fremantle is subject to the implementation conditions set out in Statement 783 published on 2 February 2009 by the Minister for Environment. Condition 9-1 of Statement 783 requires implementation of a Health, Hygiene and Environmental Monitoring Program (Program). One of the key requirements is that lead monitoring results during transport operations must not exceed the baseline levels along the 1250 kilometre long road and rail corridor from the company's mine site near Wiluna to the Fremantle Port.

The approved Program to verify compliance with this condition has been designed to determine whether Magellan lead has entered the environment. The transport corridor has been used to transport a range of materials over many years. Those materials would have included many materials which would have contained lead including lead in petrol and lead based paints. Therefore, prior to commencing transport of Magellan lead, Magellan Metals carried out systematic sampling along the transport route from Wiluna to Fremantle to determine the existing levels of lead in the environment.

The pre-commencement sampling program established baseline lead trigger levels, which, if they are exceeded (once transport commences), trigger contingency measures as required under Statement 783. The monitoring undertaken includes soil, water, air, static dust deposition and benthic sediment monitoring at Fremantle Port.

Sampling program

Baseline sampling and derivation of 'trigger' levels is described under the Baseline Sampling section of this website. The trigger levels with which operational sampling (that is, samples taken after commencement of lead carbonate transport) results are compared in the tables in the Operational Sampling section are those established during baseline sampling.

Sample sites

Sampling locations for operational monitoring are:

- 21 dust sampling sites along the rail corridor
- 2 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.

For sampling frequency, see the Health, Hygiene and Environmental Monitoring Program.

Trigger levels have been established at each site for each parameter monitored. In addition, air quality monitoring is being undertaken inside independently and randomly selected containers during the sealed shipments.

Benthic Sediment Sampling

Site Number	AGD84 Easting	AGD84 Northing	Lead (ppm) Trigger Level
P1	381834	6454392	9
P2	381739	6454292	12
P3	381710	6454249	8
P4	381692	6454234	7
P5	381620	6454134	9
P6	381578	6454075	3
P7	381517	6454014	8
P8	381481	6453980	6
P9	381478	6453942	4
P10	381416	6453892	7
P11	381357	6453810	10
P12	381350	6453802	14
DP1	381285	6453743	29
DP2	381271	6453707	44
DP3	381237	6453671	22
DP4	381228	6453626	12
DP5	381115	6453515	13
DP6	381021	6453418	12
DP7	381076	6453460	11
CO2	381078	6454402	2

6 monthly sampling, first due in Q1 2011*

* Deferred by agreement with the Minister for Environment, on advice from the Chairman of the EPA and the Office of the EPA, until after completion of Phase 2 of the Fremantle Ports dredging program given concerns relating to occupational safety, sediment removal and robustness of sampling.