

**EDUCATION & HEALTH STANDING COMMITTEE (THE COMMITTEE)
INQUIRY INTO THE CAUSE AND EXTENT OF LEAD POLLUTION IN ESPERANCE
INITIAL SUBMISSION BY MAGELLAN METALS PTY LTD (MAGELLAN)**

1. In response to a letter from the Committee to Magellan dated 10 April 2007, Magellan welcomes the opportunity to provide the submission set out below. In addition, Magellan has provided documentation to the Committee on matters raised by the Terms of Reference.
2. This submission addresses those aspects of the Terms of Reference that directly relate to Magellan, particularly, Term of Reference 1(a) which provides:

"how the environmental approval process for the transport and export of pelletised lead enabled the transport and export of granulated lead".
3. Magellan notes, consistently with the communications it has exchanged with the Committee and the balance of the Terms of Reference, that the overriding purpose of the Inquiry (as with many parliamentary inquiries) is for Parliament to investigate and scrutinise the processes and conduct of the Executive, in this case primarily the Department of Environment and Conservation and the Esperance Port Authority. Magellan provides these submissions to assist the inquiry's investigation. It may wish to provide a further submission in light of the totality of the evidence and other material before the Inquiry and any issues affecting its interests that emerge during the course of the investigation.

Terms of Reference

4. There are several threshold issues arising from the Terms of Reference that Magellan respectfully submits require clarification:
 - (a) the term "pelleted" lead concentrate could be a reference to pellets produced either by:
 - (i) taking dry ore or concentrate fines and adding a small quantity of moisture and often a binding agent; or
 - (ii) taking moist concentrate and feeding it through screw feeder equipment to form balls of concentrate.

The term "pelleted" is therefore not a precise industrial term and could apply to "pellets" produced by either of the above means.

- (b) The most relevant factor facing Magellan in the transport of its lead concentrate is moisture content. This factor determines the potential for lead concentrate to become airborne. It is not the physical form of the lead concentrate, whether that be pelletised, granulated or agglomerated, that most affects dusting.
- (c) The reference to "pelleted lead carbonate" in the Department of Environment's licence (**the Licence**) issued to the Esperance Port Authority appears only in the preamble to the Licence. A preamble does not impose any legal obligations on the licence holder. As noted above the term "pelleted" is so general in this context as to be meaningless. Further, and critically, there is no condition of the Licence that requires lead concentrate to be in "pelleted" form. The licence conditions refer to "lead carbonate" (general condition G1 assumes that "lead carbonate", among other products, can be shipped through the Esperance Port). If pelletisation was intended to be part of the Esperance Port Authority Licence conditions (given that it is not a precise industrial term) it would be expected that the Licence would stipulate precisely what the term meant and would provide specifications.
- (d) The environmental approval process related specifically to Magellan's mining operation is encapsulated in Ministerial Statement 559, which governs the implementation of the relevant proposal, namely the mining of lead ore and production of lead concentrate from the Wiluna mine and its transport to and export from the Geraldton Port. Ministerial Statement 559 does not refer to any specific form that this product must assume. Accordingly, insofar as Magellan is concerned, there was no approval process "*for the transport ... of pelletised lead*" as is suggested by Term of Reference 1(a).

5. Although, for the reasons raised in the previous paragraphs, nothing turns on the reference to "pelleted lead carbonate" in the preamble to the Licence, further relevant matters include:

- (a) The inclusion of the reference to "pelleted lead carbonate" in the preamble to the Department of Environment's Licence to the Esperance Port Authority was a result of amendments made by an officer of the Department of Environment on 11 November 2004. Magellan, through Mr Watters, assumed the reference to "pelleted lead carbonate" was a reference to agglomerated product, as there had been no discussion with Magellan on this amendment.
- (b) No representation was made by Magellan that it would be exporting the lead concentrate in "pelleted" form.

(c) Magellan did represent that it would be exporting the lead concentrate as "moist agglomerates", being approximately 10mm balls or granules. This process was implemented by Magellan but the subsequent agglomerates produced were not in a form sufficient to withstand transport from the mine to the Esperance Port which resulted in the agglomerates reverting to unagglomerated form by the time the lead concentrate reached the port. This was one of the major reasons why Magellan decided to discontinue use of the screw feed equipment for forming agglomerates and informed the Esperance Port Authority of this prior to entry into its agreement with the Esperance Port Authority as discussed below.

6. As to the transport of lead concentrate to the Esperance Port Authority and its export, Magellan has detailed below the relevant evidence it can provide that bears upon the Terms of Reference.

Magellan Metals Pty Ltd

7. Magellan operates an open cut lead mine and processing plant located approximately 30 kilometres west of Wiluna. The processing of ore from the mine commenced in February 2005. This process results in lead concentrate being produced. The concentrate's composition is predominately a lead carbonate but includes other minerals such as lead sulphate and silica. This material is sent to refineries to be smelted into lead bullion, primarily for use in the production of lead-acid batteries for the automotive industry.

8. On 2 April 2005 Magellan commenced transporting lead concentrate via road in covered "kibbles" (metal containers with weatherproof canvas covers) to Leonora. The kibbles are then loaded on to a train and transported by rail to the Port of Esperance for storage and subsequent export. The first shipment of Magellan lead concentrate was exported on 4 July 2005.

9. The lead concentrate is transported to the port pursuant to an agreement between Brambles Australia Limited and Australia Western Railroad Pty Ltd. On arrival at the Port, the lead concentrate is discharged into a hopper inside the port facility and moved by conveyer into a storage shed. The lead concentrate is then exported after being loaded on ships pursuant to an agreement between Magellan and the Esperance Port Authority.

Transport of Concentrate

10. Magellan's initial proposal was to transport lead concentrate through the port of Geraldton. Following negotiations between the parties, the Geraldton Port Authority (**GPA**) proposed that Magellan store its product "off-site" as the GPA did not have an available facility within the

boundaries of the port. Magellan considered this to be undesirable due to a number of factors including environmental considerations associated with:

- (a) the proposed configuration of product conveyors which would be prone to wind and consequent dusting; and
- (b) the high volume of truck movements through built up areas on the days ships were being loaded.

For this reason Magellan decided not to proceed with the proposal to ship its lead concentrate through the Geraldton Port.

11. Magellan investigated other options and entered into negotiations with the Esperance Port Authority as a replacement for the Geraldton Port. As part of the negotiation process Magellan met with Esperance Port Authority representatives and inspected the Esperance Port facility and concluded that the Esperance Port Authority had the necessary expertise and track record to store and handle Magellan lead concentrate. Prior to the entry into the Lease and Handling Agreement (dated 30 June 2005) between Magellan and the Esperance Port Authority (the **LHA**) the Esperance Port Authority provided Magellan with information in the form of documents including:

- (a) the Esperance Port Authority's Environmental Management Plan;
- (b) an "Assessment of Lead Carbonate Handling" report prepared for the Port by Riseborough & Associates; and
- (c) the Esperance Port Authority's Dust Gauge Monitoring and Reporting Procedure.

The LHA contains specific terms dealing with the environmental responsibilities of each of the parties and, in particular, dust control and monitoring systems which Magellan accepted as being appropriate.

12. On 29 December 2004, Magellan obtained approval from the Minister pursuant to section 45C of the *Environmental Protection Act* 1986 (WA) to change the relevant proposal so as to allow for the transport of lead concentrate to, and export from, the Esperance Port (rather than Geraldton Port).
13. In February 2005, lead production at the mine commenced and lead concentrate was being produced from about that time in preparation for shipment to the Esperance Port in April of 2005. In accordance with the representations made by Magellan and as part of the production

process of the lead concentrate Magellan installed a screw feeder to form the lead concentrate into an agglomerate (which is a ball less than 10 millimetres in diameter).

14. Brambles Australia Limited was contracted by Magellan to ship concentrate from the mine site to the Esperance port. During transportation from the mine site to the Port of Esperance, the lead concentrate was contained in enclosed kibbles.
15. On 2 April 2005 the agglomerated lead concentrate was produced and that product was loaded for delivery to the Esperance Port. It was observed by Magellan that, by the time the lead concentrate had reached the Esperance Port, it had lost its agglomerated characteristics and was comparable to bulk lead concentrate. On 7 April 2005, Magellan wrote to the Esperance Port Authority in the following terms:

"We are experiencing problems with the agglomerator, i.e. frequent tripping out, bogging etc & as a consequence very low loading rates. I need look at improving the situation. It maybe the whole unit is under-powered for the throughput needed, in which case we have to re-think the whole design.

In the meantime Trevor has explained that our product, by the time it reaches you has apparently lost its agglomerated characteristics. I have since confirmed this by inspecting the kibbles after they have completed the 35km of dirt road to Wiluna. Due the poor road condition the kibbles contents are being so badly shaken that it results in the agglomerates being consolidated into pretty much into a single mass. And of course the rest of the onward journey only exasperates the problem.

Whilst we have complained relentlessly about the dirt road to the authorities, nothing has yet happened. In the meantime, the road is also taking its toll on the Brambles trucks & as a result, Brambles now drive at only 20km/hr, taking 1hr 40mins to reach Wiluna !! Some road improvements over small sections of the road are scheduled for later this month, but will it actually happen ???

So between the low agglomerator loading rates & extended haulage times we find ourselves in an unacceptable situation. I have therefore, after dialogue with Trevor, started to load kibbles directly with the FEL. Whilst I am certain this will have no impact on your concentrates unloading routines (because we both agree that its more about moisture content than anything else), maybe you should attempt to continue to monitor the kibbles to identify any differences associated with un-agglomerated product.

Having completed our experimenting with different moistures of concentrates, I believe we now understand from your observations that the moisture content conducive to minimising dust & spillages is +/- 2%. We will strive to achieve this as our primary objective.

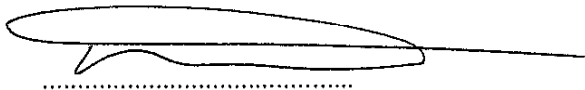
For your information our David Dengate & Perter (sic) Burrows are leaving Esperance today. Should you need their assistance again, please do not hesitate to ask."

This communication to the Esperance Port Authority was some 2 months prior to the entry into the LHA.

16. Pursuant to the LHA the Esperance Port Authority had control of the relevant infrastructure and processes by which lead concentrate was conveyed to the Storage Facility and was then loaded onto ships for export (predominantly by way of conveyors and ship loading apparatus owned by the Esperance Port Authority). Under the LHA, Magellan maintained control of the storage shed to receive and store lead concentrate.
17. By clause 3.5(e) of the LHA, Magellan was to comply with the Esperance Port Authority's environmental Licence as appended in Schedule IV to the LHA (being the last amended version of 17 November 2004 referred to above). Magellan accepted the dust management procedures put in place by the Esperance Port Authority and thereby complied with clause 3.5(e) of the LHA and the Ministerial Statement.
18. The export of lead concentrate commenced on 4 July 2005. Magellan did not export in an agglomerate form, and this was evident to the Esperance Port Authority from Magellan's pre-contractual statements, the terms of the LHA and any inspection or handling of the lead concentrate by the Esperance Port Authority.
19. In addition, Magellan initially proposed to construct a refinery at its mine site to allow for the production of lead metal for export. The proposal for the refinery was based on the projected economic benefits of producing lead metal for export and was not ever considered to be a measure to address a perceived environmental risk which may have been associated with the transportation of Magellan's lead concentrate. After significant investigations, including a detailed feasibility study and expenditure of some \$2.7 million, Magellan decided not to proceed with the refinery option as it was not feasible. This decision was based on both economic reasons and the technical challenges and uncertainties of constructing and operating a refinery in Magellan's particular circumstances.

Handling of Lead Concentrate

20. Communications between Magellan and the Esperance Port Authority demonstrate that the control of the moisture of the lead concentrate was an issue of central importance. In particular the Esperance Port Authority gave directions to Magellan that the range of moisture content was to be "*somewhere between 7% to around 9% plus or minus 0.5%*". The Esperance Port Authority's direction regarding the upper limit of the moisture range was to ensure that the moisture content would:
- (a) fall below the Transportable Moisture Limit (TML) (the TML is the allowable moisture level for safe shipment of concentrate. If moisture levels exceed the TML there is a risk that the product will become liquid and move within the hold of a ship, which may cause it to capsize); and
 - (b) allow the lead concentrate to be more easily handled by the Port.
21. It was necessary for Magellan to reduce the moisture content to under the TML and, further, to comply with the requests of the Port to keep the moisture with certain limits. On 8 May 2005 Magellan wrote directly to the Environmental Officer at the Department of Industry and Resources seeking approval for temporary drying activities. Approval for the drying pad was provided on 20 May 2005.
22. Magellan accepts that there is a problem at the Port in the handling of its material. However, Magellan believes that its product can be handled safely and in an environmentally appropriate manner. Any escape of our product into the environment is totally unacceptable. Magellan maintains that its product has been transported and handled in accordance with the terms and conditions imposed by its authority to mine, the Port's Licence and Magellan's agreement with the Port.



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Magellan Metals Pty Ltd

27 April 2007

Index of Documents referred to in the Submissions

| No. | Date | Description |
|-----|----------|---|
| 1. | 28.11.00 | Letter from Office of the Minister for the Environment; Labour Relations to Magellan Metals Pty Ltd re Magellan Lead Carbonate Project, Wiluna and Geraldton (Assessment No. 1262) and attached Ministerial Statement No. 559 |
| 2. | 04.06.03 | Esperance Port Authority - Environmental Management Plan PL009 |
| 3. | 11.08.04 | Letter from Magellan Metals Pty Ltd to Department of Environment re Concentrate Export |
| 4. | 28.09.04 | Western Australia Department of Environment Amended Licence - Licence Number 5099/9 issued to the Esperance Port Authority. |
| 5. | 08.10.04 | Letter from Magellan Metals Pty Ltd to Department of Environment |
| 6. | 11.11.04 | Email from Trevor Watters to Kevin Ross, Ken Sangster re Esperance Port Environmental Licence and attached draft amended Licence to the Esperance Port Authority |
| 7. | 29.12.04 | Letter from Minister for The Environment, Dr Judy Edwards to Magellan Metals Pty Ltd re Approval to Vary the Magellan Lead Carbonate Project (Statement 559) |
| 8. | 14.03.05 | Email from Tony Polglase to David Richards Cc David Thick re Lead Licence Amendment and attached Dust Gauge Monitoring and Reporting Procedure for the Esperance Port Authority |
| 9. | 24.03.05 | Email from Trevor Watters to Kevin Ross re OH&S Report Cc Kevin Ross and attached report from Riseborough & Associates dated 23 March 2005 |
| 10. | 07.04.05 | Email from Tony Polglase to Colin Stewart, EPA re Concentrates Cc Kevin at Ivernia, Trevor Watters, Jon Pluckhahn, Peter Burrows, David Bishop |
| 11. | 20.04.05 | Letter of Intent between Magellan Metals Pty Ltd and Brambles Australia Limited |
| 12. | 08.05.05 | Letter from Magellan to the DOIR explaining Magellan's position, Updated plan showing location of proposed pads and Formal Risk Assessment |
| 13. | 20.05.05 | Letter from Department of Industry and Resources to Magellan Metals Pty Ltd re Temporary Concentrate Drying Activities (NOI 4999) |
| 14. | 30.06.05 | The Esperance Port Authority and Magellan Metals Pty Ltd - Lease and Handling Agreement |
| 15. | 04.10.05 | Email from Gary Longbottom to Tony Polglase re Concentrate Moistures CC Kevin Ross, Taffy Davies, Shelley, Narelle Matthews |
| 16. | 27.01.06 | Draft Logistics Contract Between Magellan Metals Pty Ltd, Brambles Australia Limited and Australia Western Railroad Pty Ltd |
| 17. | 28.09.06 | Department of Environment - Letter to Esperance Port Authority re Environmental Protection Act 1986 - and attached Licence, Esperance Port Authority |
| 18. | 20.12.06 | Letter from Magellan Metals Pty Ltd to Esperance Port Authority |