

**EDUCATION & HEALTH STANDING COMMITTEE (THE COMMITTEE)  
INQUIRY INTO THE CAUSE AND EXTENT OF LEAD POLLUTION  
IN THE ESPERANCE AREA**

**CLOSING SUBMISSION BY MAGELLAN METALS PTY LTD (MAGELLAN)**

*Introduction*

Magellan takes responsibility for its product. This has been its consistent position throughout the inquiry. However, it is clear that there are deficiencies within the systems whereby Magellan's product was transported to the Esperance Port and exported. Magellan wishes to make the following submission with a view to assisting the Committee to identify those deficiencies. In doing so, Magellan will address the following matters:

- The future direction for Magellan - "raising the bar".
- The relevant industry standards applicable to Magellan's operations.
- The responsibilities of the persons involved in Magellan's operations.
- The Australian Dangerous Goods Code and some difficulties regarding its practical usefulness.
- The agglomeration issue.
- The selection of vessels for sea transport of Magellan product.
- Magellan's response to particular evidence given by other witnesses who appeared before the Committee.

*The future direction for Magellan - "raising the bar"*

1. It is now clear from the evidence before the Committee that the escape of Magellan's product into the environment apparently occurred after it had left the mine and whilst it was in the custody of contractors of Magellan, including the Esperance Port Authority. Magellan's position is that it was reasonable to rely on those contractors to do the things they had contracted to do.
2. In light of what has happened and the now apparent inadequacy of a number of aspects of the operation and regulation of the systems put in place to transport Magellan's product, Magellan has proposed a completely new system of transport that raises the bar with respect to lead concentrate transport and handling to create best practice for this operation in Western Australia.
3. Magellan's proposal for sealed and containerised product transport is radically different from the old system and has the advantage of giving control of the product handling arrangements back to Magellan. This is because, once it leaves the mine site, the product has no contact with the outside environment until it is delivered to the customer in other parts of the world. This means that Magellan no longer has to rely on others to undertake critical aspects of its product handling and transport and ensures a very clear line of responsibility for handling and transport.
4. Magellan has been advised that the Department of Consumer and Employment Protection "*strongly supports*" Magellan's proposal for sealed and containerised product transport. The

system has been described by that department as "*a very good containment system offering good public safety and a low risk of loss of containment ...*".

However, we would like to address the following matters which are before the Inquiry.

### ***Industry standards***

5. The overall system that was developed to mine, transport and export Magellan's concentrate product was typical of that in place for similar mining operations. Whilst Magellan's product is a carbonate, the systems adopted by the lead industry generally with respect to sulphide products are appropriate and applicable. The issue of the special characteristics of lead carbonate is a "red herring". If Magellan's product was a sulphide, what has occurred at Esperance would still be unacceptable.
6. The Committee has heard evidence from many witnesses and has itself visited Magellan's mine, transport facilities and the Port. There is no evidence before the Committee that suggests that the operations of the mine and the road/rail transport system caused any escape of lead concentrate into the environment. On the contrary the overwhelming evidence is that the escape of the product into the environment occurred at the Port.
  - Esperance Port Authority - T.02.05.07 - page 17 line 36 and 19 line 3.
7. Further, the evidence strongly suggests that it was not the infrastructure at the Port which led to any escape of lead into the environment, but the way in which that infrastructure and supporting systems were operated and maintained or applied.
  - Magellan Supplementary Submissions "Small Ships" - 07.06.07.
  - Magellan - T.07.06.07 - page 19 line 38 (Watters).
8. It is Magellan's submission that the systems put in place, and approved by the relevant Government Authorities are the industry standard for the mining, transport and export of products such as Magellan's:
  - (a) use of kibbles covered in weatherproof covers is standard throughout the mining industry for the road and rail transport of metal concentrates including lead concentrate - Magellan - T.07.06.07 - page 14 line 10 (Scott);
  - (b) bulk handling and ship loading are also standard practice in the industry.
    - Generally see - Magellan - T.07.06.07 - page 15 line 5 (Watters).

### ***Responsibilities of persons involved in Magellan's operations***

9. Magellan is an expert in the mining of lead and the production of lead concentrate. Magellan does this efficiently and within the terms of its relevant licences. There is no suggestion to the contrary.
10. However, getting Magellan's product to its customers requires expertise beyond that of Magellan. In particular:
  - (a) Magellan required and paid for transport services to move its product from the mine to the Port. A copy of the Contract is within Magellan Initial Submissions - 27.04.07 at Tab 16
  - (b) Magellan required and paid for Port services to move its products from storage to the vessels which were to carry the product to customers. A copy of the Contract is

within Magellan Initial Submissions - 27.04.07 at Tab 14. See also Magellan Written Answers to Further Questions - 07.06.07 at Question 37.

- (c) Magellan required and paid for sales and shipping agents and ships to transport their product by sea. Magellan - T.07.06.07 - page 18 line 21 (Scott).

11. It must be emphasised that Magellan purchased these services because it is not expert in these areas and does not have the equipment or systems to perform the services itself. Magellan reviewed the systems proposed by these service providers and satisfied itself that those systems were suitable. (Magellan - T.07.06.07 - page 14 line 42 and page 15 line 20 (Watters)). Those systems were also inspected by the relevant Government Authorities. Magellan accepts that it was obliged under its Ministerial Statement to ensure that appropriate dust monitoring systems were in place at the Port. It did this (see paragraph 11 of Magellan's initial submission). Magellan does not accept that the relevant condition actually obliged it to operate the dust monitoring system at the Port. This was impractical given that it was only one of a large number of Port customers and the dust monitoring system used by the Esperance Port Authority was also used to monitor dust emissions for those customers. Magellan's product constituted a small fraction of the material moved through the Port.

- McCallum - T.06.06.07 - page 6 line 14.

12. Magellan accepts that it would be seen as responsible for the conduct of its contractors. However, it was entitled to expect that those contractors would:

- (a) perform the services lawfully;
- (b) perform the services otherwise in accordance with their contracts; and
- (c) perform the services competently and in accordance with industry practice.

13. Magellan had limited ability to "supervise" the performance of these contractors. It obliged the contractors to adhere to minimum standards as set out in the contracts. However, it was not able to effectively supervise matters such as:

- (a) what was the appropriate signage for the kibbles and trucks operated by the road/rail transport contractor as this was something squarely within the terms of that contractor's licence. The contractor had a contractual obligation to perform the services paid for by Magellan lawfully and in accordance with that license and who knew the product was a class 9 dangerous good;

- Magellan Supplementary Submission "MSDS" - 07.06.07 para 9;
- Magellan - T.07.06.07 - page 4 line 24 (Scott);
- Magellan Written Responses to Further Questions dated 07.06.07 at Question 23.

(b) the operation by the Esperance Port Authority of the Port loading systems because:

- (i) Magellan did not have free access without notice to the Port as permission was required for Magellan personnel to enter the Port;
- (ii) the ship loading systems at the Port require technical skill and expertise that is beyond the skill set of Magellan;
- (iii) the Esperance Port Authority had the final word on what ships it would accept from Magellan for the loading of Magellan's product.

Magellan addressed these issues in its contract with the Esperance Port Authority. Magellan was aware that the Port's systems had been inspected by the DEC.

- Lease & Handling Agreement - Magellan and EPA - Magellan Initial Submissions - 27.04.07 - Schedule II.
- Magellan Written Response to Further Questions dated 07.06.07 at Question 37.

14. In its evidence to the Committee the DEC acknowledged that the dust monitoring systems at the Port were "*more than adequate*" to show the escape of lead from the Port. The issue was the timely collection of the results of this monitoring and reporting of those results. Had this been done this "*should have been able to alert the port that action needed to be taken*".

- DEC - T. 30.04.07 - Session Two page 10 at about line 31.
- DEC - T. 30.04.07 - Session Two page 16 at about line 41.

***The Australian Dangerous Goods Code and some difficulties regarding its practical usefulness.***

15. At the outset it is important to recognise that it is one thing for the Committee to inquire as to whether there has been confusion or inaccuracy in determining whether lead carbonate is a "Dangerous Good" **for the purposes of the applicable legislation**. It is entirely another thing to assert that any of the parties, particularly Magellan, were under any misapprehensions that lead carbonate is *dangerous* in the ordinary sense of the word with the potential to have serious affects on the environment if not handled correctly. There is abundant evidence demonstrating Magellan's acute and ongoing awareness of the *dangerous* qualities of its lead carbonate.

- DEC - T. 30.04.07 - Session Two page 5 at about line 19.
- Magellan - T.07.06.07 - page 2 line 20 (Scott).
- Magellan Supplementary Submissions "MSDS" - 07.06.07 para 2.

16. The legislation and regulations covering this area are complex and confusing both as regards their application by operators and interpretation by regulators.

17. The evidence also demonstrates that there is confusion regarding the classification of goods under the Australian Dangerous Goods Code and the consequences of that classification even among the Government Departments who supervise the application of the Code. The evidence from the Department of Consumer and Employment Protection ("**DOCEP**") made it clear that senior personnel within that department did not appreciate that a class 9 dangerous good was still a "dangerous" good within the meaning of the Code.

- DOCEP - T.05.06.07 - page 2 line 26 (Drygala) - (contra Magellan Supplementary Submissions "MSDS" 07.06.07 paragraphs 2 and 3).
- DOCEP - T.05.06.07 - page 4 line 31 (Drygala) - (lead carbonate is not toxic see Magellan Written Response to Further Questions dated 07.06.07 at Question 17).

18. Magellan personnel were also at times similarly confused (emails Thick to Nield dated 19.01.06 and 03.02.06) although Magellan always treated the product as "dangerous".

- Magellan - T.07.06.07 - page 2 line 21.

- Magellan Written Response to Further Questions dated 07.06.07 at Questions 3, 4 and 5.
19. It is also clear that the transport contractor, despite having a licence to transport dangerous goods, did not understand the ramifications of a product being a class 9 dangerous good.
- DEC Written Response to Further Questions dated 05.06.07 at Question 48 - evidence of the DEC that an officer and BIS "went through" the code and concluded that it was not a dangerous good.
20. The confusion stems from the lack of precision in the language in Appendix 2 of the Australian Dangerous Goods Code and the confusion of definitions in the Code and other related legislation. This subject is dealt with extensively in:
- (a) two Acts of the Western Australian Parliament, being:
    - (i) *Dangerous Goods (Transport) Act 1998*; and
    - (ii) *Explosives and Dangerous Goods Act 1961*,
  - (b) numerous regulations made under these Acts, in particular:
    - (i) *Dangerous Goods (Transport) (Road and Rail) Regulations 1999*;
    - (ii) *Explosives and Dangerous Goods (Dangerous Goods Handling and Storage) Regulations 1992*;
  - (c) the Australian Dangerous Goods Code which contains numerous Appendices and Schedules.
21. Magellan reiterates its detailed submissions on this issue as outlined in its written responses to questions 17 and 19 of the Committee's questions to Magellan of 7 June 2007. In addition, by way of highlighting the potential confusion, a literal reading of the Code and the definition of "Dangerous Goods" in the *Dangerous Goods (Transport) (Road and Rail) Regulations 1999* suggests that Magellan's product may not satisfy the definition of "dangerous goods" in the regulations. We note the following points in this regard:
- (i) the entry for UN Code 2291 Lead Compound soluble included the letters "NOS" (Not Otherwise Specified) as part of its description. The test in section 2.2 (a) of those regulations excludes "NOS" products and therefore is unsatisfied;
  - (ii) the description of UN Code 2291 in Column 2 and Column 9 of the Code refers to the solubility of the Lead Compound in water. Lead Carbonate is insoluble in water. As Lead Carbonate does not meet the description in Column 2 or Column 9 of UN Code 2291 the requirements of section 2.2(b) of the regulations are not satisfied;
  - (iii) section 2.2(c) of the regulations provides that if a test specified by Column 7 of the Code is satisfied a product will be a "Dangerous Good". Special provision 199 (as appears in column 7 of UN Code 2291) outlines a test which, on a literal reading, is a means to define whether a product is "soluble". This test does not provide criteria which can be used to determine whether the product is a "Dangerous Good". This subsection seems to be designed to be read in isolation from the rest of the section 2.2 which can lead to potentially confusing and erroneous results.

22. This confusion meant that Magellan had to undertake chemical tests in order to try to confirm the dangerous goods status of its product and was not able to locate in Australia an accredited laboratory to undertake this testing.
- Magellan - T.07.06.07 - page 4 line 33 (Scott).
23. Hence the classifications of lead carbonate and Magellan's lead carbonate concentrate in differing MSDS's reflect that confusion and uncertainty. Nonetheless, the evidence before the Committee demonstrates that:
- (a) Material Safety Data Sheets ("MSDS") are prepared by specialist organisations who are paid for their services;
  - (b) Magellan engaged such specialists to prepare its MSDS;
  - (c) as part of the process of preparing an MSDS these specialists categorise the product by reference to a dangerous goods classification taken from Appendix 2 to the Australian Dangerous Goods Code;
  - (d) the various MSDS prepared in relation to Magellan's product and the generic "off the shelf" MSDS relating to lead carbonate generally contained 3 different dangerous goods classifications which are UN # 3077, UN # 3088 and UN # 2291.

#### *The agglomeration issue*

24. It is Magellan's submission that the agglomeration matter is a side issue and distracts from the main issue in this matter, which is how it came to be that the Esperance Port Authority continued loading Magellan product:
- (a) when it must have been plain that the moisture levels were too low;
  - (b) in high winds; and
  - (c) where it was clear that the material was creating significant dust off the conveyor system and ship loader.
25. However, dealing with the matter, the evidence before the Committee on this issue shows:
- (a) the proposal to agglomerate the product was primarily directed to creating a more efficient furnace feed product in light of the initial proposal by Magellan to construct and operate a smelter at the mine site;
    - Magellan - T.02.05.07 - page 7 line 5 (Watters).
  - (b) it was thought that a side benefit of this process would be to assist in controlling dust;
    - Magellan - T.02.05.07 - page 8 line 9 (Watters).
  - (c) the amendment to the Esperance Port Authority's licence is not conditional upon any lead concentrate it handles being "agglomerated" or "pelleted", such matters, including a specification describing what is "agglomerated" or "pelleted", do not form part of the licence conditions as one would expect if it was a matter of importance;
    - Magellan Initial Submission - 27.04.07 paragraph 4(c).
    - McCallum - T.06.06.07 page 5 line 14.

- (d) whilst much has been made by the DEC of the critical importance of Magellan's product being in "agglomerate" or "pellet" form when it assessed and approved the amendment to the Esperance Port Authority's licence and the amendment to Magellan's Ministerial Conditions, this overlooks the following facts:
- (i) the DEC had already approved the proposal for Magellan's product to be shipped to and exported from the Port of Geraldton. This approval did not specify that Magellan's lead carbonate should be in any particular form (whether it be "agglomerated", "pelleted" or otherwise). This was the case notwithstanding that the evidence suggests that the Port of Geraldton's facilities were inferior to those at the Esperance Port; and
  - (ii) DEC officers made a number of visits to the Port and numerous visits to the mine and they saw the product as it was being sent by Magellan from the mine site and therefore could not have been under a misapprehension as to the nature of the product being shipped,
- (e) the primary dust control factor in lead concentrate is moisture content;
- EPA - T.02.05.07 - page 10 line 2 (Stewart).
- (f) the agglomeration proposal was not successful and Magellan informed the Esperance Port Authority that this was the case;
- Magellan Initial Submission - 27.04.07 paragraph 5.
26. The principal dust control measure was moisture content. The Esperance Port Authority was responsible for the moisture content of the stockpile in the concentrate shed at the Port (Magellan Initial Submission - 27.04.07 Tab 14 Schedule 2 and Magellan Written Response to Further Questions dated 07.06.07 at Question 37). The moisture specifications were advised by the Esperance Port Authority to Magellan and Magellan had the responsibility to send product to the Port within those specifications (Magellan Initial Submission - 27.04.07 paragraph 20).
27. It is not possible to be precise about the moisture content of material arriving at the Port as it is affected by a number of factors that are not controllable by Magellan such as:
- (a) ambient weather conditions;
  - (b) any delays during transit of the product.

Therefore, the system provided for the Esperance Port Authority to assess the moisture content of product arriving at the Port and it had the power to accept or reject the product as being either too wet, dry or within specification. This process was unaffected by whether the product was agglomerated or not.

***The selection of vessels for sea transport of Magellan product.***

28. The process by which vessels were selected is a matter of evidence before the Committee.
- Magellan Supplementary Submission "Small Ships" - 07.06.07 page 1 "How Magellan Selects a Ship"
29. In summary:
- (a) the Esperance Port Authority had the final word on whether it would accept any particular vessel and had exclusive knowledge of the technical constraints that may

apply to the loading of any particular vessel type as the Esperance Port Authority operated the conveyor system and ship loader;

- (b) Magellan engaged a sales and shipping agent to source suitable vessels;
- (c) the vessels selected were all of a type commonly used for the transport of metal concentrates in Australia and internationally;
- (d) the "box hold" vessels used on occasion by Magellan are commonly used for this type of product; and
- (e) the Esperance Port Authority had available to it specialised equipment for loading the "box-hold" type vessels and when this was used minimal dusting occurred.

- Magellan Supplementary Submission "Small Ships" - 07.06.07  
page 2 "Successful Loading 31.10.06 "MV EdamGracht".

### **Magellan's Response to Particular Evidence Provided by Other Parties to the Committee**

Magellan has reviewed the transcripts of the evidence provided to the Committee by other witnesses. Magellan does not accept a number of aspects of that evidence but, unless the Committee requires it, does not intend to address each point of disagreement. However, Magellan wishes to place on the record its response to some important matters arising from this evidence. Those matters are set out in the attached Annexure A. The limited nature of the matters addressed does not indicate Magellan's acceptance of the balance of the evidence.

1 August 2007

Magellan Metals Pty Ltd

## Annexure A

### Evidence of Ronald Padgurskis 28 June 2007

1. Mr Padgurskis made a number of statements during his evidence which demonstrate that he was confused regarding the true relationship of the parties involved in the shipping and export of Magellan's product. By way of example, Mr Padgurskis was correct when he described the aspects of his role for Magellan at the Esperance Port. Mr Padgurskis was also correct when he advised that it was the Port's representative (the cargo loading supervisor) who had responsibility for the decision as to whether or not a ship should continue to be loaded.
2. Mr Padgurskis was incorrect when he stated at Page 2, line 17 that the mine had responsibility for the moisture content of the product in the shed. Mr Padgurskis was obviously not aware of the details of the contract between Magellan and the Esperance Port Authority. This document makes it clear that the Port is responsible for transferring the product from the stockpile in the shed to the loading system for the loading onto a ship (refer Magellan's Initial Submission, tab 14, Schedule II) and managing the environmental aspects of the loading operation. Magellan has responsibility for sending its product from the mine at a moisture level within a specified range nominated by the Port. Once it is in the shed it is for the Esperance Port Authority to decide whether the moisture is sufficient for loading as it is the Port that can monitor the moisture content of the product and apply additional moisture if necessary and the Port that decides whether to load or not to load any particular product. The Port may request that the mine deliver more product for blending with the product stored in the shed. Refer to Magellan's answers to questions of the Committee on 7 June 2007 (question 37).

### Evidence of Esperance Port Authority - 6 June 2007

3. Stewart - Transcript page 34, line 23. Mr Stewart states that the Esperance Port Authority only found out in May 2007 that Magellan's product was a "Dangerous Good". This is incorrect. An MSDS for Magellan's product was provided to the Esperance Port Authority on 19 April 2005. This MSDS classified Magellan's product as a Dangerous Good (class 9). Refer to Magellan's answers to the questions posed by the Committee on 7 June 2006 (question 24); Magellan's supplementary submission dated 7 June 2007 (MSDS Submission)

### Evidence of David Jamieson - 28 June 2007

4. Page 8, line 26 and 36 - Mr Jamieson states that the Port only had a generic MSDS in respect of Magellan's product. This was incorrect, Magellan provided the Port with an MSDS for "Magellan lead carbonate" on 19 April 2005. This MSDS listed the product as a "Dangerous Good (class 9)". The Port was also provided with an MSDS which classified lead carbonate as a dangerous good (class 6.1) under cover of a letter of 11 August 2004 which was addressed to the Department of Environment and copied to the Esperance Port Authority. In addition, the Port was also provided with an MSDS for Magellan's product prepared by Risk Management Technologies in or about March of 2006. This MSDS also classified Magellan's product as a Dangerous Good (class 9). Refer to Magellan's answers to the questions posed by the Committee on 7 June 2006 (question 24); Magellan's supplementary submission dated 7 June 2007 (MSDS Submission).
5. Page 11, line 37 - Mr Jamieson states that the MV Lemmergracht loaded on 10 October 2006 was the first type of ship the Port "have (sic) had of that configuration". In fact, the "Hanna C" was also a "box hold" ship which had been loaded (without incident to Magellan's knowledge) prior to October 2006. Refer to Magellan's supplementary submission dated 7 June 2007 (small ships).

6. Page 14, line 36 - Mr Jamieson says that the loading of the ship on 12 December 2006 had commenced at "one" (1 am). This is incorrect, the loading on 12 December 2006 commenced on the afternoon of 11 December 2006. See evidence of Trevor Watters transcript 7 June 2007 (page 20, about line 18) and Magellan's supplementary submission 7 June 2007 (small ships).

#### **Evidence of Department of Environment - 30 May 2007**

7. Page 19 at about line 33 - Mr Atkins says that the "*initial shipments were in pelletised agglomerates*" and "*some time late in 2005 that changed*". Only the first transport of the product from the mine to the Port was "agglomerated" at the mine. The product had lost its agglomerated characteristics by the time it reached the Port and so by email dated 7 April 2005, Magellan informed the Port that it was going to discontinue the use of the screw feeder. The first export of Magellan's product from the Port, (in July of 2005) would have included some material which had been attempted to be "agglomerated" prior to 7 April 2005. It is incorrect to say that "*the initial shipments were in pelletised agglomerates*".

#### **Evidence of Department of Consumer and Employment Protection - 5 June 2007**

8. Drygala - page 2 line 26 - Mr Drygala states that the most recent classification of Magellan's product triggers a "*whole suite of dangerous goods legislation*". Refer to Magellan Supplementary Submissions "MSDS" 07.06.07 paragraphs 2 and 3. Magellan considers that its product was always classified as a Dangerous Good (class 9).
9. Drygala - page 4 line 31 and page 12 line 23 - Mr Drygala describes lead carbonate as a "toxic" substance and refers to a choice between UN Code 2291 and 3288. Refer to Magellan Written Response to Further Questions dated 07.06.07 at Question 17 lead carbonate does not meet the definition of "toxic" set out in the Australian Dangerous Goods Code. The reference to "toxic" in this context is to acutely toxic. Lead Carbonate is not acutely toxic.

#### **Evidence of Ian Lynass, BIS Industrial Logistics**

10. Page 3 line 1 and line 27. Mr Lynass states that Brambles did not receive a copy of an MSDS for Magellan's product until "*22 May this year*". This is incorrect. Magellan provided Brambles with an MSDS for "Magellan lead carbonate" on 19 April 2005. Refer to Magellan's answers to the questions posed by the Committee on 7 June 2006 (question 23); Magellan's supplementary submission dated 7 June 2007 (MSDS Submission).