



Environment Canada  
Environnement Canada

Northern Division  
Environmental Protection Operations  
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Our File:

Jan. 12, 2010

Phyllis Beaulieu  
Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0B 1J0

By email

**Re: MMG Resources Inc. – Lupin Spill Contingency Plan – 2AM-LUP0914**

Environment Canada (EC) staff have reviewed the above-noted plan (revised Feb. 2009) submitted under the water licence. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the *Canadian Environmental Protection Act* and Section 36(3) of the *Fisheries Act*.

Comments and recommendations:

Overall, this is a well organized and reasonably complete plan for a mine site on 'Care & Maintenance' status. Specific comments, mostly of an editorial and clarification nature, are provided below.

Table of Contents, Appendix II, Tables

This should read 'Appendix III, Tables'

Table of Contents, Appendix III, References

This should read 'Appendix IV, References'

Table of Contents, Appendix IV, Material Safety Data Sheets - Major Products

This should read 'Appendix V, Material Safety Data Sheets - Major Products'

Table of Contents, Appendix V (corrected)

The 'Material Safety Data Sheets - Major Products' in the Table of Contents do not match the products or their order listed in the Appendix V. There are inconsistencies. For example, Amex II (aka ANFO), an explosive, lists in the Table of Contents but no explosives are stored on-site, according to Andrew Mitchell, Development Manager, MMG Resources Inc. (pers. com. to D. Tilden, 12-Jan-09). MSDSs for Major Products should be listed alphabetically or numerically for ease of reference.

### Section 1.1, Preamble

The first paragraph is confusing and the Preamble Section should be rewritten for clarity. It is stated that the effective date of the contingency plan is from January 1, 2008 to January 31, 2008. The Cover Page shows the dates February 15, 2009 & June 15, 2009; Table of Contents page footers date 2009; the Contingency Plan main page footers date 2008. These inconsistent dates should be corrected.

### Section 1.2 Contacts

The corporate name 'OZ Mineral Resources Canada' changed to 'MMG Resources Inc.' on June 18, 2009. This should be reflected throughout the plan.

### Section 3.1, General, paragraph 4

"Also a quantity of explosives remains on site." This statement needs to be verified. If true, the explosives type/brand name and quantity should be identified. No explosives are stored on-site according to Andrew Mitchell, Development Manager, MMG Resources Inc. (pers. com. to D. Tilden, 12-Jan-09).

### Section 6.4, Disposal, paragraph 3

Techniques exist for accessing oil under river and lake ice and subsequently burning the same. MMG Resources Inc. may wish to consult the EPPR *Field Guide for Oil Spill Response in Arctic Waters*, or they can contact Dave Tilden at 867-669-4728 for further information.

The last two sentences should be removed; removal to municipal landfills does not seem applicable for this remote site.

### Section 6.4, Disposal, paragraph 5

It may be more helpful to replace this paragraph with information on actual practices, since landfarming is not being used at the mine site. Landfarming and bioremediation of fuel-contaminated soils is reflected in the Action Plan for Diesel Fuel (Disposal) on page 35 to be done at an approved site. Where are contaminated soils being taken?

The 'Phase III Oil Sponge' referred to in this paragraph is now called 'Oil Sponge Remedial', and this product is only suitable for treating small quantity spills of petroleum hydrocarbons. See [http://www.spillresponse.com/oil\\_sponge.htm](http://www.spillresponse.com/oil_sponge.htm)

### Section 8.2, Petroleum/Chemical Products

Item 4 lists as Ethylene Glycol Antifreeze. In Appendix V, it lists as Ucartherm Glycol, a Dow Chemical brand name for a glycol-based antifreeze. Inconsistent nomenclature creates confusion. Use consistent product names throughout the plan.

### Section 8, Detailed Response Plans (Action Plans), Diesel Fuel, Properties

One of the properties lists as "Not soluble, floats on water". While diesel fuel is mostly insoluble, the most toxic components of diesel fuel—the BTEX compounds—are in fact moderately soluble in water. BTEX compounds are benzene, toluene, ethylbenzene, and xylene. These substances are toxic to fish and aquatic organisms, particularly when spilled under ice cover.

Appendix I, Telephone Listings, Government of Canada, Environment Canada

Delete the two listings. These are no longer valid. Replace with:

A/Regional Environmental Emergencies Coordinator (Yellowknife)

Telephone: 867-669-4736 Facsimile 867-669-6837

EC does not have a 24-hour emergency pager; all spills should be reported to the NT-NU Spill Line (867) 920-8130.

Appendix II, Figures, Figure 2, Spill Report Form

A minor but significant error occurs on the Spill Report Form. Line J, Box 3, 'Hazards to Persons, Property or **Equipment**' should read 'Hazards to Persons, Property or **Environment**'. Newer editions of the form correct this error.

Appendix III, Table 1, Petroleum and Chemical Products Inventory

This table lists 81 metric tons of ANFO (AMEX II) stored in the Main Magazine. No explosives are stored on-site according to Andrew Mitchell, Development Manager, MMG Resources Inc. (pers. com. to D. Tilden, 12-Jan-09). Which is correct? ANFO is also included in Section 8, Detailed Response Plans (Action Plans), pp 48-50.

The product names (nomenclature), the number of products, and the order of listed products in Table 1 are inconsistent with those listed in the Table of Contents, Appendix V (corrected) and the MSDSs found in Appendix V. This needs revision.

Petroleum inventory

JetA/B 360,000 Imp Gallons (1,638,000 litres)

Jet B is a Naphtha-type jet fuel and Naphtha is a regulated substance (Under CEPA 1999) in a concentration of 1% and quantity of 50 tonnes. Therefore the quantities for each the Jet A and Jet B should be provided to determine if the Jet B is stored in sufficient quantities and concentrations to be regulated under CEPA 1999.

There are enough corrections and points of clarification that revising the plan may be worthwhile; this could be done in fulfilment of the 2010 update requirements. Please do not hesitate to contact me at 867-669-4735 or by email at [anne.wilson@ec.gc.ca](mailto:anne.wilson@ec.gc.ca) with any questions or comments regarding the foregoing.

Sincerely,

Anne Wilson  
Water Pollution Specialist  
Environmental Assessment - North

cc. Carey Ogilvie (Head, EA-North, Yellowknife)  
David Tilden (Hazardous Materials Specialist, EC Yellowknife)  
Wade Romanko (A/Regional Environmental Emergency Coordinator, EC YK)  
Carrie Spavor (Environmental Assessment Coordinator, EC NU)