



Giant Mine Environmental Assessment

IR Response

Round One: Information Request - Environment Canada #09

May 31, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: Environment Canada #09

Date Received:

February 28, 2011

Linkage to Other IRs:

Date of this Response:

May 31, 2011

Request

Preamble:

There is deep saline groundwater that enters the lower levels of the mine workings.

Question:

Please provide information describing any issues associated with this salinity in terms of water treatment.

Reference to DAR (relevant DAR Sections):

S. 5.7.1.1 Minewater Quality

Reference to the EA Terms of Reference:

S.3.2.3

Summary

Mine water salinity will not affect the proposed treatment process.





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Response

Mine water is pumped to the Northwest Pond, and the following table summarizes the concentration of solutes in the pond.

Parameter	Concentration [mg/L]	
	Minimum	Maximum
Dissolved Calcium	155.0	451.0
Total Calcium	156.0	431.0
Dissolved Magnesium	43.0	101.0
Total Magnesium	43.5	99.4
Dissolved Potassium	5.9	15.0
Total Potassium	6.1	15.1
Dissolved Sodium	57.7	195.0
Total Sodium	57.7	195.0
Chloride	115.0	161.0
Sulphate	617.0	617.0

Based on the above data, it is anticipated that the concentration of solutes in the mine water will not affect the proposed process. A slight reduction of the metal salt content should be realized via precipitation during pH adjustment.

Sulphates will increase the scaling potential of the water treatment equipment. This will need to be addressed through proactive operation and maintenance procedures.

It should be noted that the saline properties of the mine water currently does not appear to affect the existing water treatment plant's ability to reduce arsenic levels.

