



**Royal Oak
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August 27, 1998

Mr. Emery Paquin
Director, Environmental Protection Service
Resources, Wildlife & Economic Development
Suite 600, 5102 - 50th Avenue
Yellowknife, N.T.
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Dear Mr. Paquin,

Re: Implementation Schedule for the Giant Mine Emissions Monitor

In response to your letter of August 19, 1998, addressed to Mr. Rick Allan, I would like to inform you of our progress in the installation of a Continuous Emissions Monitoring System (CEMS) at the Giant Mine.

The two major structural modifications required for the CEMS installation are: the provision of two new access ports on the stack structure, and the construction of an analyzer room within the adjacent Roaster Building. The new stack ports have been bored and flanges have been installed. Construction of the analyzer room is in progress. Some un-anticipated problems have delayed the construction of the analyzer room, including a requirement to remove a large redundant compressor, to provide the necessary space, and the removal of concrete foundations associated with the compressor.

The activities currently being addressed, concurrent with the construction of the analyzer room, include mounting of the sample probe box, sample probe, pitot tube, differential pressure transmitter, sample tube assembly ('umbilical cord') and the installation of an air cleaning unit to provide dry, oil-free compressed air to the sample probe box. Once the analyzer room is completed, the analyzer cabinet, calibration gas bottles and computer hardware can be installed and connected.

At this time, the construction schedule indicates that the analyzer room, and all outdoor installations, will be completed by the end of September. Installation of the analyzer cabinet will not take place until October. An estimated ten (10) days of commissioning assistance from Rosemount Instruments Inc. will take place in October and the CEMS is expected to be



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operational by the end of that month.

Royal Oak Mines intends to operate the CEMS continuously after Rosemount has commissioned the system and to provide regular reports to the Environmental Protection Service on operating and calibration measurements. However, given the limitations of manual stack sampling techniques in low temperatures, a certification testing program to demonstrate the accuracy of the continuous measurements will not be possible this year.

Royal Oak will commission a series of manual stack tests in September, to determine current emission rates for sulphur dioxide and arsenic. We will forward the results of these tests to your department as soon as they are available and would welcome the participation of your Mr. Jim Sparling during the testing process.

Please contact me at (867) 669-3729 if you should have any questions on the CEMS installation project or the planned manual stack testing.

Yours sincerely,

Royal Oak Mines Inc.

Stephen Schultz
Superintendent, Environmental Services
NWT Division

cc: Ed Collins (Environment Canada)
Rick Allan (ROM)
John Stard (ROM)
Al Goetz (ROM)
Kent Morton (ROM)