



Environment
Canada

Environnement
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Environmental Protection Branch
P.O. Box 370
Yellowknife, NWT
X1A 2N3

Your file Votre référence

Our file Notre référence

October 13, 1995

Royal Oak Mines Inc.
Bag Service 3000
Yellowknife, NWT
X1A 2M2

Attention: Mr. John Stard
 Mine Manager

Re: Arsenic Emissions from Gold roasters

Dear Sir:

As a follow-up to our meeting of September 15, Environment Canada is continuing to make progress towards improving the control of arsenic emissions to the air from gold roasting operations in Canada. To assist us in this endeavor, please provide the information requested on the attached sheets within 30 days or earlier if it becomes available.

You should also be aware that data on releases to the environment will generally not be considered confidential. Where you consider other information to be confidential, please indicate which information you would like to be considered confidential.

If you need more information or clarification of any of the information items, please call Ed Collins at 920-6061. Thank you in advance for your prompt attention to this matter.

Yours truly

Laura M. Johnston
Division Manager

cc. G. W. Howard
 E. Collins

Canada

INFORMATION REQUEST FOR ARSENIC

1. A general description of Royal Oak Giant Mine including the milling, roasting and smelter operations, a legal description of property owned and operated by Royal Oak Giant Mine in Yellowknife, NWT, and a surface map indicating property boundaries. — *Surface map*
2. A detailed description of the entire air emission control system including operating temperatures, pressures and actual volumetric flow rates expressed in degrees Celsius, millimetres of mercury and cubic meters per hour, expressed at normal conditions (0°C, 1atm)
3. Actual installed capital cost of all emission control equipment described in (2), year of installation, and actual operating costs (including labour and maintenance) of all emission control equipment presently installed to control air emissions.
4. Description of any emission monitoring programs presently in place.
5. Description of any environmental monitoring or investigative studies presently funded and operated by Giant Mine in order to determine the fate or accumulation of arsenic or arsenic compounds in the receiving environment in the geographic vicinity of Royal Oak Giant Mine in Yellowknife, NWT.
6. Description of any emergency systems or programs in place in order to detect operational disturbances or failures in the process or air emission control systems or equipment presently in place at Royal Oak Giant Mine.

1) costs of Dillon Report

2)

7. A material balance for arsenic including the quantity and concentration of arsenic or arsenic compounds released from Giant Mine roaster stack. Please complete the following Table.

TABLE - Arsenic Material Balance:

ROASTER INPUT

Feed Rate (Tonnes/hr)	
Arsenic Concentration (%)	

ROASTER OUTPUT PRODUCT

Product (Tonnes/hr)	
Arsenic Concentration (%)	

ROASTER FLUE GAS

Flow Rate (Nm ³ /hr)	
Arsenic Concentration of Dust (%)	
Arsenic Concentration (mg/Nm ³)	

MATERIAL COLLECTED

Quantity (kg/day)	
Arsenic Concentration (%)	

MATERIAL STORED

Quantity (Kg/Day)	
Arsenic Concentration (%)	

MATERIAL RELEASED FROM STACK

Quantity (Kg/Day)	
Arsenic Concentration of Dust (%)	
Arsenic Concentration (mg/Nm ³)	