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To: KAREN DUNCAN	From: CARMEN
Co. GIANT	Co.
Dept.	Phone # 0-6113
Fax # 3-2986	Fax # 3-0301

FOR IMMEDIATE RELEASE

Mike Weener
Bill Heath
Larry Connell

93-035

Study of Atmospheric Emissions Completed

YELLOWKNIFE (July 5) — Results from an investigation of arsenic and sulphur dioxide emissions from the roaster stack at Royal Oak Giant Yellowknife Mine have been released by the Department of Renewable Resources.

The study was launched after a request by two Yellowknife residents was made under the Environmental Rights Act - an Act that was passed in the NWT legislature in 1991.

The Act gives residents of the Northwest Territories an opportunity to request comprehensive investigations if damage to the environment is suspected.

According to scientific evaluation of the mine's emissions, sulphur dioxide (SO₂) and arsenic are the two main types of pollutants being released into the air through its roaster stack.

The report reveals that SO₂ emission rates from the stack range between 50 to 65 tonnes per day, and is the only identified source contributing to SO₂ levels north of the mine. SO₂ gas is produced when ore containing sulphur is separated and broken down by being burned in the mine's roaster.

It was also detected that minor sources such as the burning of gasoline or diesel fuel are contributing to the levels of sulphur dioxide to the south of the mine or within city limits.

During one phase of the study, regular monitoring showed that SO₂ levels in populated areas of Yellowknife periodically exceeds national air quality objectives when the wind blows from the north. If levels are high enough, exposure to SO₂ can cause irritation of the eyes, throat and respiratory tract.

Office of the Press Secretary • Government of the Northwest Territories
Box 1320 • Yellowknife • NWT
Telephone (403) 920-6113 • FAX (403) 873-0301



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It was also found that damage to trees along Vee Lake Road, as far as five kilometres north of the roaster stack, occurred from high levels of SO₂.

Testing of roaster stack emissions also found that 20 to 30 kilograms of arsenic are released each day. Arsenic levels measured in downtown Yellowknife air are now considerably lower than in the early 1970s and are well within established limits. Pollution control equipment filters out about 99 per cent of the arsenic before the roaster gases are released through a chimney known as the roaster stack. Conversely, SO₂ is released directly out the roaster stack.

Giant Mine uses a "roasting" process in the separation of gold from the ore. In this process, crushed ore burns at high temperatures, releasing sulphur dioxide and arsenic pollutants.

Although no recommendations for actions have been included in the report, the findings of the investigation will now be considered by the territorial government to determine if measures need to be taken to protect the environment.

The Department of Health will also be evaluating the results over the next few months to determine the risk to human health.

Copies of the report can be obtained from the Environmental Protection Division, 7th Floor, Scotia Centre, or by calling (403) 873-7654.

Contact: Joe Handley
Deputy Minister
Dept. of Renewable Resources
(403) 873-7420

or Susan Enge
Public Affairs Officer
Dept. of Executive
(403) 873-7343

