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Department of Environment

Ministère de l'Environnement

Oct. 14, 2008

Richard Dwyer
Licensing Administrator
Nunavut Water Board

via Email to: licensingadmin@nunavutwaterboard.org

RE: NWB FILE # 2BE-ANI – North Arrow Minerals Inc. – Anialik River Gold and Base Metal Exploration Project

Dear Mr. Dwyer:

The Government of Nunavut, Department of Environment (DOE) has reviewed the project proposal from North Arrow Minerals Inc. for conducting gold and base metal exploration and camp operation 180km southeast of Kugluktuk. Based on the *Environmental Protection Act*, DOE has the following comments to make regarding spill contingency, and abandonment & restoration.

1) SPILL CONTINGENCY

The subsequent recommendations and comments are based on the DOE *Spill Contingency Planning and Reporting Regulations*, *Contingency Planning and Spill Reporting in Nunavut: a Guide to the New Regulations*, and *Guideline for the General Management of Hazardous Waste in Nunavut*. Consequently; DOE recommends the following be included in the Spill Contingency Plan (SCP):

- A site map that is intended to illustrate the facilities relationship to other areas that may be affected by the spill, should be provided once a camp is set up. The map should be to scale and be large enough to include the location of your facility, nearby buildings or facilities, drainage patterns, and any nearby bodies of water.
- A description of the type and amount of fuels and chemicals normally stored on site. This would include chemical names, volumes, and weights of the contaminants as well as storage methods.
- The contact information list of Regulatory Bodies should be revised and updated to include the following:

Department of Environment Government of Nunavut	Phone (867) – 975 – 7700
Manager Pollution Control and Air Quality Environmental Protection Government of Nunavut	Phone (867) – 975 – 7748 Fax (867) – 975 – 7739
- The DOE monitors the movement of hazardous wastes, from generators, carriers to receivers of the wastes, through the use of a tracking document known as a Waste Manifest. A Waste Manifest must accompany all movements, and all parties must register with DOE by contacting Robert Eno at (867)975-7748 or reno@gov.nu.ca. This procedure should be discussed in the spill plan.

- A 24 hour telephone number should be included in the SCP. This is to provide a 24 hour point of contact for the authority investigating the spill.
- Hazardous materials stored on-site should be marked so they will be visible under all conditions, in all seasons. This recommendation is intended to help prevent possible injuries to camp personnel and/or damage to the containers. Unless otherwise specified by the land use inspector or license -issuing agency, all hazardous materials should be removed from the site upon completion of the activity. The proponent is referred to DoE's *Environmental Guideline for the General Management of Hazardous Waste*.
- An inventory of response and clean up equipment available to implement the plan should be included in the spill plan. This includes your equipment (including spill kit inventory) as well as any to be used by another person responding to the spill on your behalf.

2) ABANDONMENT AND RESTORATION

Open burning

In the Abandonment and Restoration Plan, the Proponent indicates that all wood will be burned. The DOE would like to state that open burning remains a last option for the management of solid waste (including untreated wood as proposed in the project proposal) unless the proponent fails to identify a feasible and practical alternative. If open burning is to be carried out due to lack of other appropriate options, the proponent is required to follow the procedures below in consistent with DOE policy titled: *Municipal Solid Wastes Suitable for Open Burning*.

- The principle of source reduction should be utilized to reduce, reuse and recycle materials otherwise bound for landfill.
- Solid wastes that are conditionally suitable for open burning are paper products, paperboard packing and untreated wood wastes only. Other wastes such as hazardous wastes should be contained in a designated area and be managed appropriately.
- The appropriate materials are segregated and burned in a controlled manner and at a controlled site.
- Standard burning conditions shall apply, such as burning on days where winds are light and blowing away from any nearby community/camp.
- Materials are burned in manageable volumes so that fires do not get out of control.

Incineration

The Government of Nunavut is a signatory to the *Canada-Wide Standards for Dioxins and Furans*, and *Canada-Wide Standards for Mercury Emissions*. For incineration of wastes, DOE therefore has the following comments to make regarding emissions from incineration.

For a camp of greater than 10 but less than 50 people, the proponent shall apply appropriate technologies to ensure complete combustion of wastes, and the use of a dual chamber, forced-air incinerator is recommended. The proponent shall make determined efforts to achieve compliance with the Canada-wide Standards for dioxins and furans and the Canada-wide Standard for Mercury. Efforts should include the implementation of a comprehensive waste management strategy (especially waste segregation) that is designed to reduce and control the volumes of wastes produced, transported, and disposed of. The Waste Management Strategy should consider and include:

- Purchasing policies that focus on reduced packaging,

- On-site diversion and segregation programs (i.e. the separation of non-food waste items suitable for storage and subsequent transport and disposal or recycling).
- If incineration is required, ensure diligent operation and maintenance of the incineration device and provide appropriate training to the personnel operating and maintaining the incinerator.

Waste wood treated with preservatives such as creosote, pentachlorophenol or heavy metal solutions should not be burned. Additionally, plastics, electrical wire, asbestos and building demolition wastes (except clean wood) are wastes likely to produce dioxins and furans when burned and should be excluded from incineration. Under no circumstance should hazardous wastes be managed through burning or incineration. The efforts made to achieve compliance shall be reported as part of the annual report.

Drill Sumps

The sumps should only be used for inert drilling fluids, not any other materials or substances. The sumps should be properly closed out.

Contaminated Soils

Soil contaminated by fuel (e.g., soils under an old storage tank) should be treated on site or removed to an approved disposal site and replaced with new soil. The proponent is referred to DoE's *Environmental Guideline for Site Remediation*

Final Inspections

Final inspections of the entire site should be conducted by the proponent and lead agency to make sure that all areas of the site have been reclaimed as much as possible to its previous condition. Soil samples and pictures before and after the project would make this process easy on the proponent and leading agencies involved in determining areas of concern.

The DOE thanks NWB for the opportunity to provide comments on the project proposal from North Arrow Minerals Inc. Please contact us if you have further questions.

Yours sincerely,

Original signed by

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