



February 1, 2012

VIA EMAIL

Paul Mercredi, Environmental Assessment Officer
Mackenzie Valley Environmental Impact Review Board
200 Scotia Centre
P.O. Box #938
Yellowknife, NWT
X1A 2N7

Dear Mr. Mercredi,

Re: EA 1011-001, Thor Lake Project, Avalon Rare Metals Inc. – LKDFN IR #4

I am pleased to provide a response to the Lutsel K'e Dene First Nation Information Request 4 (5):

5. To the GNWT. Does it have the capacity to effectively monitor work place safety with respect to Radon; and if not, what will the GNWT do to ensure the application of the NWT Mine Health and Safety Act [Mine Health and Safety Act: Consolidation of Mine Health and Safety Regulations R-125-95, MHSA 2011 with respect to radon.

Although the GNWT does not have direct jurisdiction over the information asked for in the request we have contacted the Workers' Safety and Compensation Commission, who has kindly provided us with a response (provided below).

Please contact myself or Mr. Gavin More (Manager, Environmental Assessment and Monitoring; gavin_more@gov.nt.ca; (867) 873-7107) if you any questions.

Sincerely,



Environmental Assessment Analyst
Environmental Assessment and Monitoring
Environment and Natural Resources, GNWT
loretta_ransom@gov.nt.ca
Phone #: 867-873-7905

cc. (via email)

Peter Bengts, Chief Inspector of Mines, WSCC

Mike Tollis, Wildlife, Lands and Environment Manager, Lutsel K'e Dene First Nation

David Swisher, Vice President Operations, Avalon Rare Metals Inc.

January 26, 2012

MS. LORETTA RANSOM
ENVIRONMENTAL ASSESSMENT ANALYST
ENVIRONMENT & NATURAL RESOURCES

Dear Ms. Ransom:

Information Request #4 – Lutsel K'e Dene First Nation

This is in response to your email of January 17, 2012, requesting information pertinent to the Information Request Number 4.

The Workers' Safety and Compensation Commission (WSCC) is a Crown corporation of the Governments of the Northwest Territories and Nunavut. The Northwest Territories *Workers' Compensation Act* established the WSCC, originally, the Workers' Compensation Board, in 1977. The *Workers' Compensation Act* sets out the WSCC's authorities, including:

- Independent Administration and Adjudication – WSCC administers a program in a way that provides equitable service and protection to both workers and employers. It operates at arm's length from the governments, shielded from political influence.

The Ministers' responsibilities include overseeing legislative changes, appointing Governance Council Directors and Appeals Tribunal Members, tabling WSCC annual reports, and responding to any issues. The Ministers responsible for the WSCC are accountable to the Northwest Territories and Nunavut Legislative Assemblies and the people of the Northwest Territories and Nunavut.

A seven-person Governance Council, representing the interests of workers, employers, and the public sector, governs the WSCC. It oversees the WSCC's conduct of business and management.

In 1996, the GNWT transferred the responsibility for administering the occupational safety acts to the WSCC. As a result, the GNWT Industrial Safety and the Mine Inspection Services groups transferred to the WSCC's administration. The WSCC

administers many *Acts* and regulations on behalf of the Governments of the Northwest Territories and Nunavut.

The safety legislation with jurisdiction for the Avalon Rare Metals Inc.'s Nechalacho Rare Earth Element Project at Thor Lake is the *NWT Mine Health and Safety Act* (MHSA) and Regulations, which the WSCC Prevention Services Mine Safety unit administers.

Before a mine can be constructed and operated, the owner must obtain approval from the Chief Inspector of Mines as detailed in Regulation 17.01. As well, the MHSA stipulates a duty for the manager to comply with the Act and Regulations and take every reasonable measure and precaution to protect the health and safety of employees and other persons at the mine (MHSA Section 10). Regulations 9.82 to 9.96 specifically address potential radon exposure, in the proposed mine and processing facility .

Safety legislation in Canada is based on the Internal Responsibility System (IRS); the owners, management and workers are all responsible for their own and co-workers' safety. Regulators perform inspections or audits to confirm the legislative requirements, codes and best practices, are met. Inspectors of Mines visit each operating mine on a 6 to 8 week schedule. During construction, the interval reduces to monthly visits.

The Regulations require the manager to conduct (or causes a qualified person to conduct) a radon hazard analysis to determine if a radon hazard exists. The manager requires personnel competent in radon testing to conduct the study; normal practice is to use third party consultants, initially until the mine can obtain or train their own staff to the appropriate level. Mine Safety monitors to confirm that competent personnel performed and assessed the testing. Mine Safety may conduct confirmatory testing or order the manager to have a qualified third party perform the testing.

The aforementioned Regulations and *Act* sections attached.

Sincerely,

A handwritten signature in black ink that reads "Peter Bengts". The signature is written in a cursive, flowing style.

Peter Bengts, P.Eng.
Chief Inspector of Mines
867/669-4412 direct

cc: Cara Benoit, VP Prevention Services, WSCC

Notice of Intention to Commence Work

17.01. (1) An application to commence shaft sinking, underground development work or the surface stripping of an open pit for the purpose of production of minerals, shall be submitted, in writing, to the chief inspector and shall include a plan of the system under which the work is to be performed.

(2) The plan shall include

- (a) a regional map showing the location of the mine property;
- (b) a plan at a scale of 1:10,000 or less, showing topographic contours, claims, leases or licences, lakes, streams, roads, landing strips and the location of all proposed mining works and related facilities and also showing the relationship to the Universal Transverse Mercator (UTM) grid;
- (c) the basis of design, details of geological structure, materials handling, buildings, processing plants and facilities, stockpiles, tailings transportation and impoundment, water supply and storage facilities;
- (d) for underground development, plans of present and proposed underground workings and a plan of the mine openings in relation to the surface installations;
- (e) for surface mines, the methods to be followed in the construction of haulage roads;
- (f) for surface mines, a traffic control plan showing the maximum allowable speeds for the vehicles in use, rules for passing, "stop" and "yield" locations, priority rules for various vehicles, rules for night operation, maximum operating grades, emergency run-off protection, shoulder barriers; and
- (g) any other information required by the chief inspector.

(3) The chief inspector shall, before approving the plan, take into consideration the safety of the public and the health and safety of the persons performing the work.

(4) Shaft sinking, underground development and surface stripping of an open pit shall not proceed until the plan has been approved by the chief inspector.

(5) The manager shall notify the chief inspector in writing of any intention to make a significant departure from the plan approved by the chief inspector, and shall not proceed to implement the proposed changes without the written approval of the chief inspector.

Duties of manager

10. (1) The manager shall take every reasonable measure and precaution to protect the health and safety of employees and other persons at a mine.

Manager to comply with Act

(2) The manager shall

- (a) comply with this Act and the regulations and any orders or directives issued under this Act or the regulations;
- (b) ensure that the requirements of this Act and the regulations are met in the operation of the mine; and
- (c) ensure that any orders and directives issued under this Act or the regulations are complied with in the operation of the mine.

Test of Concentration of Radon

9.82. Sections 9.83 to 9.96 apply to a mine where levels of radiation are greater than the levels permitted in respect of office workers and persons other than surface or underground workers under Schedule 6 (Maximum Permissible Doses of Ionizing Radiation) and Schedule 7 (Maximum Permissible Exposures to Radon Daughters).

9.83. (1) The chief inspector may order the manager to perform a hazard analysis to determine if a radon hazard exists.

(2) Where the chief inspector determines as a result of a hazard assessment that radon exists in a mine, the manager shall ensure that the mine is monitored by the taking of air samples or other tests to determine the exposure to ionizing radiation and radon daughters that may occur to workers or other persons working in or passing through that area.

(3) Subject to subsection (4), the location, frequency and manner of the monitoring shall be determined by the manager and approved by an inspector.

(4) The interval between the taking of any two consecutive air samples to determine exposures at any location shall not exceed one month.

9.84. The manager shall appoint a radiation officer to be responsible for giving instruction to employees on radiation safety.

9.85. (1) The manager shall prepare a radiation exposure control code of practice to include engineering controls and industrial hygiene practices and submit it to the chief inspector for approval.

(2) The manager shall implement a radiation exposure control code of practice that has been approved by the chief inspector.

(3) The manager and other persons at the mine shall comply with the radiation control code of practice.

9.86. The manager shall ensure that no person receives more than a permissible dose.

9.87. (1) The manager shall ensure that records are kept showing the dose of ionizing radiation and exposure to radon daughters received by each person.

(2) The records required in subsection (1) shall include a record of the number of hours that each person spent in each area of the mine and a measurement of the levels of ionizing radiation and radon daughters in each area.

9.88. The manager shall submit to the National Dose Registry a return every month in accordance with National Energy Board procedures, with a copy to the chief inspector showing

- (a) the monthly, quarterly, annual and cumulative doses of ionizing radiation and exposures to radon daughters received by any person; and
- (b) the monthly average levels of ionizing radiation and radon daughters in the areas monitored under section 9.83.

9.89. (1) All records required to be kept under sections 9.83 to 9.96 shall be kept available for inspection by an inspector at all times.

(2) The personal records of any person kept under sections 9.83 to 9.96 shall be kept available for inspection by the employee at all times.

9.90. The manager shall inform any person in writing of the amount of the exposure of the employee to radon daughters when that exposure reaches

- (a) 0.75 WLM in any one month;
- (b) 1.5 WLM in any period of three consecutive months; or
- (c) 2 WLM in any period of 12 consecutive months.

9.91. (1) A person shall only use procedures and instruments approved by the chief inspector to measure doses of ionizing radiation and exposures to radon daughters.

(2) A person shall only use instruments calibrated to the satisfaction of an inspector at least once every six months to measure doses of ionizing radiation and exposures to radon daughters.

9.92. The manager shall ensure that the airborne concentrations of ionizing radiation and radon daughters at each working area of a mine are kept as low as reasonably achievable.

9.93. (1) An inspector may order radiological measurements to be taken and recorded in any area of a mine at any time.

(2) The manager shall, in respect of each working area of a mine, walkway and any other area designated by an inspector, ensure that dated reports of its radiological measurement are signed by the manager and posted in a conspicuous location in the area.

9.94. (1) The manager shall, before employing a person, obtain that person's record of any previous accumulated dose of ionizing radiation and exposure to radon daughters.

(2) The manager shall, before permitting a contractor or any person employed by a contractor to work at a mine, obtain the record of any previous accumulated dose of ionizing radiation and exposure to radon daughters of the contractor or other person.

(3) Where the manager cannot obtain the record specified in subsection (1) or (2) directly from the person, the manager shall obtain the record from the National Dose Registry with the written consent of the person.

9.95. (1) Where the record of exposure of a person to ionizing radiation or radon daughters indicates that at the current rate of exposure he or she will receive more than a permissible dose, the manager shall reassign the person to work in an area where the rate of exposure will be reduced to a rate that will prevent the person from receiving more than a permissible dose.

(2) Where an employee is reassigned pursuant to subsection (1), the employee's wages shall not be reduced.

9.96. Before a person commences work at a mine, the manager shall ensure that the person is informed of

- (a) the health hazards associated with his or her duties, in particular the health effects of radiation exposure and the added risk to an employee from smoking;
- (b) the radiation exposure control code of practice; and
- (c) any special methods, procedures and techniques to be followed as a result of the presence of radiation.