

URANIUM EXPLORATION PLAN – Hornby Bay JV Project (Mountain Lake)

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The Hornby Bay JV Project is still in the grassroots exploration drilling stage. A major component of the program is the search for uranium deposits, therefore procedures have been established to provide a safe workplace for employees while causing the minimum disturbance or harm to the environment. These procedures will be revised if the grassroots program is successful in identifying a deposit warranting a more intensive, delineation drill program.

Subject: Radiation Safety at Uranium Exploration Properties

The information contained in this document is compiled from several sources, mainly: The Canadian Nuclear Safety Commission (CNSC), Canadian Centre for Occupational Health and Safety (CCOHS), United States Environmental Protection Agency (U.S. EPA) and Cameco Corporation (Cameco).

It should be noted that the CNSC no longer regulates uranium exploration properties. However, transport of mineralized core and samples is governed by the *Packaging and Transportation of Nuclear Substance Regulations*, administered by the CNSC.

Triex Minerals Corp. is registered with and has an active account with the National Dosimetry Services, Occupational Radiation Hazards Division of Health Canada (NDS). NDS provides Triex with Thermoluminescent Dosimeter badges (TLD Badges) which are used to monitor the exposure to radioactive sources. The TLD badges will be worn by all employees who work with handling and logging of radioactive rocks on Triex projects. NDS also provides a service for reading the badges, recording of occupational dose records into the National Dose Registry and issuance of exposure report to Triex. Badges are replaced every three months.

General Background

The U.S. EPA recognizes that there are 2 sources of radiation:

- Natural Radiation
- Manmade Radiation

Manmade radiation is used on an ever-increasing scale in medicine, dentistry and industry. It is beyond the scope of this document to address exposure to manmade radiation.

Natural radiation exposure is a result of an interaction with the sun, cosmic rays and naturally occurring radioactive elements found in the earth's crust. Uranium mineral exploration deals primarily

with the search for and thus possible exposure to natural radiation occurring in radioactive elements found in the earth's crust, and is the subject of this memo.

Ionizing Radiation Fact Sheet

Ionizing radiation is often just referred to as radiation. The primary radioactive elements found in the earth's crust are uranium, thorium and potassium and their radioactive derivatives. These elements emit alpha and beta particles and gamma rays. The following information is direct from the U.S. EPA Radiation Information publication.

Alpha Particles

Alpha particles are energetic, positively charged particles (helium nuclei) that rapidly lose energy when passing through matter. They are commonly emitted in the radioactive decay of the heaviest radioactive elements such as uranium and radium as well as by some manmade elements. Alpha particles lose energy rapidly in matter and do not penetrate very far, however they can cause damage over their short path through tissue. These particles are usually completely absorbed by the outer dead layer of human skin and so, alpha emitting radioisotopes are not a hazard outside the body. However, they can be harmful if they are ingested or inhaled. Alpha particles can be stopped completely by a sheet of paper.

Beta Particles

Beta particles are fast moving, positively or negatively charged electrons emitted from the nucleus during radioactive decay. Humans are exposed to beta particles from manmade and natural sources such as tritium, carbon-14 and strontium-90. Beta particles are more penetrating than alpha particles, but are less damaging over equally travelled distances. Some beta particles are capable of penetrating the skin and causing radiation damage, however, as with alpha emitters, beta emitters are generally more hazardous when they are inhaled or ingested. Beta particles travel appreciable distances in air, but can be reduced or stopped by a layer of clothing or by a few millimetres of a substance such as aluminium.

Gamma Rays

Like visible light and x-rays, gamma rays are weightless packets of energy called photons. Gamma rays often accompany the emission of alpha or beta particles from a nucleus. They have neither a charge nor a mass and are very penetrating. One source of gamma rays in the environment is naturally occurring potassium-40. Manmade sources include plutonium-239 and cesium-137. Gamma rays can easily pass completely through the human body or be absorbed by tissue, thus constituting a radiation hazard for the entire body. Several feet of concrete or a few inches of lead may be required to stop the more energetic gamma rays.

Diamond Drill Procedures

At each drill site a suitable natural depression is used to serve as a sump for the disposal of cuttings, sludge and return water that can not be re-circulated during the drilling process. The sump will be located at a minimum of 31 meters above the ordinary high water mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created. Upon completion of the hole, the sump will be restored as required to the pre-existing natural contour of the land.

If uranium mineralization is encountered in a drill hole, the drill mud solids or cuttings with a uranium concentration greater than 0.05 per cent must be collected pending completion of the hole at which time they will be disposed down the drill hole and sealed by grouting the upper 30 metres of bedrock.

Any drill hole that encounters mineralization with a uranium content greater than 1.0 per cent over a length of > 1.0 metre, and with a metre-per-cent concentration > 5.0, will be sealed by grouting over the entire length of the mineralization zone and not less than 10 metres above or below each mineralization zone. The top 30 metres of the hole within bedrock will also be sealed by grouting once any radioactive cuttings and sludge have been disposed down the hole.

A separate logging tent will be used at the camp for the handling and temporary storage of radioactive core having a uranium content greater than 1.0 percent over a length of > 1.0 metre. Once the uranium content has been established by assaying, a decision will be made on the long range storage of the core. If stored on the property, it will be located at a minimum of 31 metres above the high water mark of any adjacent water body, where any direct flow into a water body is not possible and no additional impacts are created. This core will be stored at a minimum of 31 metres from any working structure. Additionally, radiation levels must be reduced to less than 1.0 μSv measured at 1 metre from the surface and in no instance will the level be allowed to exceed 2.5 μSv .

Safely Controlling Radiation Exposure

The minimization of radiation exposure is accomplished through reducing the time spent in contact with radioactive material, maintaining distance, monitoring and high quality personal hygiene. Exposure to alpha and beta particles is controlled by wearing and cleaning proper clothing, thorough washing of hands and avoiding eating, drinking and smoking while working around radioactive material. Exposure to gamma rays is controlled by maintaining distance and limiting time spent in contact with the radioactive source and by monitoring exposure to the radioactive source by way of TLD badges.

The following procedure for handling and logging of radioactive rocks (drill core, hand samples etc.) have been developed by Cameco Corp. Triex Minerals Corp. agrees that this is a very sound and practical procedure, and Triex insists on strictly adhering to this procedure. This procedure applies to the handling of radioactive rocks at all Triex uranium mineral exploration projects, and to all personnel who have been asked to handle radioactive material. It is the responsibility of the Triex Project Manager (or designate) to ensure that all personnel are made familiar with this procedure, and to ensure the updating and implementation of this procedure.

PROCEDURE


1. All employees who work with radioactive rocks must wear TLD badges.
2. When working with radioactive materials, safety glasses, work gloves and coveralls will be worn. Gloves and coveralls should be laundered and/or replaced regularly. Gloves, coveralls and other exposed outerwear PPE will not be worn into the kitchen area.
3. Wash hands well with soap and water after handling radioactive material.
4. Do not eat, drink or smoke when handling or working near radioactive material.
5. Ensure that the core logging areas have proper ventilation to ensure constant air turnover.
6. Store radioactive core at least 30m away from the main camp area. Post the storage area and the core-logging tent as radioactive areas.

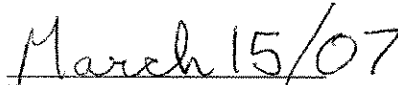
7. Do not move or store radioactive core unless in core boxes secured with wood or Plexiglas lids.
8. Follow all regulations and procedures regarding the shipment of radioactive materials.
9. The attached summary of the above-entitled "Procedures for Handling and Logging of Radioactive Core" will be posted prominently at the camp (see Attachment 1).

Shipping

The shipping of radioactive materials (Class 7) from the Project site is controlled by the Transportation of Dangerous Goods Act and Regulations. The Regulations stipulate that Low Specific Activity consignments will be shipped as Excepted Packages if the radiation on the external surface does not exceed $5\mu\text{Sv/hr}$. The container must bear the UN Number PTNSR 17(2) and contain a marking of "radioactive" on an internal surface that is visible upon opening the package. The Company has an 'INSPECTOR' dose level meter manufactured by Canada-wide Scientific Limited to determine radiation levels in Sieverts as well as scintillometers for general cps levels and a spectrometer to differentiate the radiation by mineral type. The Project Manager has a certificate in the Packaging & Transport of Radioactive Materials.

The above procedure has been reviewed and approved by:


Allan Armitage
Senior Exploration Geologist


Date

ATTACHMENT 1**PROCEDURES FOR HANDLING AND LOGGING OF RADIOACTIVE CORE AND RADIOACTIVE HAND SAMPLES**

All employees who work with radioactive core and hand samples must wear TLD badges.

Our policy is to minimize radiation exposure. This is done by reducing the time spent in contact with the radioactive rocks, maintaining distance, and maintaining high quality personal hygiene, and proper monitoring.

The following guidelines may help reduce radiation exposure and allow personnel to handle radioactive materials safely.

1. When working with radioactive materials, safety glasses, work gloves and coveralls should be utilized for handling. Gloves and coveralls should be laundered and/or replaced regularly. Gloves, coveralls and other exposed outerwear PPE will not be worn into the kitchen area.
2. Decontamination is the removal of radioactive material from a surface. Washing hands with soap and water is an effective decontamination practise after handling radioactive rocks.
3. No eating, drinking or smoking is permitted when handling or working near radioactive material. This is to prevent ingestion of radioactive materials.
4. Avoid contacting radioactive materials with cuts and scrapes. Wearing gloves and coveralls will offer some protection.
5. Ensure there is proper ventilation in the logging area. This is to minimize inhalation of radioactive materials. Taking seasonal conditions into account, always take steps to maximize ventilation (i.e. by opening windows and doors).
6. Distance is the best shield for protection from radioactivity. Store any radioactive core well away from the main camp area (i.e. >30 metres away) and ensure that the core storage area is posted to indicate the presence of radioactive material.
7. Do not move or store radioactive core unless in core boxes secured with wood or Plexiglas lids.
8. Follow policy and all regulations with regard to the shipment of radioactive materials.

Procedures for the Shipment of Radioactive Material From an Exploration Project

PURPOSE

To ensure the safe and proper handling of radioactive materials to be shipped off site and to ensure that all regulations and licence conditions are fulfilled.

SCOPE

This procedure applies to all shipments of all radioactive shipments from a work site including samples to a laboratory, radioactive wastes to a site for disposal, movement of core to a licensed storage area etc.

It is necessary to maintain the legal requirements regarding the transport of radioactive materials per the Uranium and Thorium Mining Regulations, Atomic Energy Control Act, the Transportation of Dangerous Goods Regulations and the Transport Packaging of Radioactive Materials Regulations.

RESPONSIBILITY

It is the responsibility of the Triex Project Manager, or designates, to ensure the updating and implementation of this procedure, including the measurement of radiation levels, proper packaging and proper completion of forms.

PROCEDURE

A. Background Information

1. All personnel shipping radioactive material must be certified to the standards required by the Transport of Dangerous Goods Regulations (TDG).
2. All packaging and labelling must follow the requirements of the Transport Packaging of Radioactive Materials Regulations.
3. Materials must be shipped to a licensed or approved site for analysis, storage or disposal, as appropriate. The receiver will be notified prior to shipment to ensure that they are able and willing to receive the shipment.
4. For shipment to a non-licensed or non-approved site, written approval from the Atomic Energy Control Board (AECB) is required.

B. Weighting the Sample

The sample weight can be measured directly in kilograms prior to being packaged, or it can be calculated using the amount of core and an estimated density.

C. Determining Approximate Ore Grade

The grade can be estimated from the calibrated down hole radiometric logging equipment, or the following formula may be used:

$$\%U_3O_8 = \frac{\text{Contact Gamma Reading (uSv/h)}}{45 \text{ uSv/h}}$$

D. Packaging the Material

1. The material is to be securely packaged such that no material can escape.

2. Solid samples or waste should be inside a plastic bag, which in turn is placed in a plastic pail or steel drum. The pail or drum is to be sealed.
3. Core boxes may be shipped for storage providing that a lid has been secured in place to prevent spillage.

E. Determining if Package Requires Shipping as a Dangerous Good

1. Measure the gamma radiation on the surface of the package. If the maximum gamma radiation is greater than 5.0 uSv/h, then the package must be shipped as a Dangerous Good.
2. The appropriate labelling forms must be in compliance with the TDG regulations.

F. Determining if Package is Radioactive

1. If the maximum contact gamma field of the package is less than 5.0 uSv/h, the shipper must determine whether the package is radioactive or not. This is done by determining the specific activity of the material.
2. The specific activity of the material is determined by the following formula:

$$\text{Specific Activity (kBq/kg)} = 1478 \times \% \text{ U}_3\text{O}_8$$

The sample is radioactive if the specific activity is greater than 74 kBq/kg

G. Shipping Radioactive Non-TDG Packages

1. Material that has a specific activity greater than 74 kBq/kg but a package surface gamma radiation measurement of less than 5.0 uSv/h
2. The shipping document must indicate the words "Expected Radioactive Material – limited activity"
3. The package bears the safety mark "Radioactive" inside the container in such a manner that the mark is immediately visible and legible to a person opening the package.


H. Shipping Non-Radioactive Samples

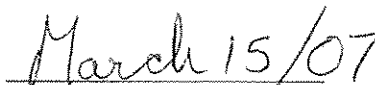
1. This material has a specific activity less than 74 kBq/kg
2. It can be shipped by any means available.

I. Records

A record of all shipments with copies of all of the shipping documents will be maintained by the Project Manager or designate. These documents will be maintained on site for each period of activity. Otherwise they will be maintained in the central project files for a period of two years after shipment is made.

APPROVAL


Allan Armitage
Senior Exploration Geologist


Date