Uranium Exploration Plan: Bugs Project

NWB File No: 2BE-BUG0712/GA

NWB Licence: 2BE-BUG0712/GA

INAC File No: N2008C0010

NIRB File No: 08EN024

May 14, 2008

Bugs Project Summary

The commodities being explored for at Bugs are uranium and thorium. There is no "mineral resource" as yet outlined at Bugs, as defined under securities commissions' strict definitions of mineral resources.

There is currently a very substantial worldwide exploration effort devoted to uranium exploration. This began in 2004 and will continue for the foreseeable future due to a shortage in fuel supplies for planned and existing electricity-generating nuclear reactors. With dwindling and increasingly expensive oil supplies, the excessive pollution caused by coal-fired thermal power plants, and the inadequate alternative or "green" energy sources currently available, nuclear energy is the power source that will be in most demand over the next 40 to 50 years.

An idea of the demand for uranium can be obtained from the following facts. As of the end of 2006 there were 435 operational nuclear reactors in the world, 28 under construction, 64 planned, and 158 proposed.

Uranium and thorium occur together in specific aspects of the Bugs geological setting. Thorium is the secondary commodity target. It can also be used to fuel nuclear reactors and there is a world industrial/scientific movement active in promoting the use of thorium, as opposed to uranium, in such reactors. Industrial and experimental thorium reactors have been operational in Germany, France, United States, and India. The end radioactive daughter products from thorium-based fuel rods are less environmentally damaging than those from uranium-based fuel rods. In any event nuclear reactor technology and safety have advanced greatly over the past 50 years.

The geology at the Bugs Project is host to the volcanic-type of uranium/thorium mineralization, best exemplified by the Streltsovska uranium deposits of the Transbaikal Region of eastern Russia. At Bugs uranium mineralization occurs as stratabound concentrations, as hydrothermal/structural concentrations, and with thorium in dyke-like bodies. The aim of exploration at Bugs is to identify economic grades and tonnages of uranium and/or uranium/thorium mineralization.

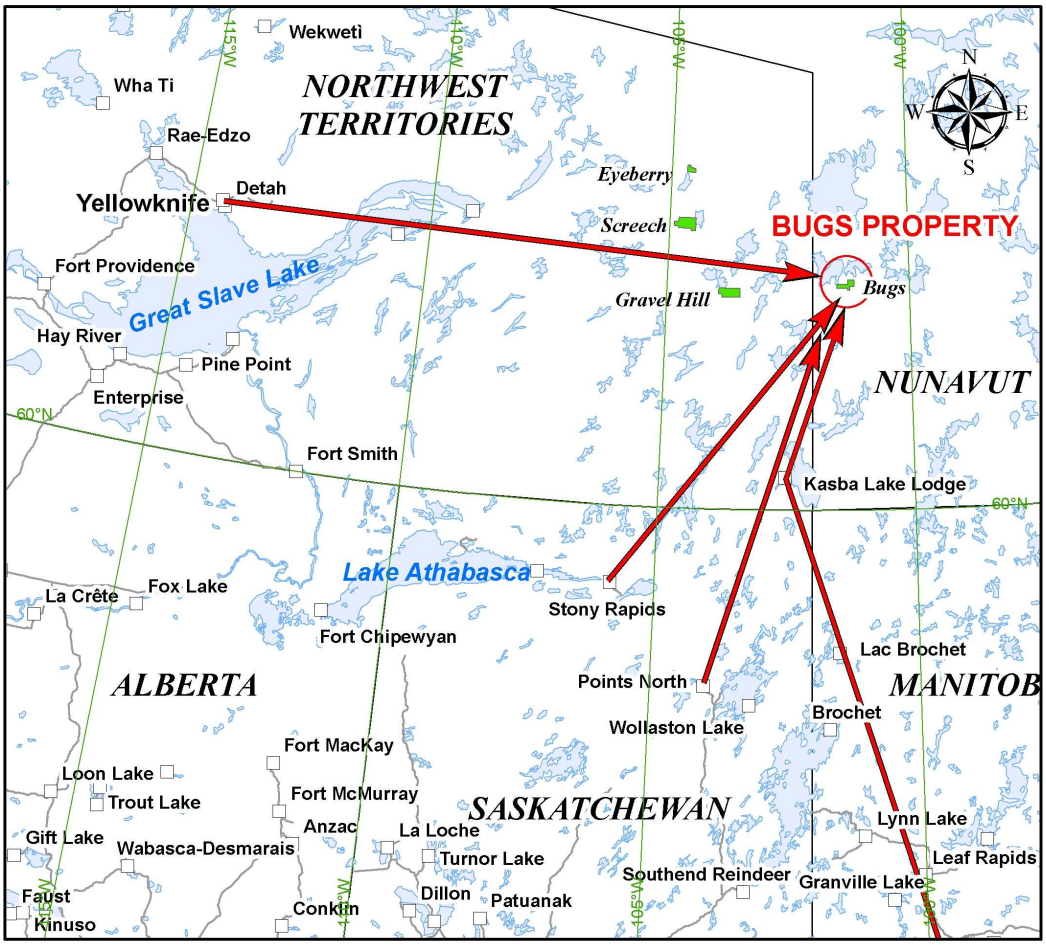
The purpose of Ur-Energy Inc. operations is to explore for uranium and uranium/thorium mineralization within the Bugs Property. The project is considered a grassroots or reconnaissance exploration program and may involve activities such as airborne and ground geophysics, radon surveys, prospecting, mapping; existing drill holes on the property will be surveyed and previously produced core will be sampled and analyzed. Surface rock sampling throughout the project area will also be undertaken and fresh bedrock samples will be collected through the use of a diamond drill.

All activities will take place within the boundaries of the Bugs claims as shown on the attached map, *Areas of Investigation*. The *Areas of Investigation* applies to 2008 exploration. The areas may subsequently change with new results or approaches.

After results obtained from the mapping/prospecting and ground radon surveys, programs are evaluated, a number of diamond drill targets (approximately 15 holes per year) will be identified.

The project site will be accessed from the south via routes through Stony Rapids (380 km) and Points North (450 km), Saskatchewan, through Winnipeg, Manitoba via Kasba Lake Lodge airstrip (NWT) (210 km), and occasionally through Yellowknife, NWT, as shown on the *Access Routes* map. These are the easiest, most economical supply routes to the Bugs Project.

Closest Nunavut communities are shown on the *Closest Communities* map below.



Projection - Lambert Conformable Conic

0 100 200

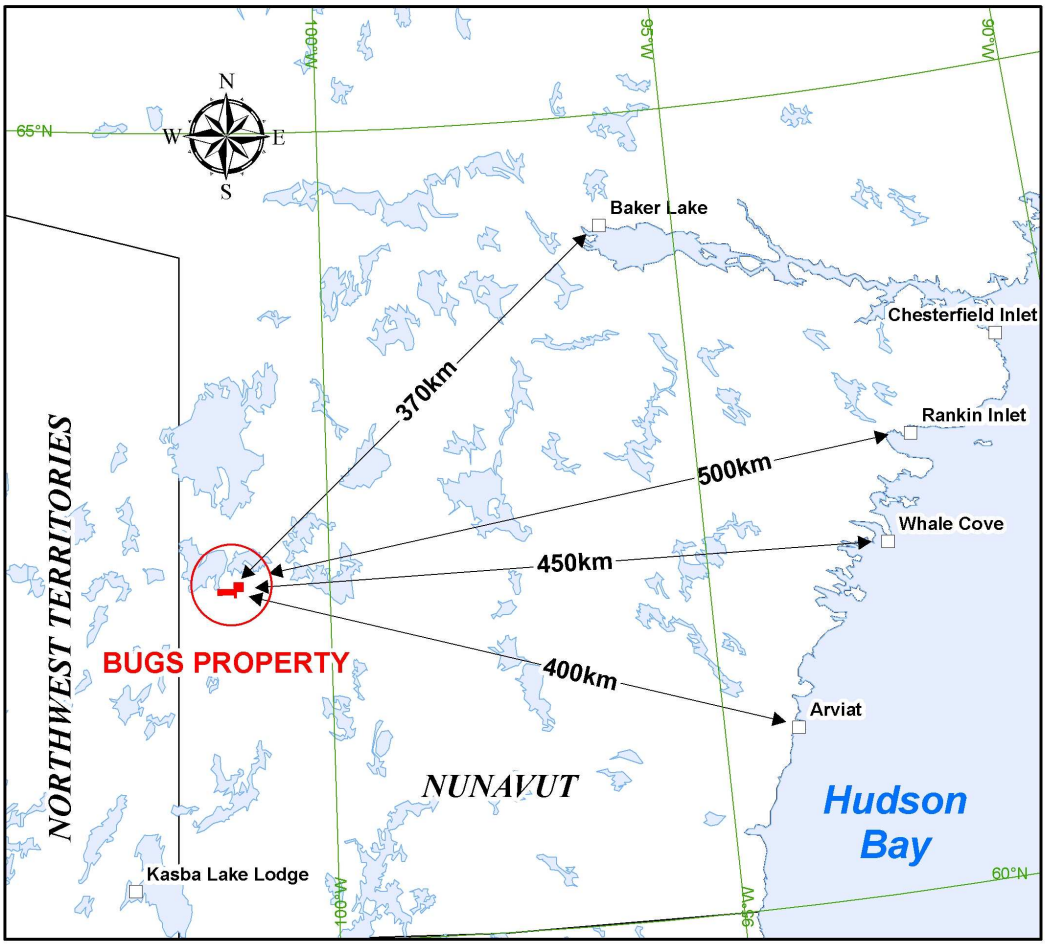
Kilometres

UR-ENERGY INC.

Bugs Lake Property, Nunavut

ACCESS ROUTES

NTS 64K/03 March 2008



Projection - Lambert Conformable Conic

0 100 200

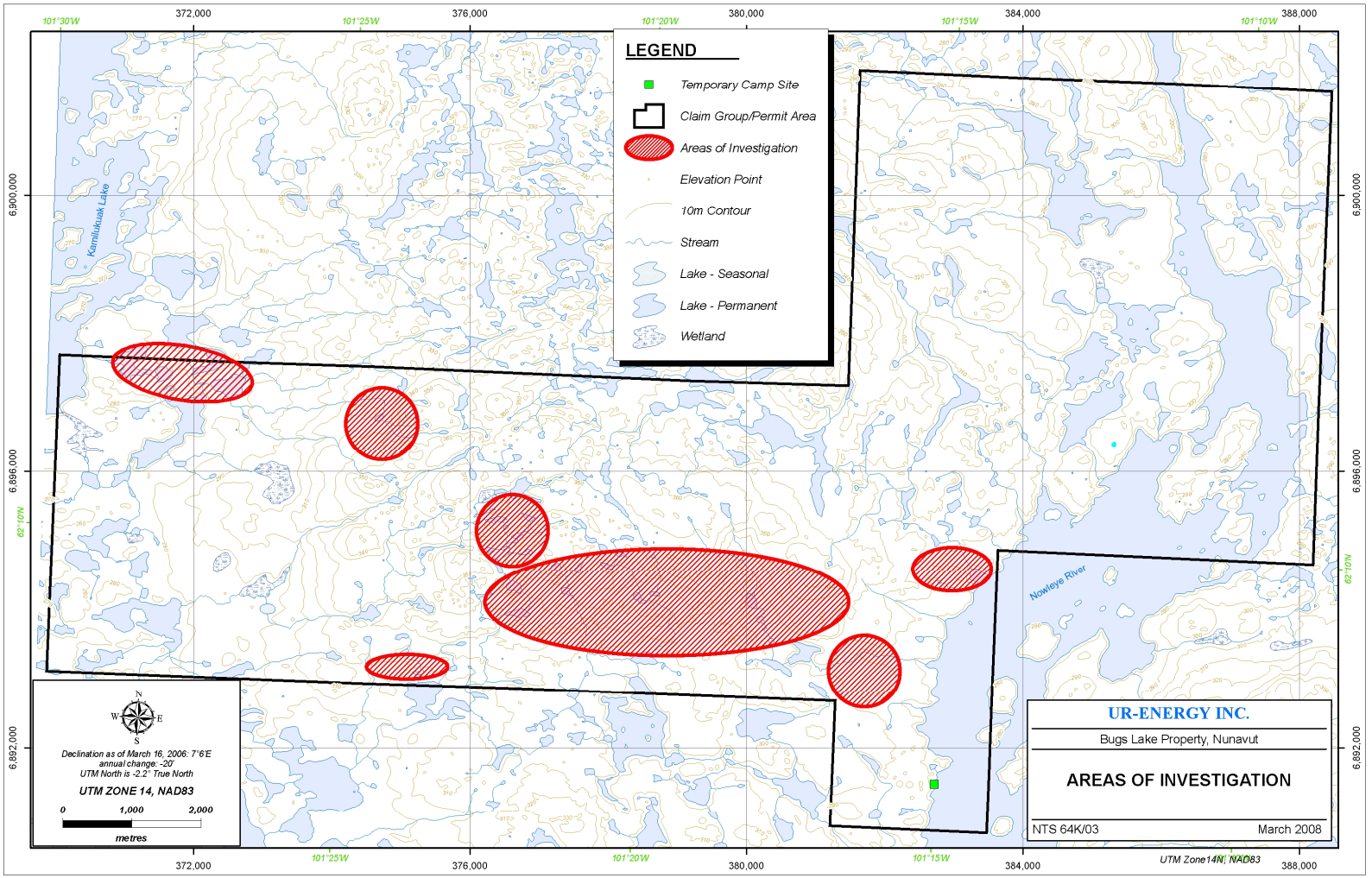
Kilometres

UR-ENERGY INC.

Bugs Lake Property, Nunavut

CLOSEST COMMUNITIES

NTS 64K/03 March 2008


LEGEND
Temporary Camp Site
Claim Group/Permit Area
Areas of Investigation
Elevation Point
10m Contour
Stream
Lake - Seasonal
Lake - Permanent
Wetland
Kamilukuak Lake
Nowleye River
101°30W
101°25W
101°20W
101°15W
101°10W
372,000
376,000
380,000
384,000
388,000
6,900,000
6,896,000
6,892,000
62°10'N
Declination as of March 16, 2006: 7°6'E
annual change: -20'
UTM North is -2.2° True North
UTM ZONE 14, NAD83
0
1,000
2,000
metres
UR-ENERGY INC.
Bugs Lake Property, Nunavut
AREAS OF INVESTIGATION
NTS 64K/03
March 2008
UTM Zone14N, NAD83

Radiation Safety at Uranium Exploration Projects

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.

Ur-Energy Inc. is registered with and has an active account with the National Dosimetry Services, Occupational Radiation Hazards Division of Health Canada (NDS). NDS provides Ur-Energy 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 Ur-Energy 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 Ur-Energy. Badges are replaced every three months.

General Radioactivity 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 report.

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.

Drilling Description

This is an early stage exploration program. The number of holes that will be drilled cannot be exactly pre-determined. We estimate that 15 holes will be drilled in 2008 for a total of 2,000m.

A light weight helicopter-portable drill will be used to obtain core samples of the bedrock. Each drill hole will be approximately 100-200 metres in depth and, as they are reconnaissance in nature, they may be widely spaced throughout the project area, but within the *"Areas of Investigation"*. The type of drill is not yet known, probably either the JKS 300 or the Versadrill kmB.4S.

The type of helicopters used will include the Bell 206B JetRanger for the prospecting/radon stage of the program, and either a Bell LongRanger or an Astar B2 for the drilling phase.

No land based drill holes will be located within 30 metres of the ordinary high water mark of any water bodies. The drill will be moved by helicopter between hole locations thereby minimizing the ecological footprint. All crews will also be shuttled daily between camp and work areas by helicopter. The foot print of each drill pad will be kept to a minimum size of approximately 10 metres by 10 metres. Pad construction will involve the placement of two parallel wooden timbers (6" x 6" x 10-12') onto the ground on which the frame of the drill and shack will be placed. The only ground clearing needed for this type of drill set-up will involve the removal of any larger, protruding boulders by hand and/or minor brush clearing. Absorbant matting will be used to collect any oils and lubricants which may be sourced from operating the drill. Drip trays will be used at all fuelling and refuelling areas. Once drilling at a particular site is completed the timbers will be removed for use at the next drill site. All used absorbant matting, garbage and fuel drums will be backhauled off the property and transported to Yellowknife, NWT or south to Stony Rapids or Points North, Sask. Where it will be disposed of in an approved disposal facility.

All drill cuttings, water return and sludge will be disposed of in a properly constructed sump or natural depression no closer than 30 metres from the ordinary high water mark of any waterbody.

The uranium or gamma radiation count for these sludges and drill cuttings will be monitored and properly managed. In the event that significant uranium mineralization is intersected in any drill hole, the Best Management Practises (BMP-010) developed for mineral exploration in Saskatchewan, and specific to uranium, will be implemented. In accordance with these Best Management Practices all drill cuttings containing >0.05% uranium (1000 counts per second on a calibrated scintillometer) will be placed back down the drill hole and the drill hole will be sealed with grout. Additionally, any drill hole intersecting uranium mineralization >1% over a length of >1 metre and with a percent concentration >5.0 will be grouted over the entire length of the mineralized zone and not less than 10 metres above or below each mineralized zone. All land based artesian holes (drill holes which produce water after completion) will be documented, plugged and sealed with grout. Saskatchewan's Best Management Practices – Drilling Operations and the Handling of Uranium Mineralization are found in the Appendix C.

If analysis of the geophysical results identify potential drill targets under water bodies, these targets will be drilled after sufficient ice has formed on these waterbodies. Similar to land base drill pads, described above, the drill will be placed and levelled on timbers. Absorbant matting will be used to collect greases and oils and drip trays will also be used at fueling and refuelling stations. The drill stem will be cased from the drill rig through the lake water and into bedrock. This is necessary for drilling accuracy and in order to allow for complete recovery of all drilling fluids. As is the case for all land base drilling any additives used in the drill fluids will be biodegradeable environmentally friendly additives. While drilling from the ice all drill fluids will be recirculated from the cutting face to a tank located near the drill on the ice. All drill cuttings collected in this mixing tank will be scanned for uranium content. If the uranium content of these sludges is >0.05% uranium the sludges will be disposed of in a land based sump no closer than 30 metres from the ordinary high water mark of any water body. If they contain >0.05% uranium they will be disposed of in a manner identical to that described for land based drilling. Only a limited amount of fuel necessary to support the drill will be located on the ice. This supply will be replenished from the nearest centrally located land based fuel cache on an as needed basis. All ice based holes will be sealed with grout below the lake bottom and all casing between the lake bottom and ice will be removed. If uranium mineralization is encountered from ice based drilling Saskatchewan's Best management Practice BMP-011 will be followed. BMP-011 is located in Appendix C of this application.

All core recovered from the diamond drilling will be transported to camp, where it will be logged and sampled. The core boxes will then be stored in core racks or cross stacked in piles not exceeding 1 metre in height. If uranium mineralization is present in the core the storage areas will monitored for radiation to ensure that radiation levels are below 1 microsevert per hour (uS/hr) at a distance of 1 metre from the core. At no time will the radiation levels of a core storage area be allowed to exceed 2.5 uS/hr.

Core Storage

A separate logging tent will be used at the camp for the handling and temporary storage of radioactive core having a uranium content typically no greater than 0.5 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 101 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.

Permanent core storage areas containing radioactive core will be appropriately labelled with radiation warning signs.

Spills

The uncontrolled or accidental release of any radioactive materials including drill mud solids and cuttings is considered a spill. All spills of radioactive materials will be appropriately reported and responded to in accordance with Ur-Energy's Spill Contingency Plan.

In the event of a spill, action will be taken immediately to contain the spill, limit the spread of contamination and control access to the spill area. Appropriate radiological and dosimetry monitoring will be performed to ensure worker doses remain safe. Mitigation procedures include collection of the radioactive materials and any required site remediation will be performed to reduce radiation levels to less than 1.0 μSv measured at 1 metre from the surface.

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. Ur-Energy agrees that this is a very sound and practical procedure, and insists on strictly adhering to this procedure. It is the responsibility of the Ur-Energy 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 as set out by Transport Canada's *Transport of Dangerous Goods Regulations*.
9. The attached summary of the above-entitled "Procedures for Handling and Logging of Radioactive Core" will be posted prominently at the camp (see Appendix 2).

SHIPPING

The shipping of radioactive materials (Class 7) from the Project site is controlled by the CNSC *Packaging and Transport of Nuclear Substances Regulations* and Transport Canada's *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 5μSv/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. Ur-Energy 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 will possess a certificate in the Packaging & Transport of Radioactive Materials.
The shipping procedure that will be followed is detailed in Appendix 3.

REFERENCES

Abandonment and Restoration Plan, Bugs Project, Nunavut, Ur-Energy Inc, January 2008.

Canadian Guidelines for the Management of Naturally Occurring Radioactive Materials (NORM), Minister of Public Works & Government Services Canada, 1st edition, Oct. 2000.

NIRB Part 2 Form – General Project Information Requirements & Project Specific Information Requirements (PSIR) - #08EN024, Bugs Project, Ur-Energy Inc., March 24, 2008.

Radiation Protection Guidelines for Uranium Exploration, Occupational Health and Safety, Saskatchewan Labour, no date indicated.

Spill Contingency Plan, Bugs Project, Nunavut, Ur-Energy Inc., January 2008.

APPENDIX 1

Emergency Contact Information
CONTACT TELEPHONE NUMBER

Environment Canada	(867) 669-4700, Fax (867) 873-8185
Environment Canada (24 hr pager)	(867) 820-5131
Environment Canada (Iqaluit)	(867) 975-4644
DIAND Land Use Inspector: Henry Kablatik	(867) 645-2831
Water Licence Inspection: Philip DePiso	(867) 360-6338
Air Tindi: Yellowknife	(867) 669-8212
Yellowknife Fire Department	(867) 873-2222
Stanton Regional Hospital – Yellowknife	(867) 920-4111
Discovery Mining Services	(867) 920-4600
Great Slave Helicopters	(867) 873-2081
Bugs Project Manager	Sat. Phone No. to be supplied
Ur-Energy Canada office: Paul Pitman	(905) 456-5436
Ur-Energy USA head office: Bill Boberg	(720) 981-4588

APPENDIX 2

Procedures For Handling And Logging Of Radioactive core and Radioactive Hand Core 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.

APPENDIX 3

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: %U3O8 = Contact Gamma Reading (uSv/h)/45 uSv/hr

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:
Specific Activity (kBq/kg) = 1478 x % U3O8

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.