Cameco Corporation
Nueltin Lake Project
Uranium Exploration Plan

Gerard Zaluski, P.Geo.
Cameco Corporation
August, 2008

Table of Contents

List of Figures

1.0 INTRODUCTION

This plan discusses the uranium-related safety and environmental procedures to be undertaken by Cameco Corporation during uranium exploration on the Nueltin Lake project of southern Nunavut. This covers personal safety, exploration and drilling procedures, remediation and reclamation, and monitoring. The intent is to protect workers during the exploration and to minimize impacts of uranium exploration on the environment.

The author of this report and primary contact for the project is:
Gerard Zaluski, District Geologist – Nunavut and Northwest Territories
Cameco Corporation
2121 11th Street West
Saskatoon, SK,
S7M 1J3
phone: (306)-956-6359
fax (306)-956-6390
e-mail gerard_zaluski@cameco.com

2.0 PROJECT LOCATION

The Nueltin Lake project of Cameco Corporation is located in southern Nunavut approximately 4 km north of the Manitoba border. As shown in Figure 1, it is approximately 345 km west-southwest of Arviat, the closest Nunavut community and 185 km northeast of Lac Brochet, Manitoba. The mineral claims and lease are shown in Figure 2 in comparison to the 1:50,000 NTS topography of mapsheets 65B/4 and 65C/1. The southwestern limit is 60°2'16"N, 100°10'50"W and the northeastern limit is 60°13'2"N, 99°49'22"W.

The project proposal relates entirely to mineral exploration on the mineral dispositions, since no camp or other infrastructure will be constructed. Facilities supporting the project are the Treeline Lodge of Nueltin Lake Lodge, in northwest Manitoba, approximately 35 km to the south.

The project consists of 35 dispositions surrounding Sandybeach Lake and lying adjacent to the western shore of Nueltin Lake (total area approximately 27,000 hectares). Numerous small lakes exist on the mineral claims and lease, as shown in Figure 2.

This plan as written specifically relates to the summer field program from June to July, 2008. The remediation, reclamation, and monitoring, however, will extend into the future as long as land use and water use permits are in place and as long as required by regulations.

3.0 SUMMER 2008 FIELD PROGRAM

The proposed field program will run from early June to late July, 2008 with exact dates depending on availability of equipment and drilling production rates. The program will consist of field mapping and prospecting on the claims for two weeks and a 1500-2500 m drill program employing one helicopter portable diamond drill. The objective of the program is to map the geology, identify occurrences of mineralization similar to the historic polymetallic U-Au mineralized boulders in the Sandybeach Lake area, and to drill test several of the known showings and geophysical targets.

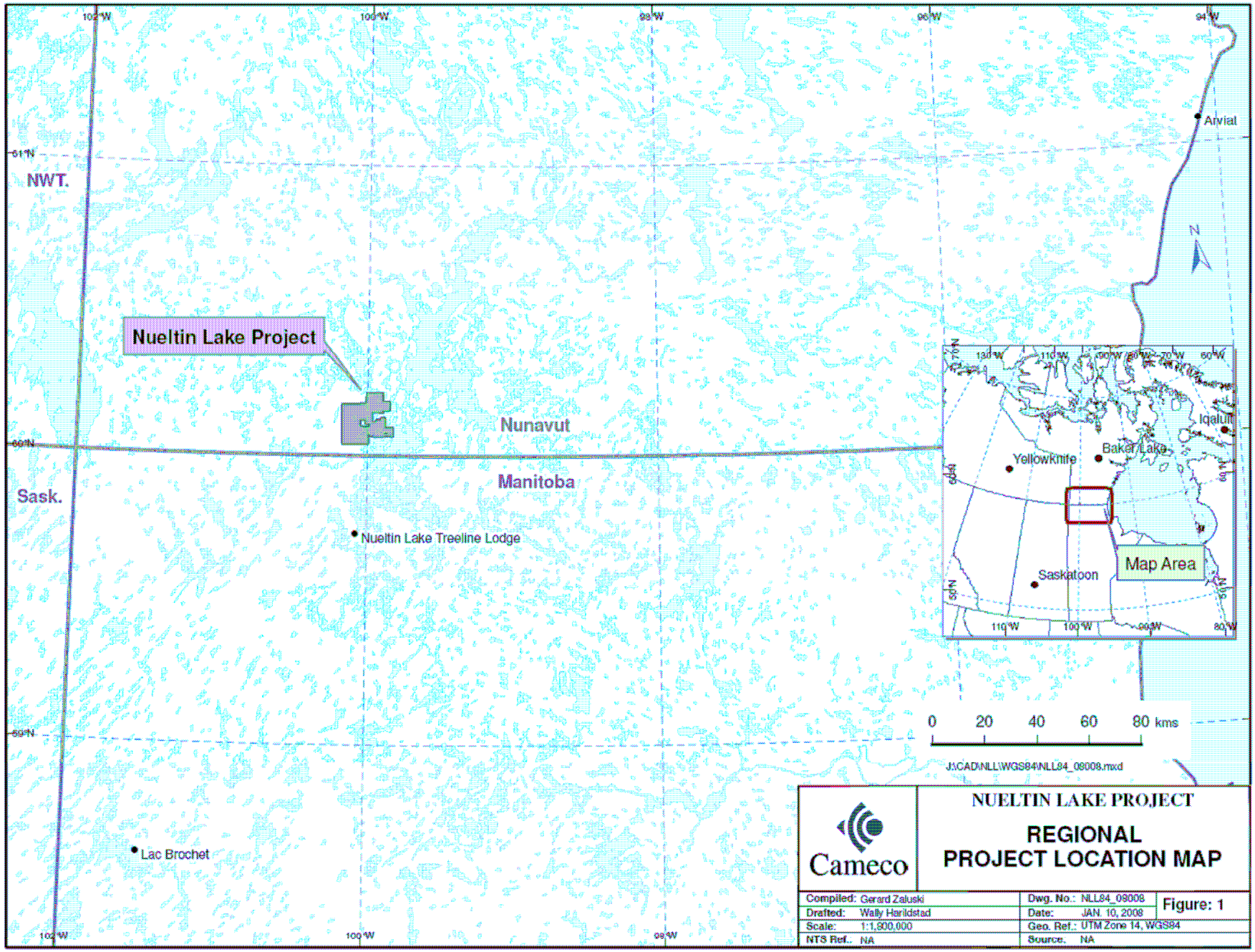

Figure 1. Location of the Nueltin Lake Project.

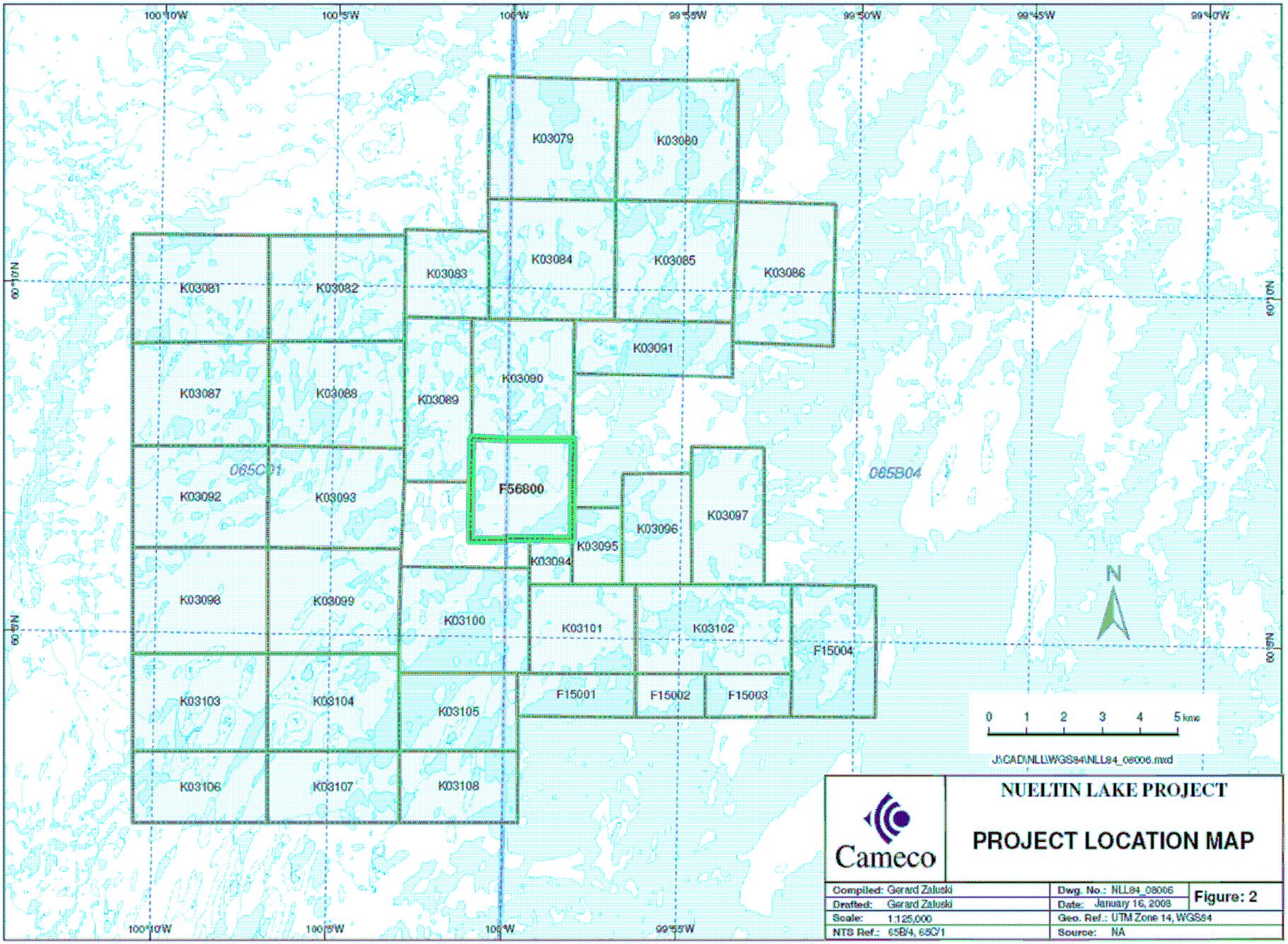

Figure 2. Nueltin Lake Project Claims and Mineral Lease.

4.0 RADIATION SAFETY

Throughout all exploration activities, all efforts are made to minimize the exposure of radiation to all people, minimizing inhalation, ingestion, and exposure to radiation generated from the radioactive decay of uranium. While exposure is generally very limited for most exploration activities, it may be significantly higher when uranium mineralization is encountered.

4.1 Training

Newly hired persons and summer students typically receive a presentation on radiation protection at the corporate or exploration office prior to beginning field work.

4.2 Radiation and Exposure

Radioactive decay of uranium results in three types of ionizing radiation: alpha, beta, and gamma radiation. Alpha decay liberates heavy charged particles (helium nuclei) that are readily stopped by thin, solid material including the skin. Beta particles are lighter charged particles that can penetrate greater thicknesses of body tissue. Exposure risks for these types of radiation are mainly related to internal exposure, including ingestion, inhalation, open wounds, and in the case of beta radiation, through the skin and eyes.

Gamma radiation has very high energy and can penetrate materials easily, thus external exposure can represent significant hazards. It is the greatest radiation hazard in uranium exploration. External exposure to radiation can be minimized by three factors: time, distance, and shielding. Exposure can be reduced by minimizing the time spent close to radioactive sources, increasing the distance from the source, and by shielding. The protective equipment and practices outlined in this manual are designed with these principles in mind.

4.3 Personal Protective Equipment

Workers exposed to uranium mineralization will use the following personal protective equipment (PPE) to minimize their exposure:

a) coveralls and gloves to protect and minimize the spread of radioactive dust
b) safety glasses to protect eyes from beta radiation
c) thermoluminescent dosimeter (TLD) badges to monitor exposure to radioactivity
d) radon detectors will be used in the core shack to monitor radiation exposure

4.4 Health and Safety Practices

In addition to using the PPE discussed above, the following practices will be adhered to when working with or around radioactive core or rocks:

a) wash hands with soap and water after handling radioactive material
b) no eating, drinking, or smoking when working near or handling radioactive materials

5.0 APPLICABLE REGULATIONS

As for any mineral commodity, all exploration activities must comply with the Territorial Land Use Act and Regulations as well as the Mine Health and Safety Act of the Northwest Territories and Nunavut. In addition, uranium exploration is also subject to the Canadian

Guidelines for the Management of Naturally Occurring Radioactive Materials (NORM) and the Canadian Nuclear Safety Commission (CNSC) for transportation of radioactive substances. This program also complies with the Exploration Radiation Safety Program of Cameco Corporation and the Cameco Emergency Response Plan.

6.0 URANIUM EXPLORATION PROCEDURES

6.1 Field Geology

Field mapping and prospecting for uranium will cover all claims on the property. These activities will cause negligible impact on the environment because they deal only with the identification of natural occurrences already exposed at the surface. Field crews will employ the use of appropriate personal protective equipment, including the use of TLD badges to monitor their radiation exposure.

6.2 Drilling

The proposed drilling sites are shown in Figure 3 along with the proposed water sources. Procedures employed in diamond drilling are designed: 1) to make the drilling process efficient; 2) minimize the impact on the environment with regard to cuttings, water usage, and radioactivity; 3) effectively reclaim the area to minimize the long term effects on the environment; and 4) to facilitate the inspection and monitoring of drill sites.

6.2.1 Drill Site Setup and Operation

Drill hole setups will be accurately located by GPS to facilitate later inspection and monitoring. Photos will be taken before and after drilling operation. Holes will be kept at least 30 m away from the ordinary high water mark of a water body. Because the project is located south of the treeline, permafrost will not be encountered and therefore no tundra-specific operating procedures will be needed.

6.2.2 Sumps and Cuttings Disposal

Sumps will be constructed to collect the drill waste including water, cuttings, and drilling additives. Where deemed necessary, mud tanks will be used to collect the majority of the cuttings prior to draining into the natural sumps. The sumps will be kept greater than 30 m from the normal high water mark of water bodies. Upon completion of the hole, cuttings will be backfilled into the drill holes or the sumps. Sumps will be scanned to ensure that gamma radiation is <1 μSv/h. The sumps will then be filled and levelled. Radioactive cuttings and/or soil will be collected and stored in the long-term radioactive core storage facility (using appropriate containment) or transported to a Cameco minesite in Saskatchewan (Rabbit Lake) for disposal.

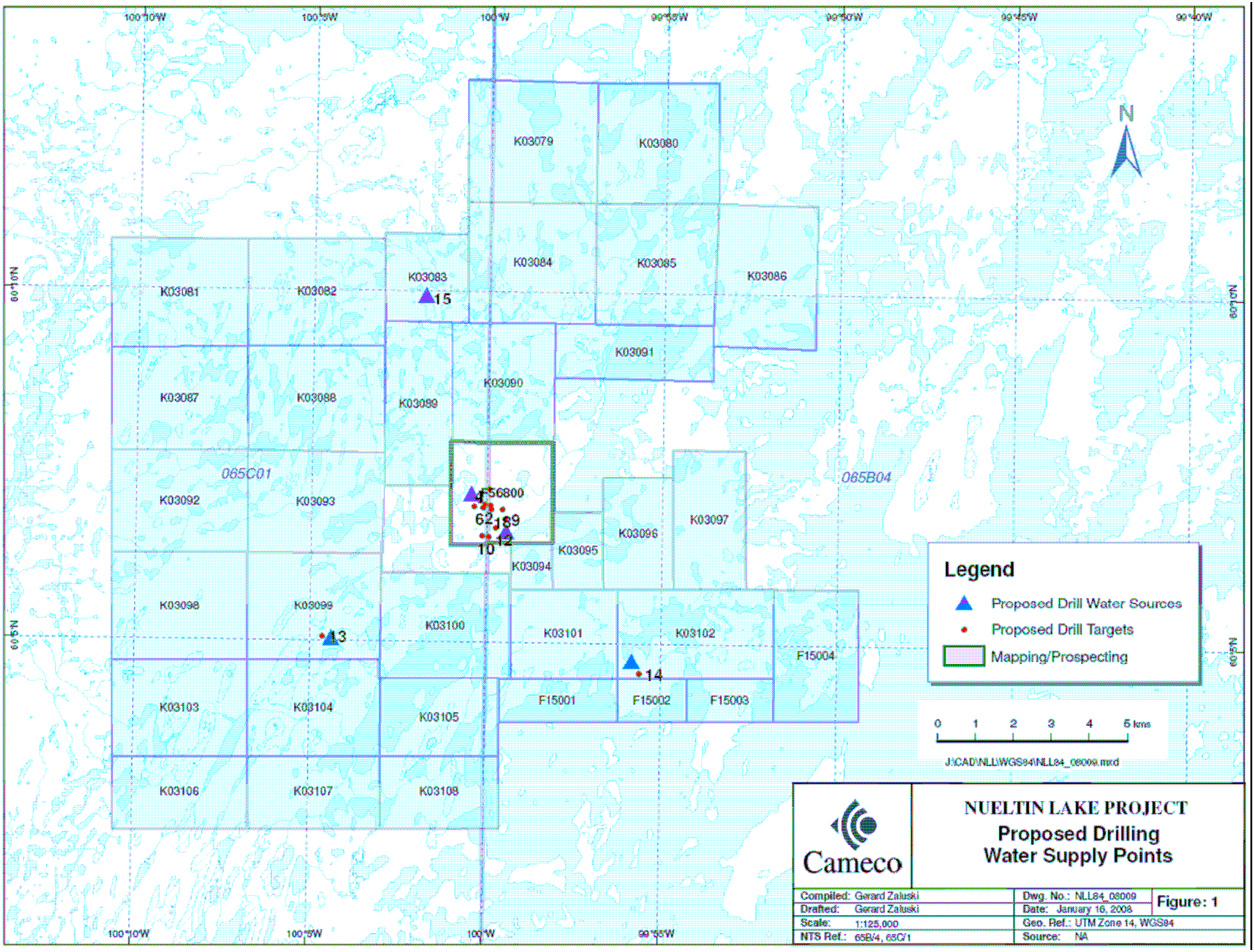

Figure 3. Proposed Drilling Sites and Drill Water Sources.

6.2.3 Radioactivity

Drill mud solids and cuttings with a uranium concentration greater than 0.05% U_3O_8 will collected and backfilled down the drill hole. Any drill hole with mineralization greater than 1.0% U_3O_8 over 1.0 m and > 5.0 m% will be sealed by grouting throughout the mineralized interval (at least 10 m above and below). If high grade mineralization is encountered, a Poly Drill recycling system may be used to collect the radioactive cuttings, which will then be shipped to a Cameco minesite for disposal.

6.2.4 Spills

Uncontrolled or accidental release of radioactive materials such as radioactive muds and cuttings is considered a spill. Such occurrences will be treated according to the Hazardous Materials Spill Contingency Plan. If a radioactive spill takes place the materials will be collected and the site remediated to reduce the radioactivity to 1 μSv/h above background at a height of 1 m.

6.2.5 Water Supply

Water for drilling will be sourced from nearby water bodies (creeks or lakes) and no hole will be sited within 30 m of the normal high water mark of a water body. Water will be recycled where feasible and disposed of in sumps.

6.2.6 Drill Hole Shutdown and Remediation

Upon completion of the drilling, casing will be removed or cut off at ground level. Drill holes will be sealed by cementing the top 30 m of the bedrock. Mineralized intervals will also be cemented as discussed above.

6.2.7 Monitoring

Drill hole collars will be located using GPS and photos will be taken of each site before and after drilling to aid in monitoring restoration. Sites will be all checked upon completion to ensure they have been fully cleaned up and restored.

6.3 Core Logging

The core shack where the drill core is logged will be well ventilated and monitored for radon. Workers will wear appropriate personal protective equipment when working with mineralized core, including gloves, safety glasses, and a TLD badge.

6.3.1 Logging of Radioactive Core

Drill core with radioactivity >25 μSv/h, or with a uranium content greater than 0.5%U_3O_8 over 1 m will be logged in a 'hot tent' at least 30 m away from other structures. The hot core pile will have a placard noting that it is a radioactive area with >25 μSv/h. The hot tent will be well ventilated and monitored for radiation.

When this facility is used the date, time, and gamma level at 1 m are recorded in a logbook. A logbook will be used to record the date and time when mineralized core is brought into or taken out of the shack. Mineralized core is only allowed to remain in the core shack for 48 hours. A sign warning of

radiation will be placed on the core shack door when radioactive core is inside.

7.0 CORE STORAGE

The storage and disposal of radioactive core and samples will be done in accordance with the Cameco Corporation Exploration Radiation Safety Program procedures and the Saskatchewan Mineral Industry Environmental Protection Regulations (1996). Long term storage of radioactive core must be located at least 30 m from the main camp and greater than 100 m from the high water line of water bodies.

Drill core will not be stored on site. All core will be removed to the floatbase camp at the Treeline Lodge of Nueltin Lake Lodge, MB where it will be logged and stored. The core storage is located by the airstrip, approximately 200 m away from the water and accommodations. Non-radioactive core will be stacked or stored in racks.

In the event that radioactive core is encountered, a long term core storage facility for radioactive core will be established and will be placarded with radioactive warning signs. Core boxes with radioactive core will be stored with properly secured lids of wood or Plexiglas. Gamma radiation levels at long term core storage facilities shall not exceed 1.0 μSv/h measured 1 m from the surface and in no instance shall exceed 2.5 μSv/h. Core exceeding this radioactivity will be removed to a Cameco minesite for storage or disposal.

8.0 TRANSPORTATION OF RADIOACTIVE MATERIAL

The transportation of uranium mineralization with an average specific activity >70 kBq/kg conform to the requirements of the Packaging and Transportation of Nuclear Substances Regulations. All personnel shipping radioactive substances must be properly certified according to the Transportation of Dangerous Goods Regulations (TDG). Radioactive drill core and rock samples must be shipped according to these regulations, depending on the radioactivity. Exploration camps have an exemption to the TDG in that core can be moved by air providing the core is <100 mm in diameter and is packaged according to the Packaging and Transport of Nuclear Substances Regulations (section 12.11 of the TDG). This packaging requirement includes the use of IP-2 packaging if samples average more than 2% uranium. Should radioactive materials with specific activity meeting LS-1 provisions be encountered and shipped, this project will be included in the Cameco Emergency Response Plan.

9.0 RECLAMATION AND REMEDIATION

Using the precautions outlined above for exploration diamond drilling, no additional reclamation should be required. However, in the event that sumps at mineralized holes are found to contain cuttings with radioactivity above the accepted threshold, these will be removed, along with any contaminated soil, and transported to a Cameco mine or mill site for disposal. Any spillage or radioactive core, cuttings, or water will be removed in a similar manner. The affected sites will be remediated to an acceptable condition.

10.0 MONITORING AND INSPECTION

10.1 Drill Sites

Cameco will undertake progressive restoration of all drill sites, to restore each site to its natural state as soon as possible. This is discussed in greater detail in the abandonment and restoration plan, which includes provisions related to uranium exploration and radioactivity. The sites will be located by GPS and monitored until

they have been fully rehabilitated, including the removal of all drilling supplies and wastes, remediation of the surface disturbance, and monitoring of the radioactivity. All drill sites will be checked to ensure that the radiation dose rate is less than 1 μSv/h above background at a height of 1 m. Once all requirements have been met, the site will be considered remediated. The status of the sites and the locations will be available for Cameco staff as well as regulatory inspectors.

10.2 Core Storage

The core storage area will be monitored regularly to ensure that radiation levels are kept at acceptable levels. This monitoring will continue as long as radioactive materials are present on site.

11.0 SUMMARY

This plan outlines the procedures that will be used by Cameco to minimize hazards posed by uranium exploration to both workers and the environment. Personal protective equipment will be used to minimize radiation ingestion, inhalation, and absorption. Monitoring will also be used to measure radioactive doses received.

According to this plan, drilling practices will collect radioactive cuttings, mud, and water to minimize its effect on the environment. The holes will be cemented through radioactive intervals and the tops of the holes as required by regulations. Any radioactive spills or contamination will be remediated and reclaimed, with monitoring as long as required until it reaches an acceptable level.

Core storage will involve monitoring the core facility to ensure that radiation levels are kept to acceptable levels. If highly radioactive core is encountered, it will be logged and stored in separate 'hot' facilities. These sites will be operated and monitored according to regulations to ensure a minimum impact to the environment or people.