Forum Energy Metals Corp.
Nunavut Uranium Project
Uranium Exploration Plan

May, 2022

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1.0 INTRODUCTION

This plan discusses the uranium-related safety and environmental procedures to be undertaken by Forum Energy Metals Corp., during uranium exploration on the Nunavut Uranium Project in the Kivalliq Region of 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 primary contact for the project is:

2.0 PROJECT LOCATION

The Nunavut Uranium Project of Forum Energy Metals Corp. is in the Kivalliq Region of Nunavut. As shown in Figure 1, the area is located approximately 90 km west of Baker Lake and 320 km northwest of Rankin Inlet. Forum Energy Metals Corp. consists of mineral claims totaling 10,590 hectares of 100% Forum-owned claims mineral claims. Mineral claims are on Crown Land, and Inuit owned land surface (IOL) including parcel BL-31. The minerals claims are on NTS maps sheets 66A04 to 66A07, 66A10 to 66A12, 66B01, 660B02, 66B07 and 66B08. (Figure 1)

In 2022, while based out of Baker Lake, a thirty-day program includes determination of a preferred location on Crown Land or BL-31 for a 20–30-person temporary camp, and ground geophysics and examining historic core. An airborne geophysical survey may also be conducted over a selective area.

In 2022, Forum is proposing to bring supplies, equipment, and fuel in by barge to Baker Lake and transporting these to the preferred campsite for camp construction via overland haul in the spring of 2023. Following camp construction Forum will commence exploration activities including a core drilling and/or reverse circulation drill campaign as well as further ground geophysics, geological mapping, prospecting, and rock sampling. Core or reverse-circulation drilling may be conducted in selected areas of IOL parcels BL-31 or Crown Land.

This plan relates to the proposed summer field program from May to October 2023 but similar practices will be employed in future programs. Remediation, reclamation, and monitoring 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 2023 FIELD PROGRAM

The proposed field program will run from early May to early October 2023 with exact dates depending on weather, budgets, and drilling production rates. The program will consist of between 8,000 and 15,000 m diamond drilling program employing 2 to 3 helicopter portable diamond drills, a small component of field mapping and prospecting on the claims, and ground and potentially airborne geophysical surveys.

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

All employees and contractors receive a presentation on radiation protection at the exploration site 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.

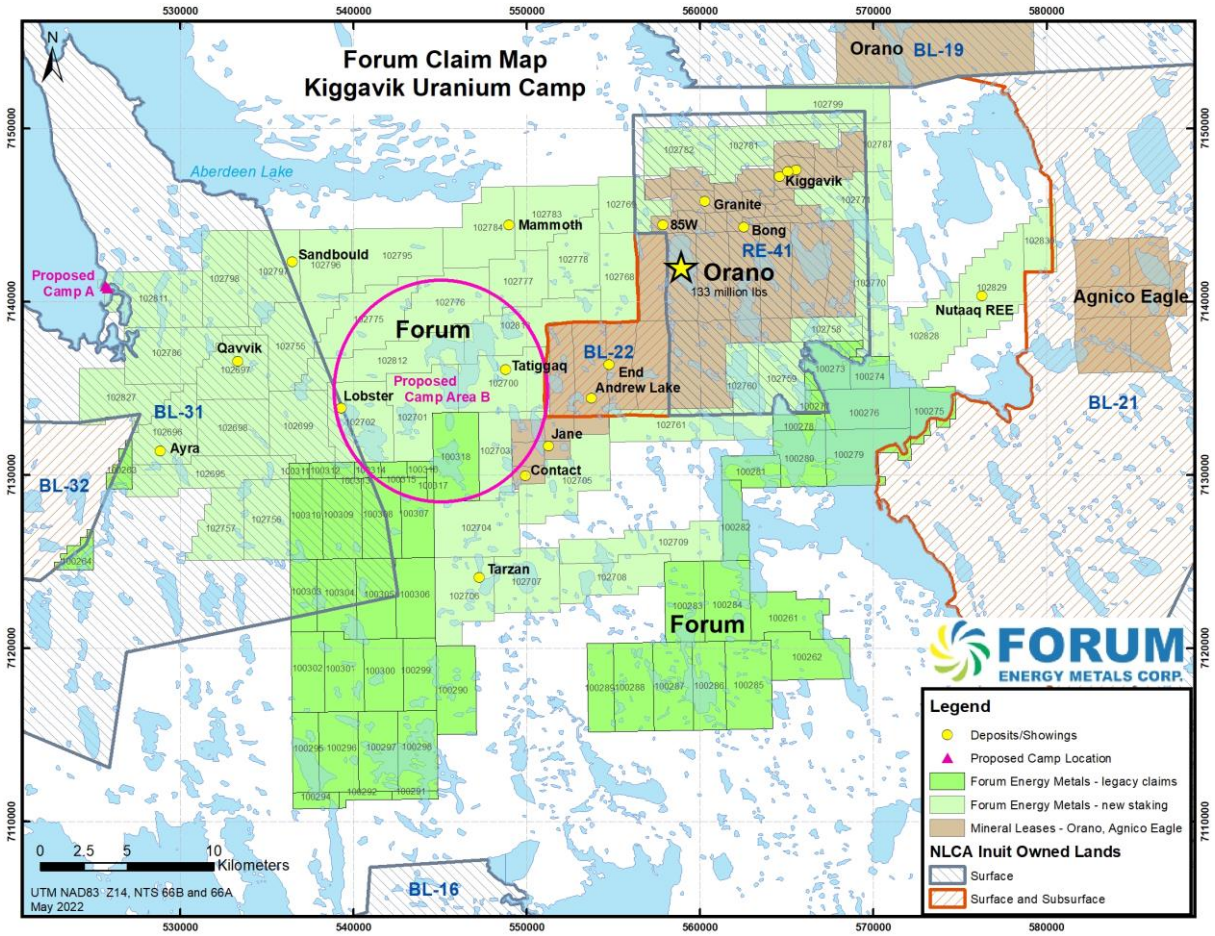
Gamma radiation has very high energy and can penetrate materials easily, thus external exposure can represent significant hazards. It is the greatest radiation hazard in uranium exploration. External exposure to radiation can be minimized by three factors: time, distance, and shielding. Exposure can 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

Figure 1. Location of the Nunavut Uranium Project.
Figure 1. Mineral Claims of the Nunavut Uranium Project.



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.

6.0 URANIUM EXPLORATION PROCEDURES

6.1 Field Geology

Field mapping and prospecting for uranium may 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 Field Geophysics

Field geophysical surveys will consist of ground gravity or resistivity measurements taken at detailed (25 to 100 m) stations spacings over areas of interest and regional (500 m) scale surveys over the majority of the projects. Field crews are not exposed to radioactivity in these surveys, therefore protective measures need not be employed. Gravity surveying consists of only measuring location and the natural gravitational field strength at the stations and is therefore has no impact to the environment requiring remediation or monitoring.

6.3 Drilling

(This section will be updated once drill targets and water sources have been identified)

The proposed drilling sites are shown in Figure 2 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.

6.3.1 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. The drill and associated equipment will be moved with a helicopter to minimize the impact on the environment. When drilling through permafrost, coil heaters and/or salt will be used to prevent the drill rods and hole from freezing. The depth to the base of the permafrost will be recorded and supplied to the Nunavut Water Board.

6.3.2 Sumps and Cuttings Disposal

Sumps will be constructed to collect the drill waste including water, cuttings, and drilling additives. Where they are 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. To avoid the difficulties involved with long term storage of highly radioactive core on the property, the Company will ship the mineralized intersections, with greater than the minimum radiation levels stated above, in their entirety to the Saskatchewan Research Council laboratory in Saskatoon. The core will in all probability undergo further testing and any remnants will be stored in the laboratory's approved radioactive materials storage facility.

6.3.3 Radioactivity

Drill mud solids and cuttings with a uranium concentration greater than 0.05% U_3O_8 will be collected using a recycling system (discussed below) or 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 cuttings collection, recycling system may be used to collect the radioactive cuttings, which will then be shipped to the Saskatchewan Research Council laboratory in Saskatoon. Radiation levels affecting drill crews will be monitored using TLD badges.

6.3.4 Spills

Uncontrolled or accidental release of radioactive materials such as radioactive muds and cuttings is considered a spill. 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.

6.3.5 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.

6.3.6 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.

6.3.7 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.

6.3.8 Core Logging

The core shack where the drill core is logged is located at the exploration camp and 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 TLD badges.

6.4 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

A separate logging tent will be used at the camp for handling and temporary storage of radioactive core having a uranium content greater than 1.0 percent over a length of more than 1.0 meter. 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 must be a minimum of at least 30 meters away from 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. Additionally, radiation levels must be reduced to less than 1.0 uSv/h measures at 1 meter from the surface and in no instance will the level be allowed to exceed 2.5 uSv/h.

To avoid the difficulties involved with long term storage of highly radioactive core on the property, the Company will ship the mineralized intersections, with greater than the minimum radiation levels stated above, in their entirety to the Saskatchewan Research Council laboratory in Saskatoon. The core will in all probability undergo further testing and any remnants will be stored in the laboratory's approved radioactive materials storage facility.

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 Forum Energy Metals Corp. 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 the long-term radioactive core storage facility to the Saskatchewan Research Council. 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

Forum Energy Metals Corp. 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 Forum Energy Metals Corp. 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 Forum Energy Metals Corp. 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.