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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No: 2BE-KIG2328 / Renewal

February 17, 2023

Stephanie Forseille
Orano Canada Inc.
100-833 45th Street West
Saskatoon SK S7L 5X2

Email: stephanie.forseille@orano.group

RE: NWB Renewal Water Licence No: 2BE-KIG2328 – Kiggavik Project

Dear Ms. Forseille:

Please find attached Licence No: **2BE-KIG2328** issued to Orano Canada Inc. by the Nunavut Water Board (NWB or Board) pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada (Nunavut Agreement)*. The terms and conditions of the attached Licence related to the use of Water and the deposit of Waste are an integral part of this approval.

If the Licensee contemplates the renewal of this Licence, it is the responsibility of the Licensee to apply to the NWB for its renewal. The past performance of the Licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the Licence renewal. Note that if the Licence expires before the NWB issues a new one, then Water use and Waste disposal must cease, or the Licensee may be in contravention of the *Nunavut Agreement and the Nunavut Waters and Nunavut Surface Rights Tribunal Act (Act)*. However, the expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence. The NWB recommends that an application for the renewal of this Licence be filed at least **three (3) months** prior to the Licence expiry date.

It should be noted that in accordance with Section 75(1)(a) of the *Nunavut Planning and Project Assessment Act (NuPPAA)*, the Board is not allowed to issue a permit or authorization for any project proposal that has not been submitted to the Nunavut Planning Commission (NPC) in accordance with Section 76 of *NuPPAA*.

If the Licensee contemplates or requires an amendment to this licence, the NWB may decide, in the public's interest, to hold a public hearing. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process and timing may vary depending on the scope of the amendment, however, a minimum of **sixty (60) days** is required from time of acceptance by the NWB. It is the

responsibility of the Licensee to ensure that all application materials have been received and are acknowledged by the Manager of Licensing.

The NWB strongly recommends that the Licensee consult the comments received from Crown-Indigenous Relations and Northern Affairs Canada (CIRNA) and Fisheries and Oceans Canada (DFO) on issues identified. This information is attached for your consideration.¹

Sincerely,

Lootie Toomasie
Nunavut Water Board,
Chair

LT/as/rh

Enclosure: Renewal Licence No: **2BE-KIG2328**

Comments – CIRNA, DFO

Cc: Distribution List – Kivalliq

¹ Crown-Indigenous Relations and Northern Affairs Canada (CIRNA), January 6, 2023 and January 30, 2023; and Fisheries and Oceans Canada (DFO), January 5, 2023.



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DECISION

LICENCE NUMBER: 2BE-KIG2328

This is the decision of the Nunavut Water Board (NWB or Board) with respect to an application dated November 29, 2022 for a renewal of a Water Licence made by:

Orano Canada Inc.

to allow for the use of Water and deposit of Waste in support of camp operations and activities related to exploration including land-based diamond drilling, prospecting, geological mapping, and geophysical surveys to further evaluated mineral deposits, and potential studies to support mine development at the Kiggavik Project, located in the Kivalliq Region of Nunavut, at the following general geographical coordinates:

Project Extents:

Latitude: 64° 39' N	Longitude: 97° 59' W
Latitude: 64° 39' N	Longitude: 97° 20' W
Latitude: 64° 17' N	Longitude: 97° 20' W
Latitude: 64° 17' N	Longitude: 97° 59' W

Camp Location(s):

Latitude: 64° 26' N	Longitude: 97° 39' W
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DECISION

After having been satisfied that the Application is for a proposal that was previously reviewed by the Nunavut Planning Commission (NPC) for which the conformity determinations, dated December 15, 2006 and December 14, 2017, remain applicable, and that the activities were previously screened by the Nunavut Impact Review Board (NIRB file No.: 06AN085 on April 3, 2007 and August 30, 2007), and that the NPC determine¹ on November 4, 2022 that this project proposal is exempt from the *Nunavut Planning and Project Assessment Act* (NuPPAA) under section 235 of that Act, the NWB decided that the application could proceed through the regulatory process. In accordance with s. 55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (NWNSRTA or Act) and Article 13 of the *Nunavut Agreement*, public notice of the Application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and considering the representations made by interested persons the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *Nunavut Agreement* and of the Act, waived the requirement to hold a public hearing, and determined that:

¹ Nunavut Planning Commission (NPC) Conformity Determination, November 4, 2022.

Licence No: 2BE-KIG1823 be renewed as Licence No: 2BE-KIG2328 subject to the terms and conditions contained therein. (Motion #: 2022-B1-019)

Signed this 17th day of February, 2023 at Gjoa Haven, NU.

Lootie Toomasie
Nunavut Water Board, Chair

LT/as/rh

I. BACKGROUND

The Kiggavik Project (Project) is a uranium surface exploration project located approximately 80 kilometers west of the Hamlet of Baker Lake. The Project consists of the Kiggavik lease, which contains the Kiggavik site to the north and the Sissions site to the south, as well as the St. Tropez lease, located to the north of the Kiggavik site. The site has been in care and maintenance since 2016.

In the near term, Orano Canada Inc. (Orano or Applicant or Licensee) intends to keep the Project in care and maintenance phase with no active field work planned. During the care and maintenance phase the Applicant intends to inspect the site every five years, at a minimum, to ensure the camp and storage areas remain in good condition. The next planned site maintenance and inspection visit is planned for 2024.

Orano has stated that if economic conditions become more favorable in the future, they will evaluate increasing the exploration activity on the Kiggavik Project.

The potential site activities for this renewal remain the same as those approved in previous Water Licence No: 2BE-KIG1823. These include prospecting, geological mapping, ground geophysical surveys, environmental baseline studies and diamond drilling, both exploration and geotechnical.

II. PROCEDURAL HISTORY

On **November 29, 2022**, the NWB acknowledged receipt of the Water Licence Application (Application) from Orano Canada Inc. (Orano or Applicant or Licensee). The following documents were submitted by the Applicant:

- Orano Kiggavik Exploration Cover Letter
- Project Summaries in English and Inuktitut
- Renewal Application Form
- Application Fee and Water Use Fee Deposit: \$60.00
- Spill Contingency Plan
- Abandonment and restoration Plan
- Waste Management Plan
- Noise Abatement Plan
- Wildlife Monitoring and Mitigation Plan
- Radiation Protection Plan
- Uranium Exploration Plan

On **November 30, 2022**, the NWB concluded that the Application generally met the requirements of section 48(1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (NWSRTA or Act)* and forwarded notice of the Application to interested parties. All parties were invited to make representations to the NWB by **January 9, 2023**.

Submissions were received from Crown-Indigenous Relations and Northern Affairs Canada (CIRNA) on January 6, 2023 and Fisheries and Oceans Canada (DFO) on January 5, 2023. The

NWB received responses from the Applicant on **January 26, 2023**. On January 30, 2023, CIRNA requested further clarifications to some of their concerns which were not fully answered by the Applicant. On **February 8, 2023**, the Applicant submitted further responses. On **February 9, 2023**, CIRNA advised that all their concerns were resolved.

The NWB has placed in its Public Registry copies of the Application and all comments received from Interveners. This information can be accessed on the NWB's FTP site using the following link:

<ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2B/2BE%20-%20Exploration/2BE-KIG1823%20Orano%20Canada%20Inc/1%20APPLICATION/2023%20Renewal>

III. FILE HISTORY

The NWB issued the initial licence, Licence No: 2BE-KIG0708, for the project on May 9, 2007. The Licence, which expired on May 31, 2008, allowed for the use of forty (40) cubic metres of water per day in support of exploration activities including a land-based drilling program.

The licence was renewed as Licence No: 2BE-KIG0812 on April 25, 2008 with the expiry date set for December 31, 2012. The renewed licence allowed for the use of one hundred and ten (110) cubic metres of Water per day for domestic purposes and land-based drilling activities (5 cubic metres per day for domestic purposes and 105 cubic metres per day for drilling).

On August 5, 2008, Amendment No. 1 was issued to Licence No: 2BE-KIG0812 to allow for an increase in the volume of water from one hundred and ten (110) cubic metres per day to three hundred (300) cubic metres per day – two hundred and ninety-five (295) cubic metres per day for drilling and five (5) cubic metres per day for domestic use.

Amendment No. 2 to Licence No: 2BE-KIG0812 was issued on March 18, 2009 to allow for delineation, in-fill, and geotechnical drilling within thirty-one (31) metres of the ordinary High Water Mark within the End Grid Lake area as identified in the application received October 9, 2008. Additional monitoring and spill contingency planning requirements were also included as conditions under the amendment.

Amendment No. 3 to Licence No: 2BE-KIG0812 was issued on July 27, 2009 to allow for the reallocation in the water volume used for domestic purposes, while restricting the total volume of water allowed for use under the Licence to three hundred (300) cubic metres per day. The water use for domestic purposes was increased from five (5) cubic metres per day to ten (10) cubic metres per day while water use for drilling purposed was decreased from two hundred and ninety-five (295) cubic metres per day to two hundred and ninety (290) cubic metres per day.

Amendment No. 4 was issued on April 1, 2010 to allow for land-based drilling within thirty-one (31) metres of the ordinary High-Water Mark at the End Grid Lake and the proposed Thelon River and on-ice drilling at the proposed Thelon River Crossing for the purpose of gathering geotechnical data. Additional conditions for monitoring were also included in the amendment. This amendment, however, was rescinded by the Board on May 13, 2010. Subsequent to the

Board's rescinding Amendment No. 4, the proponent requested that the NIRB suspend processing of the associated NIRB application for the project.

Amendment No. 5 was issued on July 15, 2011 to allow for land-based drilling during low flow artesian conditions as well as drilling within thirty-one (31) meters of the ordinary High Water Mark within the Andrew Lake and Mushroom Lake areas.

Amendment No. 6 was issued on March 14, 2012 to allow for the Licensee to conduct land-based drilling operations during low flows artesian conditions within all areas encompassed by the Kiggavik lease while disallowing drilling within thirty-one (31) metres of the High Water Mark within the Andrew Lake and Mushroom Lake areas.

The Licence was renewed for a third time as Licence No: 2BE-KIG1318 on June 14, 2013 with the expiry date set for June 13, 2018. The renewed licence allowed for the use of three hundred (300) cubic metres per day for domestic purposes and land-based drilling activities (10 cubic metres of water per day for domestic purposes and 289 cubic metres per day for drilling).

Amendment No. 1 to Licence 2BE-KIG1318 was issued on June 3, 2015 to allow for exploration activities to be undertaken in both the Kiggavik and the St. Tropez areas.

The Licence was renewed for a fourth time as Licence No: 2BE-KIG1823 on June 14, 2018 with an expiry date of June 13, 2023. The renewed licence allowed for the use of two hundred and ninety-nine (299) cubic metres of water per day for all purposes.

IV. GENERAL CONSIDERATIONS

The following sections provide background information relevant to the terms and conditions included in this Licence, in the context of submissions received and/or the Board's rationale.

Term of the Licence

In accordance with s. 45 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (*NWNSRTA* or *Act*), the NWB may issue a licence for a term not exceeding twenty-five (25) years. In determining an appropriate term for a renewal licence, the Board generally takes into consideration several factors including Interveners' comments, the Licensee's compliance history, as well as the rationale contained in the application.

The Licensee requested in its Application, a five (5) year term for the licence. The Interveners in their submissions did not comment on the term requested. The Board, in examining the completeness and thoroughness of information within the Application, felt that a five-year term was appropriate. The Board has therefore granted the term requested by the Licensee. In so doing, the Board believes and expects that the **five-year term** will provide the Licensee with significant opportunities to consistently abide by the terms and conditions in the Licence over time and provide ongoing compliance record prior to a need for renewal.

Annual Reports

Under Part B, Item 2 of the Licence, the Licensee is required to submit Annual Reports for the purpose of ensuring that the NWB has an accurate annual update of activities related to water use and deposit of waste during each calendar year. This information is maintained on the Public Registry and is available to interested parties upon request. A “Standardized Form for Annual Reporting” is to be used by the Licensee and is available from the NWB FTP site under the Public Registry link at the NWB Website:

<ftp://ftp.nwb-oen.ca/other documents/Standardized Forms/>

Water Use

In the Application, Orano has requested a water usage of up to 299 m³ per day, which is the same as that of the existing Licence. The allocation is 289 m³ for drilling and 10 m³ for domestic (camp) usage. Water for drilling activities will be obtained from sources proximal to the drilling targets. No concerns were expressed by the Interveners with respect to the requested freshwater amount, or to the manner, in which it is obtained or used. Terms and conditions for water volume and associated uses are described in Part C of this Licence.

Waste Disposal

Sewage will be mixed with greywater for disposal into a designated low-lying area located directly south of camp. Combustible solid wastes will be incinerated using a single chamber incinerator which is currently on-site.

Non-combustible solid wastes, bulky items, scrap metals, waste oils shall be sorted and stored for future transport and disposal at an approved facility.

All hazardous waste, oils, contaminated soil and water shall be stored in sealed containers and shipped to an approved facility for disposal.

Non-mineralized drill cuttings with uranium concentration <0.05% will be pumped to a natural low-lying depression.

Mineralized drill cuttings with uranium concentration >0.05% will be collected and stored in the radioactive storage compound.

Terms and conditions for waste disposal and specifically uranium drilling waste, are included in Part D of this Licence.

Monitoring

Conditions for monitoring remain unchanged.

Management Plans

The Board notes that a number of Management Plans were included as part of the Application and advises that following Management Plans are being approved by the NWB:

- *Uranium Exploration Plan, Version 7, dated November 2019*
- *Waste Management Plan, Version 9, dated November 2019*
- *Spill Contingency Plan, Version 10, dated November 2019*
- *Abandonment & Restoration Plan, Version 9, dated December 2020*

The Board appreciates submission of the Plans entitled “*Radiation Protection Plan Version 9, dated November 2019 and Noise Abatement Plan Version 7, dated November 2019*” and advises the Licensee that these Management Plans shall be implemented along the Plans stated above.

The Board reminds the Licensee of the condition in Part B, Item 7 requiring the Licensee to review the Plans approved in the Licence as required by changes in operation and/or technology, and to modify the Plans accordingly for inclusion with the Annual Report.

Intervener Comments

The following comments were received from Interveners during the review of the Application:

Crown-Indigenous Relations and Northern Affairs Canada (CIRNA)

January 06 and January 30, 2023

1. Orano to confirm whether an amendment application was submitted with this renewal?
 - Orano confirmed that this is a renewal application and not an amendment application.
 2. Orano to submit the following missing plans and documents identified in the Application.
 - EXP-740, Routine Radiological Monitoring Schedule and Associated Work Instructions (mentioned in the Radiation Protection Plan)
 - Error messages appearing throughout the Spill Contingency Plan
 - Appendix C Site Maps Missing (mentioned in the Spill Contingency Plan)
 - Emergency Response Manual (mentioned in the Radiation Protection Plan)
 - Emergency Response and Assistance Plan (ERAP) (Mentioned in the Radiation Protection Plan)
 - Winter Road Plan (mentioned in the Spill Contingency Plan)
 - EXP-740-05, Management and Disposition of Radioactive Drill Cuttings Document (mentioned in the Waste Management Plan)
- The Applicant’s response was... “*Orano refers to many internal procedures, work instructions and forms in the Management Plans, including the Radiation Protection Plan and the Spill Contingency Plan and to include each referenced document is not the intent. The Management Plans demonstrate that Orano has planned and has the*

processes in place to operate in compliance with requirements. Also, in the introduction to the current version of the management plans, Orano does indicate that the plan is not applicable during the care and maintenance phase but will be updated prior to a change in project phase to reflect the most current information. Also, all broken links will be corrected at that time. Orano will submit updated plans prior to changing phase”.

3. Orano to describe the radioactive storage compound and confirm what measures are in place to ensure that contaminants are contained and remain within the radioactive storage compound.
 - Orano stated that Section 3.3 of the Radiation Protection Plan describes the measures followed regarding storage of radioactive materials.
4. Orano to confirm that all infrastructure remains at a minimum of 31 meters from any normal high-water mark of all surrounding water bodies.
 - Orano stated that camp infrastructure is shown in relation to water bodies in the figure “Kiggavik Area Components” included with the application package.
5. Orano to provide the MSDS for all hazardous materials brought to the camp, including different kinds of fuels, oils/lubricants and cleaning products and update the Spill Contingency Plan.
 - Orano responded that MSDS are not included as part of the Spill Contingency Plan and that they are available on-site during the active exploration phase.
 - On January 30, 2023, CIRNA repeated this recommendation to include MSDS.
 - On February 7, 2023, Orano stated that they will update the Spill Contingency plan with the addition of an Appendix containing SDS for planned products requiring SDS when the Project changes from a Care and Maintenance phase to the active phase.
6. CIRNA recommends that the applicant use at least a dual chamber incinerator instead of a single chamber.
 - The Applicant’s response was... *“The Abandonment and Restoration Plan Section 1 states “The applicable requirements in Section 3 were fulfilled in 2016 and will be considered to be met until the project changes phase”. The single chamber incinerator is the current incinerator on site. The incinerator will be reviewed against regulatory requirements at the time the project changes phase.”*
 - On January 30, 2023, CIRNA repeated this recommendation.
 - On February 7, 2023, Orano stated that they will consider using a dual chamber incinerator when the Project returns to an active exploration phase. The Abandonment and Restoration Plan will remain the same while the Project is in the care and maintenance phase and will be update when the Project returns to an active phase.

7. Orano to clarify their proposed inspection schedule.
 - The Applicant's response was... *"The NWB Renewal application section 9 indicates and aligns with the Abandonment and Restoration plan and states the Kiggavik project is inspected every five years, at a minimum. The Spill Contingency Plan will be updated when there is a change of project phase, as indicated in Section 1."*
8. Orano to provide information of the procedure if artesian water is encountered during drilling operations.
 - The Applicant's response was... *"The NIRB Screening Decision included with the renewal application Appendix A Summary of Proponent Commitments includes a commitment to immediately plug and permanently seal a drill hole with artesian flow. Orano also includes information on artesian flow encountered, if any, in the Kiggavik Annual Report."*
9. Orano to illustrate where and how they plan on storing other hazardous materials such as, but not limited to, lubricating oils and cleaning products.
 - The Applicant's response was... *"In the Spill Contingency Plan Section 2.2 Petroleum and Chemical Product Storage and Inventory describes the storage of multiple products that may have larger quantities onsite. Other materials would not be stored in large quantities onsite. Any changes will be updated when the project changes phase and the Spill Contingency Plan updated."*
10. Orano to confirm that the waste storage location is at a minimum of 31 meters away from any normal high water body mark of all surrounding water bodies.
 - Orano stated that the waste storage locations are described in the Waste Management Plan in Table 4.1 and section 5.2.
11. Orano to confirm that all activities will be conducted at a minimum of 31 meters away from any normal high-water mark.
 - The Applicant's stated that... *"The Uranium Exploration Plan confirms in section 3 that both drilling operation and core logging and storage area are located at a minimum 31m from the normal high-water mark of any nearby water bodies, unless approved. The Spill Contingency Plan also confirms this in section 3.2"*

On February 9, 2023 CIRNA confirmed that all their concerns had been addressed.

Fisheries and Oceans Canada (DFO)

January 05, 2023

- DFO have stated that... *"Provided that the plans are implemented in the manner, and during the timeframe, described, the Program is of the view that the proposal will not require an authorization under the Fisheries Act, or the Species at Risk Act."*

- If the Project is unable to comply with the Interim Codes of Practice or the Measures to Protect Fish and Fish Habitat, we recommend that the proponent submit a Request for Review of the Project.



NUNAVUT WATER BOARD WATER LICENCE RENEWAL

Licence No: **2BE-KIG2328**

Pursuant to the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* and the *Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada*, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

ORANO CANADA INC.

(Licensee)

100-833 45th STREET W, SASKATOON, SK S7L 5X2

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water or dispose of Waste for a period subject to restrictions and conditions contained within this Licence Renewal:

Licence Number/Type: **2BE-KIG2328 TYPE "B"**

Water Management Area: **BAKER LAKE WATERSHED - 8**

Location: **KIVALLIQ REGION, NUNAVUT**

Classification: **MINING UNDERTAKING**

Purpose: **DIRECT USE OF WATER AND DEPOSIT OF WASTE**

Quantity of Water use not to Exceed: **TWO HUNDRED AND NINETY-NINE (299) CUBIC METRES PER DAY**

Effective Date: **JUNE 14, 2023**

Expiry of Licence: **JUNE 13, 2028**

This Licence renewal, issued and recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

Lootie Toomasie
Nunavut Water Board, Chair

PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. Scope

This Licence allows for the use of Water and the deposit of Waste for a Mining undertaking classified as per Schedule 1 of the *Regulations* at the Kiggavik Project, located approximately 80 km west of Baker Lake in the Kivalliq Region of Nunavut, at the following geographical boundaries:

Project Extents

Latitude: 64° 39' 26.46" N	Longitude: 97° 59' 8.26" W
Latitude: 64° 39' 26.46" N	Longitude: 97° 20' 52.44" W
Latitude: 64° 17' 5.9" N	Longitude: 97° 20' 52.44" W
Latitude: 64° 17' 5.9" N	Longitude: 97° 59' 8.26" W

Camp(s):

Latitude: 64° 26' 29" N	Longitude: 97° 39' 34" W
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- a. This Licence is issued subject to the conditions contained herein with respect to the taking of Water and the deposit of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new *Regulations* are made or existing *Regulations* are amended by the Governor in Council under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, or other statutes imposing more stringent conditions relating to the quantity or type of Waste that may be so deposited or under which any such Waste may be so deposited, this Licence shall be deemed, upon promulgation of such *Regulations*, to be subject to such requirements; and
- b. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

2. Definitions

“**Act**” means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“**Addendum**” means the supplemental text that is added to a full plan or report usually included at the end of the document and is not intended to require a full resubmission of the revised report;

“**Amendment**” means a change to original terms and conditions of this Licence requiring correction, addition or deletion of specific terms and conditions of the Licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

“**Applicant**” means the Licensee;

“**Appurtenant Undertaking**” means an undertaking in relation to which a use of water or a deposit of Waste is permitted by a licence issued by the Board;

“**Board**” means the Nunavut Water Board established under the *Nunavut Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“**Bulk Fuel Storage Facility**” means the fuel storage facility as described in the Application and supporting documents submitted November 28, 2007;

“**Closure and Reclamation Plan**” means a Plan developed to reach the closure goal and taking in account the “Guidelines for the Closure and Reclamation of Advanced Mineral Exploration and Mine Sites in the Northwest Territories” 2013;

“**Effluent**” means treated or untreated liquid Waste material that is discharged into the environment from a structure such as a settling pond, landfarm or a treatment plant;

“**Engineer**” means a professional engineer registered to practice in Nunavut in accordance with the *Consolidation of Engineers and Geoscientists Act S. Nu 2008, c.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

“**Greywater**” means all liquid Wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet Wastes;

“**Hazardous Waste**” means Waste classified as “hazardous” by Nunavut Territorial or Federal legislation, or as “dangerous goods” under the *Transportation of Dangerous Goods Act*;

“**High Water Mark**” means the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land (ref. Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities);

“**ICP Scan**” means the laboratory method for determining trace metals in water through Emission Spectroscopy using inductively coupled plasma (approximately including up to 32 elements, depending on the laboratory performing the analysis);

“**Inspector**” means an Inspector designated by the Minister under Section 85 (1) of the *Act*;

“**Licensee**” means the holder of this Licence;

“**Modification**” means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work, but does not include an expansion;

“Nunavut Agreement” means the *“Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada”*, including its preamble and schedules, and any amendments to that agreement made pursuant to it;

“Regulations” means the *Nunavut Waters Regulations* SOR/2013-69 18th April, 2013;

“Secondary Containment” means an impermeable structure, external to and separate from primary containment, which prevents unplanned spills of hazardous materials and provides a minimum capacity of 110% of the original vessel. Where multiple vessels are stored within the containment, it must provide a minimum capacity equal to the sum of the largest vessel and 10% of the aggregate volume of all other vessels located in the containment. This structure shall also provide containment and control of hoses and nozzles;

“Sewage” means all toilet Wastes and Greywater;

“Spill Contingency Plan” means a Plan developed to deal with unforeseen petroleum and hazardous materials events that may occur during the operations conducted under the Licence;

“Sump or Sumps” A structure or depression that collects, controls, and filters liquid Waste before it is released to the environment. This structure should be designed to prevent erosion while allowing percolation of liquid Waste;

“Toilet Wastes” means all human excreta and associated products, but does not include Greywater;

“Waste” means, as defined in s. 4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means;

“Water” or “Waters” means waters as defined in section 4 of the *Act*.

3. **Enforcement**

- a. Failure to comply with this Licence will be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*;
- b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*; and
- c. For the purpose of enforcing this Licence and with respect to the use of water and deposit or discharge of Waste by the Licensee, Inspectors appointed under the *Act*, hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable law.

PART B: GENERAL CONDITIONS

1. The Water use fees for the right to the use of Water shall be paid in accordance with Section 12 of the *Regulations*.
 2. The Licensee shall file an Annual Report on the Appurtenant Undertaking with the Board no later than March 31st of the year following the calendar year being reported, containing the following information:
 - a. A summary report of Water use and Waste disposal activities for the reporting period including the following:
 - i. quantity of Water (in cubic metres/year) obtained for domestic and other purposes from sources on, in or flowing through Inuit-Owned Lands;
 - ii. quantity of Water (in cubic metres/year) obtained for domestic and other purposes from sources on, in or flowing through Crown Lands;
 - iii. quantity of Waste disposed of at on-site Waste disposal facility; and
 - iv. quantity of Waste backhauled to approved facility for disposal;
 - b. A list of unauthorized discharges and summary of follow-up actions taken;
 - c. Any revisions to the Spill Contingency Plan, Abandonment and Restoration Plan and other Plans, as required by Part B, Item 7, submitted in the form of an Addendum;
 - d. Description of all progressive and/ or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of operations;
 - e. Report all artesian flow occurrences as required by Part F, Item 5
 - f. Details pertaining to location of sump(s) and drill holes;
 - g. Summary of all information requested and results of the Monitoring Program;
 - h. Summary of public consultation/participation, describing consultation with local organizations and residents of the nearby communities, if any were conducted; and
 - i. Any other details on Water use and Waste deposit requested by the Board by November 1 of the year being reported.
 3. The Licensee shall notify the NWB and Inspector of any changes in operating plans or conditions associated with this Project at least thirty (30) days prior to any such change.
 4. The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of Water volumes as required under Part J, Item 1.
 5. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted, cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan.
 6. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
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7. The Licensee shall review the Plans referred to in this Licence, as required by changes in operation and/or technology, and modify the Plan accordingly. Revisions to the Plans shall be submitted in the form of an Addendum to be included with the Annual Report.
8. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.
9. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

(a) Manager of Licensing:

Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nwb-oen.ca

(b) Inspector Contact:

Manager of Field Operations, INAC
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4284
Fax: (867) 979-6445

10. The Licensee shall submit one (1) electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut.
11. The Licensee shall ensure that all documents or correspondence submitted by the Licensee to the NWB are received and acknowledged by the Manager of Licensing.
12. This Licence is assignable as provided for in Section 44 of the *Act*.
13. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence, or any other regulatory requirement.

PART C: CONDITIONS APPLYING TO WATER USE

1. The Licensee shall obtain Water for domestic purposes from a small unnamed lake located to the north or a small unnamed lake located to the east of the camp facility, to a maximum of ten (10) cubic metres per day. Water used for drilling shall be obtained from Water

sources proximal to the drilling targets, to a maximum of two-hundred and eighty nine (289) cubic metres per day. The total volume of Water for the purposes of this Licence shall not exceed two hundred ninety-nine (299) cubic metres per day.

2. The use of Water from streams or any Water bodies not identified in Part C, Item 1, is prohibited unless authorized and approved by the Board in writing.
3. The withdrawal of Water from any stream shall not exceed ten (10) per cent of the low flow of that stream unless approved by the Board in writing.
4. If the Licensee requires Water in sufficient volume that the source water body may be drawn down the Licensee shall, at least thirty (30) days prior to commencement of use of water, submit to the Board for approval in writing, information on the water body that includes, but is not limited to: volume of water required, hydrological overview of the water body, details of impacts, and proposed mitigation measures.
5. The Licensee shall equip all water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw Water at a rate such that fish do not become impinged on the screen.
6. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body unless authorized.
7. The Licensee shall not cause erosion to the banks of any body of Water and shall provide necessary controls to prevent such erosion.
8. Sediment and erosion control measures shall be implemented prior to and maintained during the undertaking to prevent entry of sediment into Water.

PART D: CONDITIONS APPLYING TO WASTE DISPOSAL

1. The Licensee shall implement the “*Waste Management Plan, Version 9, dated November 2019*” that was submitted as additional information with the Application and has been approved by the Board with the issuance of the Licence.
2. The Licensee shall locate areas designated for Waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High Water Mark of any water body such that the quality, quantity or flow of Water is not impaired, unless otherwise authorized by the Board.
3. The Licensee shall not practice on-site land filling of domestic Waste, unless otherwise approved by the Board in writing.
4. The Licensee is authorized to dispose of all acceptable food Waste, paper Waste and untreated wood products in an incinerator.
5. The Licensee shall not open burn plastics, wood treated with preservatives, electric wire,

Styrofoam, asbestos or painted wood to prevent the deposition of Waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding Waters, unless otherwise approved by the Board in writing.

6. The Licensee shall provide to the Board documented authorization from all communities in Nunavut receiving Wastes from the Kiggavik Project prior to any backhauling and disposal of Wastes to those communities.
7. The Licensee shall backhaul and dispose of all hazardous Wastes, Waste oil and non-combustible Waste generated through the course of the operation at a licensed Waste disposal site.
8. The Licensee shall maintain records of all Waste backhauled and records of confirmation of proper disposal of backhauled Waste. These records shall be made available to an Inspector upon request.
9. The Licensee shall contain all greywater in a Sump located at a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board in writing.
10. The Licensee shall contain all Toilet Wastes in latrine pits or use incineration, chemical, portable or composting toilets. Latrine pits shall be located at a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any water body, treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment. Any remaining residue generated from the disposal of Toilet Wastes through incineration, chemical, portable or composting toilets shall be backhauled and disposed of in an approved Waste disposal site.
11. The Licensee shall ensure that any hazardous materials, including waste oil, receive proper treatment and disposal at an approved treatment facility.
12. The Licensee shall operate and maintain all facilities to the satisfaction of an Inspector.

PART E: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS

1. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes including the immediate banks except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.
2. The Licensee shall conduct all activities in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake corrective measures in the event of any impacts on surface drainage.
3. The Licensee shall construct all winter lake and stream crossings, including ice bridges, entirely of Water, ice or snow. The Licensee shall minimize disturbance by locating ice

bridges in an area that requires the minimum approach grading and the shortest crossing route. Stream crossings shall be removed or the ice notched prior to spring break-up.

4. Stream crossing shall be a minimum of five hundred (500) meters from spawning areas.
5. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed a distance of at least thirty-one (31) metres from the ordinary High Water Mark in such a fashion that they do not enter the Water.
6. The Licensee shall not mobilize heavy equipment or vehicles for trenching or other activities unless the ground surface is capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles shall be suspended if rutting occurs.

PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS

1. The Licensee shall implement the “*Uranium Exploration Plan, Version 7, dated November 2019*” that was submitted as additional information with the Application and has been found acceptable by the Board.
2. The Licensee shall not conduct any land based drilling within thirty-one (31) metres of the ordinary High Water Mark of any water body, unless otherwise approved by the Board in writing.
3. The Licensee shall dispose of all drill waste, including Water, chips, muds and salts (CaCl_2) in any quantity or concentration, from land-based drilling, in a properly constructed Sump or an appropriate natural depression located at a distance of at least thirty-one (31) metres from 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.
4. Drill mud solids or cuttings with a uranium concentration greater than 0.05 percent are to be collected and then disposed of down the drill hole and sealed.
5. If artesian flow is encountered, drill holes shall be immediately sealed and permanently capped to prevent induced contamination of groundwater or salinization of surface waters. The Licensee shall report all artesian flow occurrences within the Annual Report, including the location (GPS coordinates) and dates.
6. Where drilling activity has penetrated below the permafrost layer, the NWB requests that the Licensee record the depth of permafrost and location of the drill hole to be included within the Annual Report.
7. On-ice drilling is not authorized under this Licence.

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facilities and Waste Disposal Facilities provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a. the Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - b. such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
 - c. such Modifications are consistent with the NIRB Screening Decision;
 - d. the Board has not, during the sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - e. the Board has not rejected the proposed Modifications.
2. Modifications for which all of the conditions referred to in Part G, Item 1 have not been met can be carried out only with written approval from the Board.
3. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING

1. The Licensee shall implement the “*Spill Contingency Plan, Version 10*” dated November 2019, that was submitted as additional information with the Application and has been approved by the Board with the issuance of the Licence.
2. The Licensee shall submit an updated *Spill Contingency Plan*, at least sixty (60) days prior to initiating exploration activities. The updated Plan shall include MSDS for hazardous products planned to be stored and used on-site.
3. The Licensee shall prevent any chemicals, petroleum products or Wastes associated with the project from entering Water. All Sumps and fuel caches shall be located at a distance of at least thirty-one (31) metres from the ordinary High Water Mark of any adjacent water body and inspected on a regular basis.
4. The Licensee shall conduct any equipment maintenance and servicing in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other Waste and contain potential spills.
5. If during the term of this Licence, an unauthorized discharge of Waste occurs, or if such a discharge is foreseeable, the Licensee shall:
 - a. Employ the approved Spill Contingency Plan;

- b. Report the spill immediately to the NWT/NU 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4284; and
 - c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.
6. The Licensee shall, in addition to Part H, Item 5, regardless of the quantity of releases of harmful substances, report to the NWT/NU 24-Hour Spill Line if the release is near or into a water body.

PART I: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION OR TEMPORARY CLOSURE

1. The Licensee shall implement the “*Abandonment & Restoration Plan, Version 9*”, dated December 2020, which was submitted as additional information with the Application and has been approved by the Board with the issuance of the Licence.
2. The Licensee shall complete all restoration work prior to the expiry of this Licence.
3. The Licensee carry out progressive reclamation of any components of the Project no longer required for the Licensee’s.
4. The Licensee shall backfill and restore, to the satisfaction of an Inspector, all sumps, sewage/wash-water pits to the pre-existing natural contours of the land when possible.
5. The Licensee shall remove from the site, all infrastructure and site materials, including all fuel caches, drums, barrels, buildings and contents, docks, water intakes, pumps and lines, material and equipment prior to the expiry of this Licence.
6. All roads and airstrip, if any, shall be re-graded to match natural contours to reduce erosion.
7. The Licensee shall remove any culverts and restore the drainage to match the natural channel. Measures shall be implemented to minimize erosion and sedimentation.
8. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
9. Areas that have been contaminated by hydrocarbons shall be reclaimed to meet objectives as outlined in the *Government of Nunavut’s Environmental Guideline for Site Remediation, 2010*. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.

10. The Licensee shall restore all drill holes and disturbed areas to natural conditions immediately upon completion of the drilling. The restoration of drill holes must include the removal of any drill casing materials and if having encountered artesian flow, the capping of holes with a permanent seal. Where drill casings cannot be removed the Licensee shall cut off the casings at ground level and identify with signage.
11. The Licensee may leave the casings on site, if it intends to continue drilling in existing casings, but shall add signing to keep the area safe for the other territory users. The drill casings left cannot stay on the field for more than 2 years after the drilling.
12. The Licensee may store drill core produced by the appurtenant undertaking in an appropriate manner and location at least thirty-one (31) metres above the ordinary 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, or as directed by an Inspector.
13. For the long term storage of drill core, radiation levels must be reduced to less than 1.0 μSv measured at 1 metre from the surface and in no instance is the level allowed to exceed 2.5 μSv .
14. Any drill hole that encounters mineralization with a uranium content greater than 1.0 percent over a length >1.0 metre, and with a meter-percent concentration >5.0 , will be sealed by grouting over the entire length of the mineralization zone and not less than 10 meters above or below each mineralization zone.
15. Drill holes are to be sealed by cementing (grouting) the upper 30 metres of bedrock or the entire depth of the hole, whichever is less or as otherwise approved by the Board in writing.
16. If the radiation levels for the stored core exceed the levels identified in Part I, Item 13, the Licensee shall submit to the Inspector a detailed report of the test results and the proposed long term core handling and mitigation measures for long term storage or removal.
17. The Licensee shall contour and stabilize all disturbed areas to reduce erosion and sedimentation to Water, upon completion of work, upon completion of the undertaking and as per Part I, Item 3.

PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM

1. The Licensee shall measure and record, in cubic metres, the daily quantities of Water utilized for camp, drilling and other purposes. The daily quantities of Water used for drilling shall be recorded for each Water source used in accordance with Part C, Item 1.
2. The Licensee shall provide the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of Water are utilized for all purposes.

3. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where Wastes associated with camp operations and drilling operations are deposited.
4. All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the current edition of *Standard Methods for the Examination of Water and Wastewater*, or by such other methods approved by the Board in writing.
5. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
6. Where uranium mineralization has been encountered, under Part F, Item 5 and Part I, Items 13 and 14, the Licensee shall monitor the drill Sumps and core storage areas to provide the necessary data needed in order to assess and ensure that the mitigation measures required for restoration under the Abandonment and Restoration Plan have been completed.
7. The Licensee shall include in the Annual Report required under Part B, Item 2 all data, monitoring results and information required by this Part.
8. An Inspector may impose additional monitoring requirements.