



NIRB Application for Screening #125969

Amendment to Municipality of Grise Fiord Water Licence 3BM-GR12025 - Water Treatment Plant

Application Type: New

Project Type: Municipal and Industrial Development

Application Date: 5/25/2024 2:11:28 PM

Period of operation: from 2028-09-01 to 2048-09-01

Project Proponent: Community Support Division
Government of Nunavut
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Canada
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DETAILS

Non-technical project proposal description

English: The Government of Nunavut Department of Community and Government Services, on behalf of the Municipality of Grise Fiord, is applying to amend water licence 3BM-GRI2025 to replace the existing water supply infrastructure and increase the maximum annual water withdrawal volume to meet the needs of the growing population. A design for the new water supply infrastructure is complete and the municipal council of Grise Fiord has passed a motion approving the construction and responsibility for operations and maintenance as owners of the facility at construction completion. The new water supply facility will be located entirely on municipal lands. The facility will consist of a treatment building, three water storage tanks and water will be transported from Airport River using an intake centrifugal pump and 300 m of flexible overland hose, where it then drops into a chamber and enters a buried pipeline that extends another 300 m to the treatment building. Grise Fiord must fill storage tanks each summer to maintain water supply to the community throughout the year. The water source will remain the same for the new facility. An increase in water withdrawal is being requested because the new system will have an additional tank to provide the community with redundancy should a tank fail in the future. The new water storage capacity would be 13,200 cubic metres of water between three tanks. The seasonal overland flexible piping for water withdrawal will be stored once the water resupply is complete each year. Civil works for the site is anticipated to start summer 2026 and the tanks and water treatment building will be connected on site during summer 2027. Final commissioning of the plant is expected either by summer 2027 or summer 2028. Construction materials and any hazardous wastes will be transported in and out of the community by sealift.

French: Le ministre des Services communautaires et gouvernementaux du gouvernement du Nunavut, au nom de la municipalité de Grise Fiord, demande la modification du permis d'utilisation de l'eau 3BM-GRI2025 afin de remplacer l'infrastructure d'approvisionnement en eau existante et d'augmenter le volume annuel maximal de prélèvement d'eau pour répondre aux besoins de la population croissante. La conception de la nouvelle infrastructure d'approvisionnement en eau a été réalisée et le conseil municipal de Grise Fiord a adopté une motion approuvant la construction et la responsabilité du fonctionnement et de l'entretien en tant que propriétaire de l'installation une fois la construction achevée. La nouvelle installation d'approvisionnement en eau se trouvera entièrement sur les terres municipales. L'installation consistera en un bâtiment de traitement et trois réservoirs de stockage d'eau. L'eau sera transportée depuis la rivière Airport à l'aide d'une pompe centrifuge d'admission et de 300 m de tuyau flexible terrestre, d'où elle tombera ensuite dans une chambre et entrera dans une canalisation enterrée qui s'étend sur 300 m supplémentaires jusqu'au bâtiment de traitement. Chaque été, Grise Fiord doit remplir ses réservoirs de stockage pour maintenir l'approvisionnement en eau de la localité tout au long de l'année. La nouvelle installation utilisera la source d'eau actuelle. La modification demandée quant au volume d'eau prélevé découle de l'ajout d'un réservoir au nouveau système, ceci afin de disposer d'une marge de manœuvre pour assurer l'approvisionnement de la localité advenant la défaillance d'un des réservoirs. La nouvelle capacité de stockage en eau sera de 13 200 mètres cubes d'eau répartis en trois réservoirs. Les tuyaux flexibles saisonniers terrestres destinés au prélèvement d'eau seront remisés une fois le réapprovisionnement en eau terminé chaque année. Les travaux de génie civil du site devraient débuter à l'été 2026 et les réservoirs et le bâtiment de traitement des eaux seront connectés sur place au cours de l'été 2027. La mise en service finale de l'usine est prévue pour l'été 2027 ou l'été 2028. Les matériaux de construction et tous les déchets dangereux seront transportés à l'intérieur et à l'extérieur de la communauté par transport maritime.

[illegible]

Inuinnaqtun: Nunavut Kavamanga Nunalingni Kavamatkunnili Pivikhaqautikkut, pitqutigiqplugu Haamlanganit Ausuittuq, uuktuliqtut aallanguriami imarmut laisinganik 3BM GRI2025 himmiriami ittut imaqarvinga aulapkaitjutikhanik, angiklijuumirlugu kiklinga ukiuq tamaat imaq taimaaqtittijuq qanuraaluktut ihuaqhilugu pijumajainun amigairjuumiliqtunun inugiaqtılaanginnun. Qanuqtun piliurutikhaq nutaamun imaqarvikhamun iniqtaujuq unalu hamlatkut katimajiit Ausuittumi pigiaqtittijun angiqhugu hanajauliriami munaridjutikhamullu auladjutinun ihuaqhaidjutinullu nanminirivlugu imaqarvikhamun hanajaudjutaanun iniqhikpata. Nutaq imaqarvikhaq inniaqtuq tamaat haamlatkut nunainni. Imaqarvikhaq piquaqniaqtuq halumaqhiivikhamik igluqpakmik, pingahut imaqarviit imarlu agjaqtauniaqtut Tingmitiqarvingmi Kuukkap aturluni imiqtautikhaq pamirvikhangit, unalu 300 mik ihuaqtumik tuqhuaqarluni nunat qangagun, taima anmugianganik iliugarvikhaanun ilaulunilu hauhijumik tuqhuangit hivutunirmik aulaniqaqtun 300 nik miitanik halumaqhiijumun igluqpaangnun. Ausuittuq tatatijukhaq qattarjuit aujaq tamaat pihimajaangani imaqarvikhaq nunallaamun ukiuq tamaat. Imaq aulalimaituq aadjikiiktumik nutaamun igluqpangmun. Akiturjuumijut imakkut auladjutikharnik tukhiqtauliqtut taimaali nutaq auladjut piquangniaqtuq ilaliutihimajunik qatarjunik tunihijaangani nunallaanun aupajaaqtumik imaqarvikhamik ihuangitpat hivungani. Nutaq imaqarvik aktılaanga imaa 13,200 cubic metresmik imarmik akun'ngani pingahuni imaqarvingni. Tamna ukiup iluani nunami ajurnaittumik imarmik auladjutikharnik tutqurlugit qatarjuangit inirumik ukiuq tamaat. Inungnun havaakhat najugakhaanun piniarnahugijainun pilirlugu aujani 2026-mi qattarjuit imaqarviklu igluqpaa ataniaqtuq najugaani talvani aujani 2027-mi. Kingullirmi havaktitaudjuta imaqarvingmun niriuktaat kitumiluuniin aujani 2027-mi uumaniluuniin aujani 2028-mi. Hanajaujaami tamajat kitullikaarlu hivuranaqtun iqqakukhat nuutiqauniaqtun talvunga talvangalu nunallaamin umiakkut akjautikkut.

Personnel on site: 2
Days on site: 365
Total Person days: 730
Operations Phase: from 2026-07-01 to 2028-09-01
Operations Phase: from 2028-09-01 to 2048-09-01
Post-Closure Phase: from to

Activities

Location	Activity Type	Land Status	Site history	Site archaeological or paleontological value	Proximity to the nearest communities and any protected areas
New Water Treatment Plant Site	Municipal and Industrial Development	Municipal	Current undeveloped land within the municipality	N/A	Within the municipality

Community Involvement & Regional Benefits

Community	Name	Organization	Date Contacted
Grise Fiord	David General	SAO, Municipality of Grise Fiord	2024-03-24

Authorizations

Indicate the areas in which the project is located:

Authorizations

Regulatory Authority	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Nunavut Water Board	3BM GRI2025	Active	2020-12-09	2025-12-08

Project transportation types

Transportation Type	Proposed Use	Length of Use
Air	Construction personnel for water treatment plant to fly in	
Water	Sealift of construction materials and resupply of operations and maintenance materials	
Land	Operations personnel for the water treatment plant will be locals	

Project accomodation types

- Temporary Camp
- Community
- Other,

Material Use

Equipment to be used (including drills, pumps, aircraft, vehicles, etc)

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Water Truck	2	xyz	For delivering treated water from the treatment plant to building water tanks
Excavator, bulldozer, and truck	3	xyz	All heavy earth construction machinery for landscaping and constructing permanent structures
Crane and forklift	2	xyz	For modular building assembly
Centrifugal Pump	1	xyz	The intake pump to retrieve raw water from Airport River
Aggregate	4700	m ³	For the onsite earthworks. The source of the granular material will be the existing quarry as understood by the local Council

Detail Fuel and Hazardous Material Use

Detail fuel material use:	Fuel Type	Number of containers	Container Capacity	Total Amount	Units	Proposed Use
Sodium hypochlorite 12%	hazardous	1	240	240	Liters	For the disinfection of water during treatment for the operations phase only per year
Diesel	fuel	1	260000	260000	Liters	Heating and emergency backup genset for the operations phase only per year

Water Consumption

Daily amount (m3)	Proposed water retrieval methods	Proposed water retrieval location
299	Intake centrifugal pump set up seasonally each summer.	Water will continue to be pumped from the licenced source Airport River.

Waste

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional treatment procedures
Waste disposal	Combustible wastes	60 kg annually for the operations phase only	Municipal landfill disposal of used cartridge filters (30 annually) and empty sodium hypochlorite jugs (12-20L jugs annually).	None required.

Environmental Impacts:

The water treatment plant project will provide sustained access to safe drinking water. A hydrological study concluded that Airport River is would be a reliable water source and is not fish bearing.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Sea

SECTION I1: Municipal Development

This is critical municipal infrastructure within the municipal bounds

Description of Existing Environment: Physical Environment

This is critical municipal infrastructure within the municipal bounds

Description of Existing Environment: Biological Environment

This is critical municipal infrastructure within the municipal bounds

Description of Existing Environment: Socio-economic Environment

This is critical municipal infrastructure that is essential for municipal operations.

Miscellaneous Project Information

Not applicable

Identification of Impacts and Proposed Mitigation Measures

Not applicable

Cumulative Effects

Not applicable

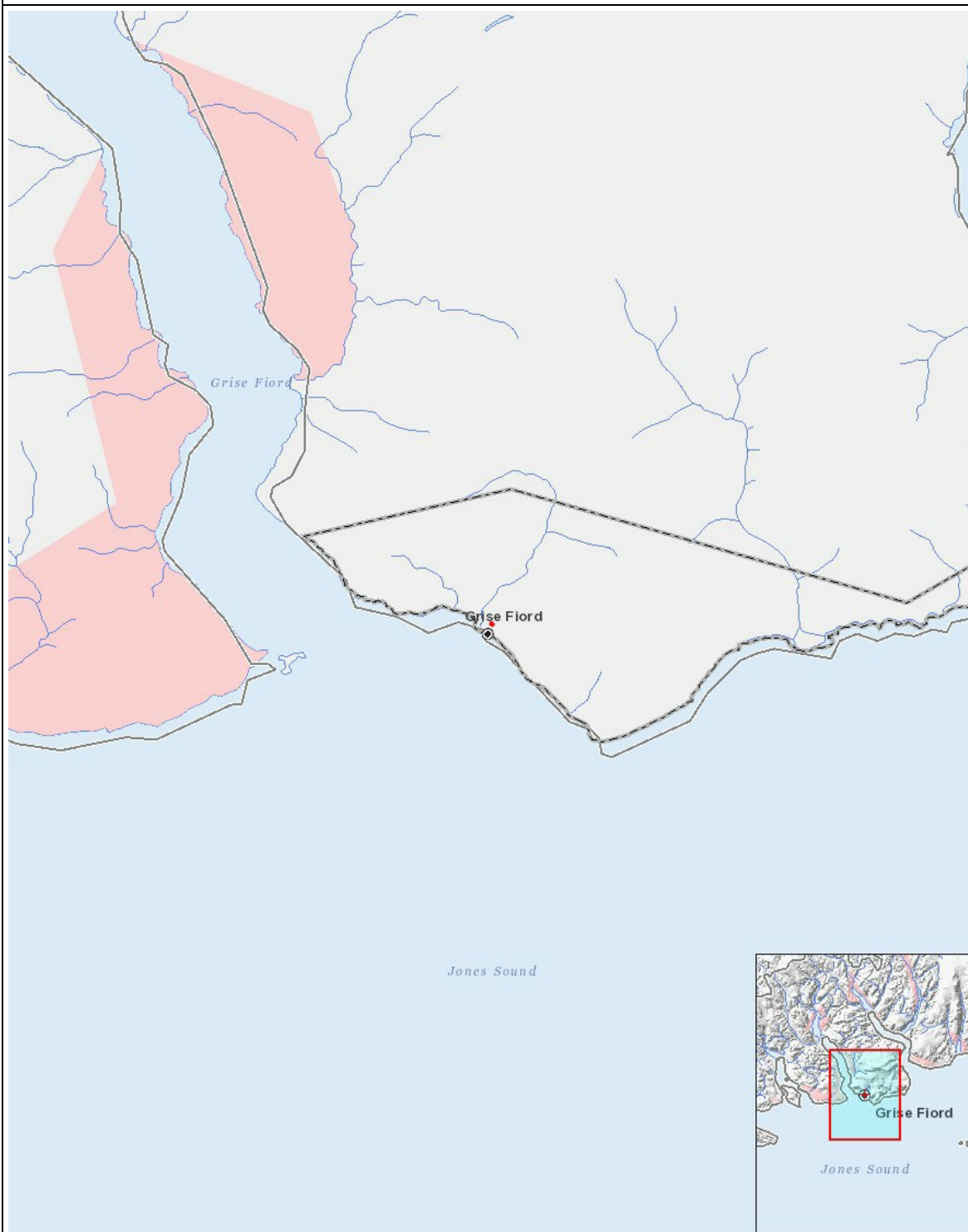
Impacts

Identification of Environmental Impacts

	PHYSICAL	Designated environmental areas	Ground stability	Permafrost	Hydrology / Limnology	Water quality	Climate conditions	Eskers and other unique or fragile landscapes	Surface and bedrock geology	Sediment and soil quality	Tidal processes and bathymetry	Air quality	Noise levels	BIOLOGICAL	Vegetation	Wildlife, including habitat and migration patterns	Birds, including habitat and migration patterns	Aquatic species, incl. habitat and migration/spawning	Wildlife protected areas	SOCIO-ECONOMIC	Archaeological and cultural historic sites	Employment	Community wellness	Community infrastructure	Human health
Construction																									
Municipal and Industrial Development		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	P	P	P	-
Operation																									
Municipal and Industrial Development		-	-	-	-	P	-	-	-	-	-	-	-		-	-	-	-	-		-	P	P	P	P
Decommissioning																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Negative and non-mitigatable, M = Negative and mitigatable, U = Unknown)

Project Location



List of Project Geometries

1	polygon	New Water Treatment Plant Site
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