Demande de la CNER faisant l’objet d’un examen préalable #125743

Application for the Water Licence Amendment of the Municipality of Kimmirut #3BM-KIM1929

Type de demande :	New
Type de projet:	Municipal and Industrial Development
Date de la demande :	11/29/2022 3:55:58 PM
Period of operation:	from 0001-01-01 to 0001-01-01
Autorisations proposées:	from 0001-01-01 to 0001-01-01
Promoteur du projet:	Department of Community and Government Services, Bhabesh Roy Department of Community and Government Services, Bhabesh Roy P.O. Box 379, Pond Inlet, NU X0A 0S0, Phone: 867-899-7314, Email: broy@gov.nu.ca Pond Inlet Nunavut X0A 0S0 Canada Téléphone :: 867-899-7314, Télécopieur :: 867-899-7330

DÉTAILS

Description non technique de la proposition de projet

Anglais: The Government of Nunavut, Department of Community and Government Services, on behalf of the Municipality of Kimmirut, is applying for the construction of the new wastewater treatment facility (WWTF) and amendment of the discharge effluent limits in the existing water license 3BM-KIM1929 to effectively service the growing population in Kimmirut over a 20-year life span. The facility consists of a lagoon and wetland-treatment-area and will be designed to meet the long-term needs of Kimmirut and the regulatory requirements. The lagoon requires a working volume of 26,900 m3 based on projected annual wastewater generation until 2043.The treatment goals for the WWTF effluent criteria at the end of treatment are established as 100, 120 and 1.25 mg/L for carbonaceous biochemical oxygen demand (CBOD), total suspended solids (TSS) and un-ionized ammonia as nitrogen, based on a 6-year research project completed by Centre for Water Resources Studies at Dalhousie University. The licensee is requesting to remove the effluent quality limits from KIM-3 and to add limits to KIM-5 which does not currently have limits. Once the future lagoon is constructed KIM-3 will represent partially treated wastewater leaving the lagoon and KIM-5 will represent fully treated wastewater effluent at the outlet of the wetland-treatment-area. It is still recommended to sample KIM-3 for treatment monitoring purposes but no effluent parameter limits should be applied.The design consultant recommends that the effluent quality limits applied at KIM-5 be CBOD 100 mg/L, 120 TSS mg/L, and to remove faecal coliforms as a parameter since this is a public health parameter and not an environmental parameter. The receiving environment is zoned for waste disposal and not used by the public for fishing, harvesting, or recreation. Faecal coliforms are not included in the federal Wastewater Systems Effluent Regulations SOR/2012-139 Fisheries Act Registration 2012-06-29. Faecal coliforms are also no longer applied as an environmental parameter in the Northwest Territories where the Nunavut Water Board historically derives its effluent parameter decisions on.

Français: Le ministère des Services communautaires et gouvernementaux (SCG) du gouvernement du Nunavut, au nom de la municipalité de Kimmirut, demande la construction d'une nouvelle installation de traitement des eaux usées et la modification des limites de l'effluent de rejet dans le permis d'utilisation des eaux 3BM-KIM1929 existant afin de desservir efficacement la population croissante de Kimmirut sur une période de 20 ans. La lagune sera conçue pour répondre aux besoins à long terme de Kimmirut, aux exigences réglementaires et aux mesures de protection nécessaires pour éviter d'avoir un impact sur l'écoulement des eaux souterraines vers le lac Fundo.CGS a retenu Dillon Consulting Limited (Dillon) pour fournir des services de conception et d'administration de la construction d'une nouvelle installation de traitement des eaux usées à Kimmirut. Les objectifs de traitement de l'effluent lagune-milieu humide ont été établis à 100, 120 et 1,25 mg/L pour la demande biochimique en oxygène des matières carbonées, le total des solides en suspension et l'ammoniac non ionisé sous forme d'azote, d'après un projet de recherche de six ans réalisé par le Centre for Water Resources Studies de l'Université Dalhousie. Le titulaire du permis demande de retirer les limites de qualité des effluents du point KIM-3 et d'ajouter des limites au point KIM-5 qui n'en a pas actuellement. Une fois que la future lagune sera construite, KIM-3 représentera les eaux usées partiellement traitées et KIM-5 représentera les effluents d'eaux usées entièrement traitées. Le consultant en conception recommande que les limites de qualité de l'effluent appliquées au KIM-5 soient de 100 mg/L pour la DBOC et de 120 mg/L pour les TSS, et de supprimer les coliformes fécaux comme paramètre, car il s'agit d'un paramètre de santé publique et non d'un paramètre environnemental. Le milieu récepteur est zoné pour l'élimination des déchets et n'est pas utilisé par le public pour la pêche, la récolte ou les loisirs.Les coliformes fécaux ne sont pas inclus dans le Règlement sur les effluents des systèmes d'assainissement des eaux usées fédéral DORS/2012-139 - Enregistrement de la Loi sur les pêches 2012-06-29. Les coliformes fécaux ne sont plus utilisés comme paramètre environnemental dans les Territoires du Nord-Ouest, où l'Office des eaux du Nunavut s'est toujours inspiré pour prendre ses décisions concernant les paramètres des effluents.La production annuelle prévue d'eaux usées (débit) en 2043 serait de 19 200 m3, ce qui nécessiterait un volume de travail minimal de 26 900 m3 pour la lagune.

Inuktitut: ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᖏᑦ, ᓄᓇᓕᖕᓂ ᒐᕙᒪᒃᑯᓐᓂᓪᓗ ᐱᔾᔪᑎᖃᖅᑎᒃᑯᑦ, ᑭᒻᒐᖅᑐᐃᓗᑎᒃ ᕼᐋᒻᒪᓚᖕᒐᑦ ᑭᒻᒥᕈᕐᒥ, ᑐᒃᓯᕋᕐᒪᑕ ᓴᓇᔭᐅᓂᒃᓴᖕᒐᓂ ᓄᑖᒥ ᑮᓇᓗᖕᒍᑦ ᓴᓗᒻᒪᕐᓴᐃᑉᐱᖕᒥᑦ ᐋᖅᑭᒋᐊᕐᑕᐅᓗᓂᓗ ᐃᑭᐊᖕᒐᒍᑦ ᓯᓚᒻᒧᑦ ᑯᕕᑉᐸᓪᓕᐊᔪᖅ ᐃᒪᖕᒧᑦ ᐱᔪᓐᓇᐅᑎᒥᔭᐅᕙᖏᖅᑐᒥᒃ 3BM-KIM1929 ᐱᔾᔪᑎᕋᕐᑕᐅᑦᑎᐊᕐᑯᓪᓗᒥᑦ ᐃᓅᒥᐊᒃᓯᑉᐸᓪᓕᐊᔪᑦ ᑭᒻᒥᕈᒻᒥ ᐊᕐᕿᒍᓂ 20-ᐊᑐᑯᑖᒍᓐᓇᕐᓂᖕᒐᓄᑦ. ᑮᓇᓗᕐᑲᕐᐱᒃ ᐋᖅᑭᒃᑕᐅᓂᐊᖅᐳᖅ ᓈᒻᒪᒃᓯᓕᕈᑕᐅᓇᓱᒃᓗᓂ ᐊᑯᓂᐅᔪᒃᑯᑦ ᑭᙱᒪᔭᐅᔪᓄᑦ ᑭᒻᒥᕈᒻᒥ, ᒪᓕᒐᖅᑎᒍᑦ ᐱᔭᐅᒥᐊᓕᖕᓄᑦ, ᐊᒻᒪ ᓴᐳᔾᔭᐅᓯᒪᔭᙵᕐᑲᖅᑐᓄᑦ ᐊᒃᑐᐃᔾᔪᑕᐅᑦᑕᐃᓕᓗᑎᒃ ᓄᓇᐅᐸ ᐃᑭᐊᖕᒐᓂ ᐃᒪᖅ ᑰᒃᐸᓪᓕᐊᑎᓪᓗᒍ ᑮᓇᐅᔭᖅᑑᑏᑦ ᑕᓯᕐᒧᑦ.ᓄᓇᓕᖕᓂ ᒐᕙᒪᒃᑯᓐᓂᓪᓗ ᐱᔾᔪᑎᖃᖅᑎᒃᑯᑦ ᐱᓚᐅᖅᑐᑦ ᑎᓚᓐ ᐱᓕᕆᔾᔪᑎᖕᓂᒃ (ᑎᓚᓐ) ᐱᑎᑦᑎᓗᑎᒃ ᐋᖅᑭᒃᓯᒪᓂᒃᓴᖕᒐᓂᒃ ᓴᓇᔭᐅᓂᖕᒐᓄᓪᓗ ᑎᑎᕋᕐᕕᖕᒥᐅᑕᓕᕆᔾᔪᑎᓂᒃ ᐱᔾᔪᑎᖃᐅᑎᓂᒃ ᓄᑖᒧᑦ ᑮᓇᓗᕐᑲᕐᕕᖕᒧᑦ ᓴᓗᒻᒪᖅᓴᐃᑉᐱᖕᒧᑦ (WWTF) ᑭᒻᒥᕈᒻᒥ. ᑲᒪᒋᔭᐅᓂᕐᒧᑦ ᑐᕋᒐᓇᔭᐅᔪᑦ ᑮᓇᓗᕐᑲᕐᐱᐅᑉ ᖃᓂᒥᔫᓂ ᐃᒪᖅᑰᓂᖅ ᑰᒻᐱᐅᔪᓐᓇᖅᑐᒧᑦ ᒪᓕᒃᑕᐅᒥᐊᓕᑦ ᐋᖅᑭᒃᑕᐅᓚᐅᖅᐳᑦ ᐃᒪᓐᓇ 100, 120, ᐊᒻᒪ 1,25 mg/L ᐸᐅᒃᓴᕐᒧᑦ ᐊᓂᕐᓂᖅᑲᕐᓇᖅᑐᒥᒃ ᐱᔭᓇᐊᖅᑲᕐᓂᖕᒐ ᓄᖕᒍᑎᓇᑉᐸᓪᓕᐊᓂᖕᒐᓄᑦ, ᑲᑎᙵᓗᒥᑦ ᓄᖅᑲᖅᑎᑕᐅᓯᒪᔪᑦ ᑕᖕᒥᓅᑦ, ᐊᒻᒪ ᐊᕙᑎᒧᑦ ᓱᕈᕐᓇᖅᑐᑦ ᐳᓪᓚᕐᑲᕐᓂᖕᒐᓄᑦ, ᑕᒪᐃᓐᓄᑦ, ᑐᙳᕚᕕᒥᔭᐅᓪᓗᓂ ᐅᑭᐅᓄᑦ ᐊᕐᐱᓂᓕᖕᓄᑦ ᖃᐅᔨᓴᖅᑕᐅᔪᑦ ᐱᐊᓂᒃᑕᐅᓂᑯᑦ ᐃᒪᕐᒥᒃ ᐱᔾᔪᑎᓕᖕᓂᒃ

ᑐᖅᑲᖅᑕᕐᕕᖕᒧᑦ ᐃᑲᔫᑎᒃᓴᑦ ᖃᐅᔨᓴᖅᑕᐅᓯᒪᔪᑦ Dalhousie ᓯᓚᑦᑐᖅᓴᕐᕕᒡᔪᐊᕐᒥ. ᓚᐃᓴᓐᓯᑖᖅᑐᖅ ᐲᖅᓯᖁᔨᔪᖅ ᑯᕕᑎᑕᐅᔪᑦ ᐱᐅᓂᖕᒋᓐᓂᑦ ᑭᓪᓚᖃᖅᑎᑕᐅᔪᓂᑦ KIM-3-ᒥ ᐊᒻᒪᓗ ᐃᓚᓯᓂᕐᒥᑦ ᑭᓪᓚᖃᕐᓂᕐᒥᑦ KIM-5-ᒧᑦ ᒫᓐᓇᐅᔪᖅ ᑭᓪᓚᖃᖕᒋᑦᑐᖅ. ᓯᕗᓂᑦᓴᕐᒥᑦ ᑭᓈᓗᖃᕐᕕᒃ ᓴᓇᔭᐅᑉᐸᑦ KIM-3 ᑭᒡᒐᖅᑐᐃᓂᐊᖅᑐᖅ ᐃᓚᖕᒐᒍᑦ ᓴᓗᒻᒪᓴᖅᑕᐅᓯᒪᔪᓂᑦ ᑭᓈᓗᒻᒥᑦ ᐊᒻᒪᓗ KIM-5 ᑭᒡᒐᖅᑐᐃᓂᐊᖅᑐᖅ ᓴᓗᒻᒪᖅᓯᒪᑦᓯᐊᖅᑐᒥᑦ ᑭᓈᓗᒻᒥᑦ ᑯᕕᑎᑕᐅᔪᒥᑦ.
ᖃᓄᐃᖕᒐᓂᐊᕐᓂᖕᒐᓄᑦ ᐅᖃᐅᔾᔨᔨ ᐊᑐᓕᖁᔨᔪᖅ ᑯᕕᔪᑦ ᐱᐅᓂᖕᒋᓐᓄᑦ ᑭᒡᓕᐅᔪᑦ ᐊᑐᖅᑕᐅᔪᑦ KIM-5-ᒥᑦ CBOD 100 mg/L, 120 TSS mg/L, ᐊᒻᒪᓗ ᐲᖅᓯᓂᕐᒧᑦ faecal coliforms-ᓂᒃ ᑭᒡᓕᐅᓂᖕᒐᓄᑦ ᑖᓐᓇ ᑭᒃᑯᑐᐃᓐᓇᕐᓄᑦ ᐋᓐᓂᐊᖃᕐᓇᙱᑦᑐᓕᕆᓂᕐᒧᑦ ᑭᒡᓕᐅᖕᒪᑦ ᐊᒻᒪᓗ ᐊᕙᑎᒧᑦ ᑭᒡᓕᐅᙱᔅᓱᓂ. ᐊᕙᑎᑖᖅᑎᑕᐅᓂᖅ ᑭᒡᓕᓕᐅᖅᑕᐅᓯᒪᔪᖅ ᐊᒃᑕᑯᓂᑦ ᐃᒥᑦᑎᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᙱᔅᓱᓂᓗ ᑭᒃᑯᑐᐃᓐᓇᕐᓄᑦ ᐃᖃᓪᓚᐊᕐᓂᕐᒧᑦ, ᐊᖑᓇᓯᖕᓂᕐᒧᑦ, ᐅᕝᕙᓘᓐᓃᑦ ᑭᐱᙳᐃᔭᕐᓂᕐᒧᑦ.ᑰᒐᓛᑦ ᐃᓚᐅᑎᑕᐅᖕᒋᑦᑐᑦ ᒐᕙᒪᑐᖃᒃᑯᑦ ᐃᒋᑕᐅᔪᖅ ᐃᒪᕐᒥᒃ ᐊᑐᖅᑐᓄᑦ ᐋᖅᑭᐅᒪᔪᓂᒃ ᑯᕕᔪᓄᑦ ᒪᓕᒐᕋᓛᑦ SOR/2012-139 ᐃᖃᓗᓕᕆᓂᕐᒧᑦ ᐱᖁᔭᖅ ᑎᑎᕋᖅᑕᐅᓂᕐᒧᑦ 2012-06-29. ᑰᒡᔪᐊᑦ ᐊᑐᖅᑕᐅᔪᓐᓃᕐᒥᔪᑦ ᐊᕙᑎᒧᑦ ᑭᒡᓕᐅᔪᓄᑦ ᓄᓇᑦᓯᐊᕐᒥᑦ ᓄᓇᕗᒻᒥ ᐃᒪᓕᓇᕇᑦ ᑲᑎᒪᔩᖕᒥᑦ ᐃᒻᒪᒃᑲᓐᓂᖅ ᑯᕕᑎᑦᑎᖃᑦᑕᓚᐅᖅᑐᑦ ᑭᒡᓕᐅᔪᓂᑦ ᐃᓯᒪᓕᐅᕆᓂᕐᒧᑦ.ᓂᕆᐅᒋᔭᐅᔪᑦ ᐊᕐᕌᒍᑕᓖᑦ ᑭᓈᓗᖃᕐᕕᒻᒥᑦ ᐆᒻᒪᖅᑯᑎᓕᐅᓂᕐᒥᑦ (ᐃᖕᒋᕋᓂᖕᒐ) 2043−ᒥᑦ 19,200 m3−ᓂᑦ, ᓴᓇᒻᒪᖕᒐᓄᑦ ᑭᓈᓗᖃᕐᕕᒃ ᐊᖏᓂᓕᒻᒥᑦ 26,900 m3.

Personnel

Personnel on site: 2
Days on site: 260
Total Person days: 520
Operations Phase: from 2023-09-30 to 2043-09-30

Activités

Emplacement	Type d'activité	Statut des terres	Historique du site	Site à valeur archéologique ou paléontologique	Proximité des collectivités les plus proches et de toute zone protégée
sewage lagoon	Municipal and Industrial Development	Municipal	shallow fresh water lake	site has no archeological or paleontological value	proximity to the town 1.3 km

Engagement de la collectivité et avantages pour la région

Collectivité	Nom	Organisme	Date de la prise de contact
Information is not available			

Autorisations

Indiquez les zones dans lesquelles le projet est situé:

South Baffin

Autorisations

Organisme de régulation	Description des autorisations	État actuel	Date de l'émission/de la demande	Date d'échéance
Office des eaux du Nunavut	water license 3BM-KIM1929	Active	2019-05-27	2029-05-26

Project transportation types

Transportation Type	Utilisation proposée	Length of Use
Land	SEWAGE TRUCKS	

Project accomodation types

Collectivité

Utilisation de matériel

Équipement à utiliser (y compris les perceuses, les pompes, les aéronefs, les véhicules, etc.)

Type d'équipement	Quantité	Taille – Dimensions	Utilisation proposée
excavator	1	heavy duty	excavation
crusher	1	heavy duty	aggregate production
screener	1	heavy duty	aggregate screening
dump truck	2	heavy duty	aggregate and construction material ground transportatiion
front loader	1	heavy duty	loading aggregate and construction materials
heavy duty compactor	2	heavy duty	aggregate compaction
grader	1	heavy duty	grading
dewatering pumps	2	heavy duty	surface water management and diversion
water truck	1	12000 L	aggregate material compaction

Décrivez l'utilisation du carburant et des marchandises dangereuses

Décrivez l'utilisation de carburant :	Type de carburant	Nombre de conteneurs	Capacité du conteneur	Quantité totale	Unités	Utilisation proposée
unknown	hazardous	0	0	0	Liters	Not applicable
Diesel	fuel	1	12000	12000	Liters	PPD fuel truck

Consommation d'eau

Quantité quotidienne (m3)	Méthodes de récupération de l'eau proposées	Emplacement de récupération de l'eau proposé
0		

Déchets

Gestion des déchets

Activités du projet	Type des déchets	Quantité prévue	Méthode d'élimination	Procédures de traitement supplémentaires
Information is not available				

Répercussions environnementales :

presently community sewage disposal practice is direct discharge into marine environment. this project will improve environmental impacts by providing proper sewage containment and treatment.

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

1. Municipality sewage disposal facility is identified as Municipal Capital Facility. Project consists of Sewage Lagoon and wetland construction. Daily service provision service consists of Collecting raw sewage from businesses and private housing, trucking and disposing the raw sewage into sewage lagoon. Once a year sewage will be decanted into wetland area. To construct new sewage lagoon, local quarry material will be used. Produced quarry aggregate will be trucked to the construction site. Recommended but not limited to, PPE in sewage disposal consists of gloves, eye protection, hard hat, steel toe boots, tywek coverall and face respirator. There is no safety requirement to have fire fighting equipment installed at the sewage lagoon facility. Fire extinguishers are located within sewage trucks. Sewage truck engine and sewage pump are the Noise sources during sewage disposal process. Ear plugs are recommended.

Description de l'environnement existant : Environnement physique

Presently Kimmirut sewage disposal is uncontrolled direct sewage discharge into the wetland area, directly connected with marine environment. Access road to existing sewage discharge area will be upgraded. There are no designated recreational, harvesting or park areas in vicinity.

Description de l'environnement existant : Environnement biologique

Existing shallow fresh water lake to be converted into sewage lagoon does not house any aquatic species. It is not recognized spot as a critical habitat or residence of any species. Locals have not noticed any migration or spawning patterns of any species.

Description de l'environnement existant : Environnement socio-économique

Existing area has been used as an unregulated sewage disposal for decades. There are no land or marine harvesting activities in sewage disposal area.

Miscellaneous Project Information

Presently raw sewage collection from private homes and businesses is carried out daily with sewage truck. Upon filling the sewage truck to the capacity, raw sewage is discharged into sewage lagoon where primary influent treatment occurs. During summer months sewage is transferred/decanted into wetland area. Initial sewage decanting flow into wet land is actuated by sewage transfer gas powered pump. As soon as syphoning transfer starts, sewage pump is disconnected and removed from the site. Sewage decanting/transfer process from lagoon cell into wetland takes on an average 6-8 weeks. Sewage final effluent polishing treatment is completed in the wet land prior to entering the marine environment.Gravel supply for all road upgrades and new road built, will be supplied from existing quarry.Aggregate volumes required for sewage lagoon construction and truck turn around area are estimated @ 34 000 m3Estimated existing quarry gravel supply is 70 000m3

Identification des répercussions et mesures d'atténuation proposées

Constructing the new waste water treatment disposal facility (sewage lagoon) will significantly improve land and aquatic environment

Répercussions cumulatives

Monitored and regulated new sewage disposal facility will have significant positive impact on environment

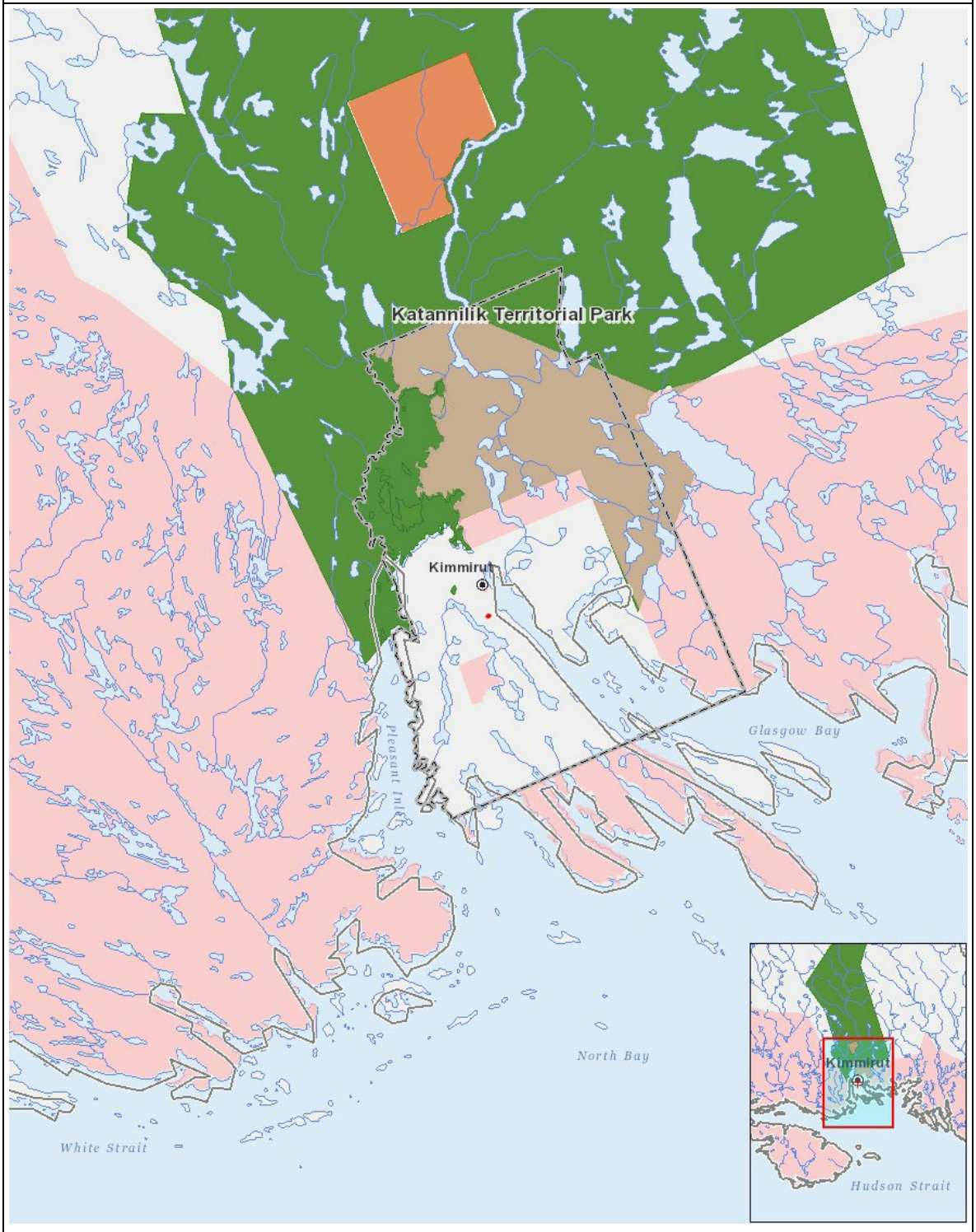
Impacts

Identification des répercussions environnementales

	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																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
Exploitation																									
Municipal and Industrial Development		-	-	-	-	P	-	-	-	-	-	-	-		-	U	M	P	-		-	P	P	P	P
Désaffectation																									
-		-	-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-	-		-	-	-	-	-

(P = Positive, N = Négative et non gérable, M = Négative et gérable, U = Inconnue)

Site du projet



Liste des géométries de projet

1	polygon	sewage lagoon