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NUNAVUT IMPACT REVIEW BOARD

NUNAVUMI AVATILIKIYIN KATIMAYIN

NIRB Application for Screening #125089

Former Iqaluit Metal Dump Remediation

Application Type:	New
Project Type:	Remediation
Application Date:	3/10/2017 10:14:40 AM
Period of Operation:	From 2017-05-01 to 2017-12-31
Proposed Authorization:	From 2017-05-01 to 2017-12-31
Project proponent:	Jackie Barker Transport Canada 3-344 Edmonton Street Winnipeg Manitoba R3C 0P6 Canada Tel: 204-979-1739, fax:

DETAILS

Non-technical project proposal description

English: The Iqaluit Former Vehicle Dump and Community Landfill (the site) is situated approximately 1.7 km southwest of the City of Iqaluit, Nunavut. The former dump and landfill occupies a total area of approximately 7.25 ha (72,500 m2), which includes the up-gradient debris area and the lower area bordering the Sylvia Grinnell River. The site is adjacent to the Sylvia Grinnell Territorial Park protected area and is within the administrative boundaries of Iqaluit as shown on Schedule A of the 2016 Draft Nunavut Land Use Plan issued by the Nunavut Planning Commission. The site is located within Nunavut Management Area 53 (Frobisher Bay Watershed). The area was used as a military and municipal landfill starting in the late 1950's and early 1960's. The United States Air Force (USAF) used the site from 1955 to 1963 as a metal dump for vehicles, truck bodies, barrels and scrap metal. The site was believed to be used for the disposal of small quantities of municipal waste from the City of Iqaluit in the 1960's. A few examples of municipal wastes disposed of at the site include food cans and bottles, kitchen appliances, bicycles, tires, wooden pallets, animal remains, water heaters and toys. The site was reportedly abandoned in the 1970s. Upon closure of the site, it is believed that a cap consisting of granular material was placed on top and on the face of the landfill site to cover much of the debris. Transport Canada (TC) proposes to implement a remediation project at the site to address the environmental and physical impacts associated with the historical military and municipal waste disposal at the site. The undertaking is the remediation of the former Iqaluit vehicle dump and community landfill and will include the following main components: • Removal of debris, contaminated soil and hot spot contaminated sediments and consolidation into on-site landfill or disposal off-site, depending on the waste stream. • Engineered decommissioning of the on-site landfill. • Monitoring of the performance of the remediation work. • Temporary diversion of a drainage feature to remove impacted sediments/soil/debris. Improvement of the same drainage feature following the remediation with a rip-rap structure (as required) to act as a passive treatment system for the enhanced recovery of surface water and sediments downstream of the drainage feature. • Swale design to divert precipitation and melt water away from the decommissioned landfill slopes to prevent both erosion and water infiltration. • Collection of surface water samples from ponds and drainage features to monitor the natural recovery following the remediation program. In 2017, a remedial action plan including remedial options evaluation was completed. Alternative methods and locations that were considered included full removal off-site of landfill debris and other scattered debris, engineered wetlands for the treatment of contaminant impacted sediments in downstream ponds, in-situ treatment of soil contamination and managing impacts in place through site-specific contaminated site risk assessment and management. The options were reviewed against a number of screening criteria. The option selected met all screening criteria. Additional details are available in Remedial Action Plan, Former Metal Dump and Community Landfill, Iqaluit, Nunavut. 27 January 2017 Report prepared by Arcadis Canada Inc. for PWGSC. The undertaking will improve the environmental conditions of the site and enhance the quality of the downstream surface water environment.

Impacts associated with the remediation projects are predominantly related to the use of machinery on site. A detailed list of mitigation measures have been compiled including a spill contingency plan, dust control measures, and sediment control measures. It is anticipated that physical work at the site will occur between May 2017 and October 2017, with long-term monitoring occurring until December 2020. Types of equipment to be used include excavator, dump truck, bulldozer, pickup truck, grader, and backhoe. All fuel storage will be off-site. It is anticipated that there will be 15 personnel on-site for the first three months of the project, 5 personnel on-site by the end of the 2017 field season, and 2 personnel on-site during monitoring events. In November 2016, Transport Canada sent letters to potentially interested parties, including City of Iqaluit, Qikiqtani Inuit Association, Government of Nunavut (Department of Economic Development and Transportation and Department of Environment), and Nunavut Tunngavik Incorporated. The intent of the letters was to provide notification of the upcoming project and to request any comments. The City of Iqaluit responded to the letter and indicated that "The City has no concerns with this at this time and welcomes this work." The Government of Nunavut, Department of Economic Development and Transportation also responded and indicated support of the project.

French: L'ancien dépotoir de véhicules et site d'enfouissement communautaire d'Iqaluit (le site) est situé à environ 1,7 km au sud-ouest de la ville d'Iqaluit, au Nunavut. L'ancien dépotoir et site d'enfouissement occupe une superficie totale d'environ 7,25 ha (72 500 m2), ce qui comprend la zone des débris en amont et la zone inférieure longeant la rivière Sylvia Grinnell. Le site est adjacent à la zone protégée du parc territorial Sylvia Grinnell et se trouve à l'intérieur des limites administratives d'Iqaluit, comme illustré à l'annexe A du plan d'aménagement du territoire du Nunavut publié par la Commission d'aménagement du Nunavut. Le site se trouve à l'intérieur de la zone de gestion des eaux 53 (bassin versant Frobisher Bay). Depuis la fin des années 1950 jusqu'au début des années 1960, la zone était utilisée en tant que site d'enfouissement municipal et militaire. Entre 1955 et 1963, la United States Air Force (USAF) a utilisé les lieux comme site d'enfouissement de métal et y a enfoui des véhicules, des carrosseries de camions, des barils et de la ferraille. Dans les années 1960, le site aurait aussi été utilisé pour l'élimination de petites quantités de déchets municipaux provenant de la ville d'Iqaluit. Parmi les déchets municipaux qu'on y aurait enfouis, notons des boîtes de conserve, des bouteilles, des appareils de cuisine, des bicyclettes, des pneus, des palettes de bois, des restes d'animaux, des chauffe-eau et des jouets. Le site aurait été abandonné dans les années 1970. Après l'abandon du site, il semblerait que le dessus et la face du site d'enfouissement aient été recouverts d'une couche de matériau granulaire afin de couvrir une bonne partie des débris. Transports Canada (TC) propose de mettre en œuvre un projet d'assainissement du site afin de remédier aux incidences environnementales et physiques de l'élimination des déchets militaires et municipaux sur les lieux. Cet engagement prévoit l'assainissement de l'ancien dépotoir de véhicules et site d'enfouissement communautaire d'Iqaluit, et comportera les éléments suivants : • l'enlèvement des débris, du sol contaminé et des sédiments contaminés du point chaud, et leur consolidation à même le site d'enfouissement ou leur élimination hors site, selon le flux de déchets; • le déclassement technique du site d'enfouissement; • la surveillance du rendement des travaux d'assainissement; • la dérivation provisoire d'un fossé de drainage pour enlever les sédiments, le sol et les débris contaminés; l'amélioration de ce fossé de drainage à la suite de l'assainissement grâce à une structure d'enrochement (suivant les besoins) faisant office de système de traitement passif permettant la récupération assistée des eaux de surface et des sédiments en aval du fossé; • l'aménagement d'une dénivellation permettant de dériver les eaux de précipitation et de fonte des pentes du site d'enfouissement déclassé afin de prévenir l'érosion et l'infiltration d'eau; • la collecte d'échantillons d'eau de surface d'étangs et des fossés de drainage afin d'assurer la récupération naturelle suite au programme d'assainissement. En 2017, un plan d'assainissement comportant une évaluation des options de restauration a été achevé. Des méthodes et des lieux de rechange ont été envisagés, dont l'enlèvement complet hors site des débris du site d'enfouissement et des autres débris éparpillés, des terres humides artificielles pour le traitement des sédiments touchés par les contaminants dans les étangs en aval, le traitement sur place des sols contaminés et la gestion des répercussions sur place en procédant à l'évaluation des risques et à la gestion du site contaminé. Les options ont été évaluées au regard de plusieurs critères de sélection. Les options sélectionnées respectaient l'ensemble des critères de sélection. Plus de détails sont disponibles dans le Plan d'assainissement, ancien site d'enfouissement de métal et communautaire, Iqaluit, Nunavut. 27 janvier 2017, rapport préparé par Arcadis Canada Inc. pour SPAC. L'engagement permettra d'améliorer les conditions environnementales du site et la qualité des eaux de surface en aval. Les répercussions des projets d'assainissement sont principalement liées à l'emploi de machines sur le site. Une liste détaillée des mesures d'atténuation a été compilée. On y trouve un plan d'urgence en cas de déversement, des mesures de contrôle des poussières, et des mesures de contrôle des sédiments. Selon les prévisions, les travaux physiques sur le site s'échelonneront de mai à octobre 2017. La surveillance à long terme devrait se prolonger jusqu'en décembre 2020. Des excavatrices, des camions à benne, des bouteurs, des camionnettes, des niveleuses et des pelles rétrocaveuses figurent parmi l'équipement qui sera utilisé. Le combustible sera entreposé à l'extérieur du site. On s'attend à ce qu'il y ait 15 employés sur place pendant les trois premiers mois du projet, cinq employés à la fin de la saison 2017 sur le terrain, et deux emp

Inuktitut: ᐃᖃᓗᖕᓂ ᓄᓇᒃᑰᕈᑎᓄᑦ ᐊᒃᑦᕿᐱᐅᓚᐅᖅᑐᖅ ᓄᓇᓕᐅᓪᓗ ᐊᒃᑦᕿᐱᖕᒐ (ᐃᓂᒥᔭᐅᔪᖅ) ᐅᖓᓯᖕᓂᓕᒃ 1.7 ᑮᓛᒥᑕᐸᓘᖕᓂᒃ ᐃᖃᓗᐃᑦ ᓄᓇᓕᐸᐅᔭᖕᒐᑕ ᓂᒋᐊᑕ ᐱᓇᖕᓇᖅᐸᓯᖕᒐᓂ, ᓄᓇᕗᒻᒥ. ᐆᒃᑐᕋᕈᓯᑎᒍᑦ ᑕᐃᔭᑦ (UTM) ᐃᓂᐅᑉ ᕿᑎᐊᓂᖕᒑᖅᓗᒍ ᓇᓃᓐᓂᓇᔭᖕᒐ E521904.94, N7067812.69. ᐊᒃᑦᕿᐱᐅᓚᐅᖅᑐᖅ ᐊᒃᑕᑯᓂᓪᓗ ᓴᐅᓯᕝᕕᒃ ᐊᖏᑎᒥᓂᖃᖅᑐᖅ 7.25 Hᐊᒃᑎᐊᐸᓘᖕᓂᒃ (72,500 ᒦᑕᑦ ᑭᐸᖅᑲᓇᒃᑐᑦ), ᐃᓚᒋᔭᐅᓪᓗᑎᒃ ᓯᕕᖕᒐᓂᐊᑕ ᖁᕝᕙᓯᖕᓂᐊᓂ ᐊᒃᑕᑯᐃᑦ ᐊᒻᒪ ᐊᒃᐸᓯᖕᓂᖅᓴᖅ ᑭᓪᓕᐊᓃᕐᓗᓂ ᐃᖃᓗᐃᑦ ᑰᖕᒐᓄᑦ. ᖁᕝᕙᓯᒃᑐᒃᑯᑦ ᑭᓯᐊᓂ ᑎᑭᑕᒃᓴᐅᔩᖅᐳᖅ ᐊᖅᑯᑎᒃᑯᑦ. ᐃᓂᒥᔭᐅᔪᖅ ᐊᑭᐊᓂᑦᑐᖅ ᐃᖃᓗᐃᑦ ᑰᖕᒐᑕ ᓄᓇᐳᑦ ᒥᕐᖑᐃᖅᓯᕐᕕᖕᒐᓂ ᓴᐳᒻᒥᔭᐅᓯᒪᔪᒥ ᐃᓗᐊᓂᕐᓗᓂᓗ ᐃᖃᓗᐃᑦ ᐊᐅᓚᐸᒃᑕᖕᒐᑕ ᑭᓪᓕᖕᒐᓂᑦ ᓯᖅᑭᔫᖅᑎᑕᐅᓯᒪᓪᓗᓂ ᐊᑕᔪᒥ AΓ 2016ᒧᑦ ᑎᑎᕋᖅᑕᐅᕐᒐᖅᑐᒥ ᓄᓇᕗᒻᒥ ᓄᓇᓂᒃ ᐊᑐᕐᓂᕐᒧᑦ ᐸᕐᓇᐅᑎᒥ ᑎᑎᕋᖅᑕᐅᓚᐅᖅᑐᒥᒃ ᓄᓇᕗᒻᒥ ᐸᕐᓇᐃᔭᒃᑯᓐᓄᑦ. ᐃᓂᒥᔭᐅᔪᖅ ᐊᑐᖅᑕᐅᓚᐅᖅᑐᖅ ᐅᓇᑕᖅᑐᒃᓴᓕᓇᔾᔪᑦ ᐊᒻᒪᓗ ᓄᓇᓕᖕᒧᑦ ᐊᒃᑕᑯᓂᒃ ᓴᐅᓯᕝᕕᒥᔭᐅᓚᐅᖅᑐᖅ ᐱᒋᐊᖅᓱᒥᑦ 1950ᑦ ᐃᓱᐊᓂ ᐱᒋᐊᓕᕼᕐᓂᖕᒥᓐᓂᓗ 1960ᑦ. ᐊᒥᐊᓕᑲᒥᐅᑦ ᖃᖕᓚᑕᓰᒃᑯᑦ ᐅᓇᑕᖅᑐᒃᓴᖕᒥᑦ (USAF) ᐊᑐᖅᐸᓚᐅᖅᑖ ᐃᓂᒥᔭᐅᔪᖅ 1955ᒥᑦ 1963ᒧᑦ ᓴᕕᖃᔭᖕᓄᑦ ᐊᒃᑦᕿᐱᒥᔭᐅᓪᓗᓂ ᓄᓇᒃᑰᕈᑎᓄᑦ, ᓄᓇᒃᑰᕈᑎᑦ ᑎᒥᑕᕕᓂᖕᒥᓐᓄᑦ, ᖃᒃᑦᕿᓄᑦ ᐊᒻᒪᓗ ᓴᕕᖃᔭᖕᓄᑦ ᐊᑐᕈᓐᓃᖅᑐᓄᑦ. ᐃᓂᒥᔭᐅᔪᖅ ᐊᑐᖅᑕᐅᓇᓱᒋᔭᐅᓚᐅᖅᑐᖅ ᐊᖏᓗᐊᓐᖏᑦᑐᓂᒃ ᐊᒃᑯᓄᑦ ᐃᖃᓗᐃᑦ ᓄᓇᓕᐸᐃᔭᖕᓚᓄᑦ 1960ᖕᒥᓐᓂ. ᐆᒃᑑᑕᐅᓪᓗᑎᒃ ᓄᓇᓕᖕᒧᑦ ᐃᒥᔭᐅᕙᓚᐅᖅᑐᑦ ᐃᓂᒥᔭᐅᔪᒥ ᐃᓚᖃᖅᑐᑦ ᓂᕿᓄᑦ ᑑᒃᓴᐃᑦ ᐃᒥᖃᐅᓯᕝᕖᓪᓗ, ᐃᒑᔾᔨᑏᑦ, ᐱᔩᑏᑦ, ᐊᒃᓴᓗᐊᑦ, ᕿᔪᐃᑦ ᑐᙵᕕᒥᔭᐅᕙᒃᑐᑦ ᐅᒥᐊᕐᔪᐊᒃᑰᕐᓂᑯᓄᑦ, ᐆᒪᔪᕕᓃᑦ ᓂᕿᕐᓗᑯᖕᒥᑦ, ᐃᒪᕐᒥᒃ ᐆᓇᖅᑐᓕᐅᕈᑎᑦ ᐊᒻᒪᓗ ᐱᙳᐊᑦ. ᐃᓂᒥᔭᐅᔪᕈᖅ ᐃᒃᓯᖕᓇᖅᑕᐅᓚᐅᖅᑐᖅ 1970ᖕᒥᓐᓂ. ᒪᑐᔭᐅᖕᒪᑦ, ᐊᒃᑕᑯᓂᒃ ᓴᐅᓯᕝᕕᒃ ᖃᓪᓕᖅᑕᐅᓚᐅᕋᓱᒋᔭᖅ ᓯᐅᕋᕐᒥᒃ ᓴᐅᔭᐅᓂᐊᕐᓚᑕ ᐊᒃᑕᒃ. ᐃᖏᕐᕋᔪᑎᓕᓇᔾᔪᑦ ᑲᓇᑕᒥ (TC) ᑐᒃᓯᕋᐅᓯᐅᕐᓯᒪᖕᓚᑕ ᐋᕿᒃᓯᔪᒪᓪᓗᑎᒃ ᐱᐅᓯᕚᓪᓕᕈᑎᒧᑦ ᐱᓕᕆᐊᒃᓴᒥ ᑕᒡᕙᓂ ᐃᓂᒥᔭᐅᔪᒥᑦ ᐃᓱᒪᒥᓪᓗᒍ ᐊᕙᑎᒥᔭᐅᔪᖅ ᐊᒻᒪ ᓴᕿᔮᕐᓂᒃᑯᑦ ᐊᒃᑐᐃᒍᑎᐅᔪᑦ ᐊᒃᑐᐊᓂᖃᖅᑐᑦ ᐅᓇᑕᖅᑐᒃᓴᓄᑦ ᐃᒻᒪᑲᓪᓚ ᐊᒻᒪ ᓄᓇᓕᖕᓄᑦ ᐊᒃᑦᕿᐱᐅᓯᒪᓂᖕᒐᓂᑦ ᑖᓐᓇ ᐃᓂᒥᔭᐅᔪᖅ. ᐱᓕᕆᓂᐅᔪᖅ ᐱᐅᓯᕚᓪᓕᖅᑎᑦᑎᓂ ᐃᖃᓗᐃᑦ ᓄᓇᓯᐅᑎᓄ ᐊᒃᑦᕿᐱᕕᓂᕐᒥᑦ ᐊᒻᒪ ᓄᓇᓕᖕᓄᑦ ᐊᒃᑦᕿᐱᖕᒥᑦ ᐊᒻᒪ ᐅᑯᓂᖕᒐ ᐃᓚᖃᓗᐊᕐᓂᐊᖅᐳᑎᒃ: • ᐊᒃᑕᑯᓂ ᐋᔭᐃᓗᑎᒃ, ᓱᕿᖅᑎᕐᓯᒪᔪᓂ ᑐᐊᕙᖕᓂᑦ ᐊᒻᒪ ᐃᑭᑐᐃᓐᓇᓇᐊᖃᖅᑐᓂᑦ ᓱᕿᖅᑎᕐᓯᒪᓂᕐᒧᑦ ᐊᑕᐅᓯᕐᒧᐊᖅᑕᐅᓗᑎᒃ ᐊᒃᑖᓯᕝᕕᖕᒧᑦ ᐅᕝᕙᓘᓐᓃᑦ ᐃᒥᑦᑎᕝᕕᒃᓴᒧᑦ, ᐊᒃᑐᐃ ᐱᓕᕆᐅᖕᒍᔪᑦ ᑕᐅᑐᒡᓗᒥᑦ. • ᐱᓕᕆᐊᖑᓕᕆᓂᒃᑯᑦ ᐃᓂᖃᕐᕕᐅᔪᖅ ᐊᒃᑦᕿᐱᒃ ᐊᑐᕐᓃᖅᑎᓪᓗᒍ • ᖃᐅᔨᓴᕐᕚᓕᐊᓗᑎᒃ ᐱᓕᕆᓂᕐᒥᑦ ᐱᐅᓯᕚᓪᓕᖅᑎᑦᑎᓂᕐᒧᑦ ᐱᓕᕆᐊᒥᑦ. • ᑰᓪᕕᐅᑲᐃᓐᓇᕐᓂᐊᕐᑐᒥᑦ ᐋᕿᒃᓯᓗᑎᒃ ᒪᑯᐊ ᐊᒃᑐᖅᑕᐅᓯᒪᔪᑦ ᓯᕿᒧᑦ/ᑐᐊᐸᐃ/ᓴᓃᑦ. ᐱᐅᓯᕚᓪᓕᖅᑎᑦᑎᓗᑎᒃ ᒫᓯᒥᖕᓚᑦᑕᐃᓐᓇ ᑰᓪᕕᐅᔪᒥ ᐱᐅᓯᕚᓪᓕᖅᑎᑦᑎᓚᐅᕐᑎᓪᓗᒥᑦ ᓴᐳᓕᑕᓕᐅᕐᓗᒍ (ᐱᔭᓇᐊᖅᑲᕈᑎᒃ) ᐃᒪᕐᒥ ᐱᐅᓯᕚᓪᓕᕈᑎᐅᓂᐊᕐᓗᓂ ᐊᒻᒪ ᓱᕈᕐᓂ ᑰᒃᑕᐅᕙᓪᓕᐊᔪᓂᑦ ᑕᕝᕗᓇ ᑰᓕᐊᖑᓯᒪᔫᒃᑯᑦ. • ᐊᑦᑎᒃᑐᕐᒥ ᓴᓇᓗᑎᒃ ᐊᑕᐅᓯᕐᒥ ᑲᑎᓗᐊᕐᑯᓇᒥ ᐊᒻᒪ ᐊᐳᑎ ᐊᐅᒃᐸᓪᓕᐊᔪᒥ ᑰᓪᕕᐅᓇᔭᕐᓗᓂ ᐊᒃᑦᕿᐱᐅᑉ ᐅᕕᖕᒐᓂᖕᒐᒍᑦ ᑲᑎᑐᐃᓐᓇᕐᑯᓇᒥᑦ ᐊᒻᒪ ᐃᒪᖅ ᓯᒥᒃᓯᒪᓕᑎᑕᐅᕐᑯᖕᒥᓂᕐᒧᑦ. • ᓄᐊᑦᑎᑲᑖᓗᑎᒃ ᐃᒪᕐᒥ ᖃᖕᒐᓃᑦᑐᒥ ᑕᓯᓚᖕᓄᑦ ᐊᒻᒪ ᑰᕕᐊᖃᑦᑕᖅᑐᓂ ᖃᐅᔨᓴᕈᑎᐅᓂᐊᖅᑐᓂ ᓄᓇ ᐃᓕᖁᓯᐊᓄᑦ ᐅᑎᖅᐸᓪᓕᐊᓂᖕᒐ ᖃᓄᐃᐸᓪᓕᐊᓂᖕᒐᓂᑦ ᐱᐅᓯᕚᓪᓕᖅᑕᐅᓚᐅᖅᑎᓪᓗᒍ. 2017-ᒥ, ᓴᓗᒪᓯᓴᐃᓂᕐᒧᑦ ᐸᕐᓇᐅᑏᑦ ᐊᒻᒪ ᓴᓗᒪᓯᓴᐃᓂᕐᒧᑦ ᖃᓄᐃᓕᐅᕈᑎᐅᔪᓐᓇᖅᑐᑦ ᖃᐅᔨᓴᖅᑕᐅᓚᐅᕐᐳᑦ ᐱᐊᓂᒃᓱᑎᓗ. ᐊᔪᐊᒍᖕᒑᖅ ᐱᓕᕆᐊᖑᔪᓐᓇᖅᑐᖅ ᐊᒻᒪ ᐃᓂᒃᓴᐅᔪᓐᓇᖅᑐ ᐃᓱᒪᒋᔭᐅᓚᐅᖅᐳᑦ ᐃᓚᖃᖅᓱᑎᒃ ᐋᔭᐃᑦᑎᐊᒪᓇᖅᓂᕐᒥᑦ ᐊᒃᑦᕿᐱᐅᑉ ᓯᓚᑎᐊᓂᑦ ᐊᒃᑦᕿᐱᖕᒥᑦ ᐊᒻᒪᓗ ᐊᓯᖕᒥᓐᓂᑦ ᑎᒃᑕᐅᓯᒪᓚᓚᒃᑐᓂᑦ ᓴᓂᕐᓂᑦ, ᐃᒪᕐᔫᓂᐅᔪᓂᑦ ᐋᕿᒃᓯᒪᐃᓗᑎᒃ ᓱᕿᕐᓯᒪᔪᓄᑦ ᐊᒃᑐᖅᑕᐅᓯᒪᔪᓂᑦ ᐊᒻᒧᑦ ᑰᓚᓖᓚᐅᕐᓗᑎᒃ ᑕᓯᕐᓄᑦ, ᑐᐊᕙᓂ ᐱᐅᓴᓐᓂᖅᑎᓯᒪᔪᓂ ᓴᓗᒪᖅᓴᐃᓗᑎ ᐊᒻᒪ ᐊᐅᓚᑦᑎᓗᑎᒃ ᐊᑐᐊᒍᑎᐅᓇᔭᖅᑐᓂᑦ ᐊᑐᖅᑕᐅᔪᓂᑦ ᖁᐊᕐᓵᕐᓇᖅᑐᒦᒍᓐᓇᖅᑐᓂᑦ. ᐃᓱᒪᒋᔭᐅᑲᓐᓂᕐᓯᒪᔪᑦ ᕿᒥᕐᕈᐊᖅᑕᐅᓚᐅᕐᐳᑦ ᐊᔾᔨᒌᖕᒋᑦᑐᓂ ᓇᓗᓇᐃᒃᑯᑎᖃᐅᖅᑕᐅᓚᐅᖅᑐᑎᒃ. ᓂᕈᐊᕆᔭᐅᔪᖅ ᑕᒪᐃᓐᓂ ᖃᐅᔨᓴᕈᑎᐅᔪᑦ ᑲᔪᔪᓐᓇᓚᐅᕐᓚᑦ. ᐊᔪᒃᑲᓐᓂᖅᒥᓐᓂ ᑐᓴᒐᒃᓴᖅᑕᓕᒃ ᐅᕙᓂ ᐋᕿᒃᓯᒥᐊᖅᑎᑦᑎᓂᕐᒧᑦ ᐸᕐᓇᐅᑏᑦ, ᓴᕕᖃᔭᖕᓄᑦ ᐊᒃᑦᕿᐱᕕᓂᕐᒧᑦ ᐊᒻᒪ ᓄᓇᓕᖕᒥᓄᑦ ᐊᒃᑦᕿᐱᖕᒧᑦ, ᐃᖃᓗᐃᑦ, ᓄᓇᕗᑦ ᔮᓄᐊᕆ 27, 2017-ᒥ ᐅᓂᒃᑳᓕᐊᑦ ᐊᐅᓚᑕᐅᓪᓗᓂ ᐅᑯᓇᙵᑦ Arcadis Canada Inc. ᐅᑯᓄᖓ PWGSC. ᐱᓕᕆᓂᐅᔪᖅ ᐱᐅᓯᕚᓪᓕᖅᑎᑦᑎᓇᔭᖅᑐᖅ ᐃᓂᒥᔭᐅᔪᒥ ᐊᒻᒪ ᐱᐅᓯᕚᓪᓕᖅᑎᑦᑎᓗᓂ ᓄᓇᐅᑉ ᖃᖓᓐᓂᑐᓂ ᐃᒪᕐᓂ ᑰᐸᓪᓕᐊᒍᑎᒃᓴᒥ. ᐊᒃᑐᐃᒍᑎᐅᓇᔭᖅᑐᓕ ᐱᐅᓯᕚᓪᓕᖅᑎᑦᑎᓂᕐᒧ ᒪᑯᓄᖓ ᓄᓇᓯᐅᑎᓂᑦ ᐊᑐᑲᑕᐅᔪᑦ ᑕᒫᓂ. ᓇᓗᓇᐃᔭᕐᓯᒪᔪᓂᑦ ᐱᐅᓯᕚᓪᓕᖅᑎᑦᑎᓂᕐᒧ ᑲᑎᑕᐅᓯᒪᕗᑦ ᐃᓚᖃᖅᓱᑎᒃ ᑯᕕᔪᖃᑳᓚᒃᐸᑦ ᐸᕐᓇᐅᑎᓂᑦ, ᐳᔫᖅᑎᑎᓗᐊᖅᑕᐃᓕᓂᕐᒧᑦ ᐊᒻᒪᓗ ᓱᕈᕐᓂ ᑕᐅᒪᐅᖕᒐᕈᓵᔭᖅᑎᑎᑕᐃᓕᓂᕐᒧᑦ. ᐃᓱᒪᒋᔭᐅᔪᓕ ᐱᓕᕆᓂᖅ ᐱᓕᕆᐊᖕᒥ ᓖᓐᓇᔭᖅᑐᖅ ᒪᐃ 2017-ᒧ ᐅᒃᑑᐱᕆ 2017-ᒧ ᐊᑯᓐᓂᖕᒐᓂᐅᓂᐊᕐᒪᑦ, ᐊᑯᓂᕈᓗᒃ ᖃᐅᔨᓴᖅᑕᐅᕙᓪᓗᓂ ᑎᑭᓪᓗᒍ ᑎᓯᐱᕆ 2017. ᐱᓕᕆᐊᒃᓴᑦ ᐊᑐᖅᑕᐅᓇᔭᖅᑐᑦ ᐃᒪᐃᑦᑑᕗᑦ ᓄᓇᒥ ᐋᔭᐃᔾᔨᑎ, ᓄᓇᓯᐅᑎ ᑐᐊᕙᒥ ᐅᓯᑲᖅᑕᐅᑎ, ᐳᐊᕐᓇᓯᓕᒃ, ᓄᓇᓯᐅᑎ ᐅᓯᓕᕐᕕᓕᒃ, ᖃᐃᖅᑲᖅᓴᐃᔾᔨᑎ ᐊᒻᒪ ᑯᑭᓕᒃ ᐳᐊᕐᓇᓯᓕᒃ. ᑕᒪᐃᓐᓂ ᐅᕐᓱᐊᓗᐃᑦ ᐱᓕᕆᐊᕕᐅᑉ ᓯᓚᑎᐊᓃᓐᓂᐊᖅᑐᑦ. ᐃᓱᒪᒋᔭᐅᔪᖅ 15-ᓂ ᐃᖅᑲᓇᐃᔭᖅᑐᖃᕋᔭᕐᓂᖕᒋᓐᓂᑦ ᑖᒃᑯᓂ ᓯᕗᓪᓕᖅᑯᓂ ᑕᕿᓂᑦ ᐱᖕᒐᓱᓂ ᐱᒋᐊᓕᖅᑎᓪᓗᒋᑦ, ᑕᓪᓕᒪᓂ ᐃᖅᑲᓇᐃᔭᖅᑎᖃᕐᓗᑎᒃ ᐱᓕᕆᕝᕕᖕᒥᑦ 2017-ᒥ ᐱᓕᕆᐊᓂᓕᖅᑎᓪᓗᒋᑦ, ᐊᒻᒪᓗ ᒪᕐᕉᖕᓂ ᐃᖅᑲᓇᐃᔮᖅᑏᖕᓂ ᖃᐅᔨᓴᖃᑦᑕᓕᐊᑎᓪᓗᒋᑦ. ᓄᕕᐱᕆ 2016-ᒥᑦ, ᐃᖏᕐᕋᔪᑎᓕᓇᔾᔪᑦ ᑲᓇᑕᒥ ᑎᑎᖃᓂ ᐊᐅᓪᓚᖅᑎᑦᑎᑲᓚᐅᕐᓯᒪᔪᑦ ᑕᒪᑐᒥᖕᓚ ᐃᓱᓖᓐᑎᖃᕈᒥᓇᖅᑐᓄᑦ ᐃᓚᖃᖅᓱᑎᒃ ᐃᖃᓗᐃᑦ ᓄᓇᓕᐸᐅᔭᖕᒐᓄᑦ, ᕿᑭᖅᑕᓂ ᐃᓄᐃᑦ ᑲᑐᔾᔨᖃᑎᒌᖕᒥᓐᓄᑦ, ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᖏᓐᓄᑦ (ᐱᕙᓪᓕᐊᔪᓕᕆᔨᒃᑯᓐᓄᑦ ᐊᒻᒪ ᐃᖏᕐᕋᔪᑎᓕᕆᔨᒃᑯᓐᓄᑦ ᐊᒻᒪᓗ ᐊᕙᑎᓕᕆᔨᒃᑯᓐᓄᑦ), ᐊᒻᒪᓗ ᓄᓇᕗᑦ ᑐᙵᕕᒃᑯᓐᓄᑦ. ᑎᑎᕋᖅᑕᐅᔪᑦ ᑐᓴᐅᒪᑎᑦᑎᔾᔪᑎᐅᓇᓱᐊᕈᓯᖅᑐᑦ ᖃᓄᐃᓕᐅᕈᑎᐅᕙᓪᓕᐊᓂᐊᖅᑐᓂᑦ ᐊᒻᒪ ᑕᒃᑯᓄᖓ ᐃᓱᒫᓗᑎᒋᔭᐅᔪᓄᑦ. ᐃᖃᓗᐃᑦ ᓄᓇᓕᐸᐅᔭᖕᒥ ᑮᓇᐅᑦᓯᒪᔪᑦ ᑎᑎᖃᓂ ᐅᖃᖅᑐᑎᓗ "ᓄᓇᓕᐸᐅᔭᐃᑦ ᐃᓱᒫᓘᑎᖃᙱᑦᑐᑦ ᒫᓇ ᐊᒻᒪᓗ ᑐᙵᓱᒃᑎᑦᑎᔾᔪᑎᖃᖅᐳᑎᒃ ᐱᓕᕆᐊᒃᓴᒥᑦ." ᓄᓇᕗᑦ ᒐᕙᒪᒃᑯᑦ, ᐱᕙᓪᓕᐊᔪᓕᕆᔨᒃᑯᑦ ᐊᒻᒪ ᐃᖏᕐᕋᔪᑎᓕᕆᔨᒃᑯ ᑭᐅᓚᐅᕐᒥᔪᑦ ᐃᑲᔪᖅᑐᐃᓯᒪᓂᖃᖅᑐᑎᒃ ᐱᓕᕆᐊᖑᔪᒪᔪᒥᑦ.

Personnel

Personnel on site: 15

Days on site: 140
Total Person days: 2100
Period of operation: from 2017-05-01 to 2017-12-31
Proposed term of operation: from 2017-05-01 to 2017-12-31

ACTIVITIES

Project Activities

Location	Activity Type	Land Status	Site History	Site Archaeological or Palentological Value	Proximity to the nearest communities and any protected areas
TC Iqaluit Landfill 2	Site Cleanup/Remediation	Commissioners	The area was used as a military and municipal landfill starting in the late 1950's and early 1960's. The United States Air Force (USAF) used the site from 1955 to 1963 as a metal dump for vehicles, truck bodies, barrels and scrap metal. The site was believed to be used for the disposal of small quantities of municipal waste from the City of Iqaluit in the 1960's. A few examples of municipal wastes disposed of at the site include food cans and bottles, kitchen appliances, bicycles, t	Not applicable	The project is situated approximately 1.7 km southwest of the City of Iqaluit, Nunavut. The site is adjacent to the Sylvia Grinnell Territorial Park protected area and is within the administrative boundaries of Iqaluit as shown on Schedule A of the 2016 Draft Nunavut Land Use Plan issued by the Nunavut Planning Commission. The site is located within Nunavut Management Area 53 (Frobisher Bay Watershed).

Community Involvement and Regional Benefits

Community	Name	Organization	Date Contacted
Iqaluit	Mélodie Simard	City of Iqaluit	2016-11-01
Iqaluit	P.J. Akeeagok	Qikiqtani Inuit Association	2016-11-01
Iqaluit		Government of Nunavut (Department of Economic Development and Transportation and Department of Environment)	2016-11-01
Iqaluit		Nunavut Tunngavik Incorporated	2016-11-01

AUTHORIZATIONS

Project Locations

South Baffin

Project Authorization

Authorizing Agency	Authorization Description	Current Status	Date Issued / Applied	Expiry Date
Nunavut Water Board	Submitted application via e-mail and mail on Friday, March 3, 2017. Anticipated that project will require a type "B" licence	Applied, Decision Pending		

MATERIAL USE

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

Equipment Type	Quantity	Size - Dimensions	Proposed Use
Excavator	1	350	Earth moving
Dump Truck	1	Tandem	Earth moving
Bulldozer	1	D6	Earthwork
Pickup Truck	1	1500/2500	Personnel
Grader	1	Unknown	Road Maintenance
Backhoe	1	100 HP	Earthwork

Detail Fuel and Hazardous Material Use

Fuel / Material	Type	Number of Containers	Container Capacity	Total Amount	Units	Proposed Use
Other	fuel	0	0	0	Liters	No fuel storage on-site. Will be transported to site in slip tanks and machinery will be fueled at a designated fueling station straight from the slip tank. All fuel storage will be off-site
Hazardous Materials and Chemicals	hazardous	0	0	0	Liters	Not applicable. No storage of chemicals is to take place on-site. All chemical storage will be at the contractor's premises in Iqaluit.

Project Water Consumption

Daily Amount (m3)	Proposed Water Retrieval Methods	Proposed Water Retrieval Location
0	Environmental sampling will be conducted manually by dipping sample containers directly into water bodies. No equipment will be used. 0.1 m3 total water withdrawal for the entire life of project	On-site ponds and drainage features.

WASTE

Waste Management

Project Activity	Type of Waste	Projected Amount Generated	Method of Disposal	Additional Treatment Procedures
Site Cleanup/Remediation	Combustible wastes	N/A	N/A	N/A
Site Cleanup/Remediation	Greywater	N/A	N/A	N/A
Site Cleanup/Remediation	Hazardous waste	1040m3	Off-site disposal at licensed facility	N/A
Site Cleanup/Remediation	Non-Combustible wastes	3629 m3	Consolidation into on-site landfill	N/A
Site Cleanup/Remediation	Overburden (organic soil, waste material, tailings)	700m3	Disposal at Iqaluit Land Treatment Unit or removal to the south	N/A
Site Cleanup/Remediation	Sewage (human waste)	N/A	There will be on-site portable lavatories and refuse will be disposed of at the Iqaluit municipal sewage lagoon.	N/A

Environmental Impacts

See attached document.

DETAILS PART 2

Project General Information

See attached Non-Technical Project Information.

DFO Operational Statement of Conformity

N/A

Transportation

Access from the City of Iqaluit on existing roadways.

Camp Site

N/A

Equipment

See previous "Material Use" section.

Water

See previous "Material Use" section.

Waste Water (Grey water, Sewage, Other)

See previous "Waste" section.

Fuel

See previous "Material Use" section.

Chemical and Hazardous Material

See previous "Material Use" section.

Workforce and Human Resources / Socio-Economic Impacts

Public Services and Procurement Canada (PSPC), on behalf of Transport Canada, will tender the project on Buyandsell.gc.ca to procure the services required to undertake this project at the best value for Canadians.

Public Involvement / Traditional Knowledge

See previous "Activities" section with respect to Community Involvement

SECTION F: Site Cleanup/Remediation: Project Information

The site covers an area of approximately 72,500 m2. The site is situated on an escarpment leading to the Sylvia Grinnell River and has several shallow ravines and coulees partially filled with metal debris. The debris is scattered over a large area and consists of vehicles, equipment, barrels, and scrap metal. There are four areas of environmental (AECs) concern at the site as follows: AEC 1 – Upgradient Buried Debris, AEC 2 – Vehicle Dump, AEC 3 – Main Landfill, and AEC 4 – Downgradient, Off-site. See attached Figures 1 and 2 and Section 3.2 and Section 5 of the attached Remedial Action Plan (RAP) for more details regarding the location, type, and quantities of contaminants to be cleaned up. The RAP provides an evaluation of the remedial options that were considered for addressing the physical and environmental impacts at the site. In summary, the selected remedial option is as follows: The options were considered against predefined objectives that included minimizing human health and safety risks at the site; protecting ecological habitats; minimizing impacts during remediation; minimize long-term care and maintenance; and blending the final site conditions with thenatural environment where possible while being cost-effective and technically feasible. The option selected targets the offsite disposal of significantly impacted soils and sediments, the offsite removal of selected debris based on their waste stream category, the onsite consolidation of debris and comingling impacted soils, the engineered decommissioning of the site main landfill and the natural recovery of the remaining surface water and sediment impacts. Please see Section 7 of the RAP for a detailed discussion of the selected remedial option. Silt fencing will be employed at all down-gradient locations and dust suppression will be implemented as needed. Select contouring will be implemented to match existing conditions as much as possible. It is estimated that approximately 275 m3 of petroleum hydrocarbon impacted soil will be mechanically removed and disposed of in a licensed land treatment unit in Iqaluit. Impacted soil will be directly loaded onto trucks for disposal and will not be stockpiled on-site. Non-hazardous metal debris such as barrels will be crushed and/or cut up in situ using an excavator and will be incorporated into the main landfill.

Description of Existing Environment: Physical Environment

Sylvia Grinnell Territorial Park, the oldest of Nunavut's territorial parks borders the site to the northwestern extent. Sylvia Grinnell Park is divided in two by the Sylvia Grinnell River. The park plays a vital role in the community of Iqaluit by providing an important fishing ground for Arctic Char. The Sylvia Grinnell River is the principal drainage system in the region which discharges into Frobisher Bay. The river is influenced by the tidal action of the ocean which has some of the largest tides in Canada. The river is a major migratory route for Arctic Char. The natural drainage around the project area is influenced by the bedrock structure and numerous small, elongated ponds that have formed along fault lines and joints. The ponds are shallow (approximately less than 0.5 m deep), and are poorly drained. The high ratio of sediment surface to pond volume allows maximal exchange between the sediment and the water. In the winter, the ponds are frozen to the bottom. There are four large ponds and two smaller ponds. There are small intermittent drainages that join these water bodies. Three of these ponds experience influx of brackish ocean water twice daily (ponds 1, 3, and 4). The other three ponds are considered to be under a freshwater environment (ponds 2, 5 and 6). Two of these ponds (ponds 5 and 6) appear to play a crucial role in naturally attenuating sediment and surface water contaminants prior to discharge into the Sylvia Grinnell River. The project area is characterized by rolling terrain that slopes towards the Sylvia Grinnell River. The bedrock over which the metal debris was dumped is approximately 30 m above the River valley. Local terrain consists mainly of bare rocky outcrops with a thin layer of glacial and marine sediments in low lying areas between outcrops. The elevation of the landfill site is approximately 30 to 35 metres above sea level (m asl) and the Sylvia Grinnell River is at approximately 0 to 5 m asl (http://atlas.nrcan.gc.ca). The area is underlain by continuous permafrost. Soils are nutrient-poor, silty, shallow and have little, if any profile development. The topography, structural geology and drainage of the study area follow a northwest-southeast trend. Ground cover is a combination of black, silty sand with organic soil, bedrock outcrops, grass and lichens. Iqaluit is located within an arctic climatic zone despite being well outside of the Arctic Circle. The average daily temperature range is -28oC to 7.7 oC. The area is characterized by very cold winters and short summers that permit the growth of very small, stunted trees. The average monthly temperature is below freezing for eight months of the year. The average annual precipitation is 412.1 mm, which is much wetter than many other localities in the Canadian Arctic islands. There is 198.3 mm annual rainfall and 235.8 mm annual snowfall (www.climate.weatheroffice.ec.gc.ca).

Description of Existing Environment: Biological Environment

The project area is characterized by a combination of bare rocky outcrops, grasses, and lichens. To determine if the site is part of or is near to a critical wildlife habitat, the network of protected areas administered by Environment Canada was reviewed. The network, which includes migratory bird sanctuaries, national wildlife areas, and marine wildlife areas, represents diverse habitats protected under federal legislation. In addition, a territorial search for information related to critical wildlife habitat was also conducted. The distribution data provided by Environment Canada and the Government of Nunavut are based on limited available information. Due to the dynamic nature of species distribution, the data provided does not represent an exhaustive and comprehensive inventory of a species' current distribution. Results of the searches are presented in Section 3.4.4, Table 3 of the RAP. According to the Species at Risk web mapping application and the Nunavut Department of Environment website, no species are listed as threatened within the Killiniq region. Based on the Nunavut Wild Species 2000 report, the subject sites are within the range of three sensitive species: the wolverine, grey wolf and the polar bear. Sylvia Grinnell Territorial Park is also home to Arctic Hare, Arctic Fox, Caribou, lemmings and other small mammals. Polar Bear have even been sighted on occasion, although they do not frequent the area. The park also plays a significant role in bird migration and over 40 species have been recorded in the park at different times of the year. The park is also the most southern breeding ground for the Ringed Plover. The local vegetation above and below the cliff consists of wet grassland tundra species including mosses, grasses and sedges. On the cliff and bedrock outcrops vegetation is sparse and consists of lichens with patches of grasses and mosses.

Description of Existing Environment: Socioeconomic Environment

The project is located with the municipality of Iqaluit and is adjacent to Sylvia Grinnell Territorial Park and Iqaluit Airport.

Identification of Impacts and Proposed Mitigation Measures

See attached "Summary of Potential Environmental and Resource Impacts"

Cumulative Effects

An overall improvement on the current situation is expected and it is not likely that the project will result in any cumulative effects.

IMPACTS

TABLE 1 - 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																									
-			-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
OPERATION																									
-			-	-	-	-	-	-	-	-	-	-	-		-	-	-	-	-		-	-	-	-	-
DECOMMISSIONING																									
Site Cleanup/Remediation			P	P	M	-	P	-	-	-	P	-	M	M		M	P	P	P	P		P	-	-	-	-

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

Project Map