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Landfarm, Solid Waste Non-Hazardous Facility, Water and Sewage Treatment Infrastructure Upgrades, Temporary Camp and Amendment of Water Licence, for the Eureka High Arctic Weather Station

ᑐᒃᓯᖅᑑᑕᐅᔪᖅ ᖃᓄᐃᑦᑑᓂᖓ: New

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ᐅᓪᓗᖓ ᑐᒃᓯᖅᑑᑎᓕᐊᕕᓂᐅᑉ: 2/24/2021 8:43:04 AM

Period of operation: from 0001-01-01 to 0001-01-01

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ᖃᓄᐃᑦᑑᑎᓂᒃ ᐱᓕᕆᐊᖃᖅᑎᓂᐊᕆᐊᖓᓐᓂᒃ

ᖃᓪᓗᓈᑎᑐᑦ: Environment and Climate Change Canada (ECCC) is planning to construct a new Landfarm, Non-Hazardous Solid Waste Facility as well as complete upgrades to their existing Water and Sewer Treatment Infrastructure at the Eureka High Arctic Weather Station (HAWS). It is also requested that the current Water License be amended to include the use of Station Creek, Black Top Creek and West Remus Creek. The HAWS is located on the north side of Slidre Fjord, at the northwestern tip of Fosheim Peninsula, Ellesmere Island, Nunavut. The closest community to HAWS is the Hamlet of Grise Fiord. Construction of these projects are anticipated to occur between August 2021 and August 2025, and operations of the facilities are to occur between 2022 and 2042, which is the life expectancy of the Non-Hazardous Solid Waste Facility. During construction, approximately 30 site personnel are required. Transportation to site will be through the use of chartered aircraft for personnel, food and smaller supplies and sealift for equipment and larger supplies.An archaeological assessment will be completed for all potentially affected areas that haven't been previously assessed. Archaeological assessments will be conducted in spring 2021 in conjunction with other investigations. If any archaeological areas of significance are identified, they will be protected through mitigation measures approved by the Nunavut Department of Culture and Heritage. Mitigation may include fencing around sensitive areas and applying setbacks. Previous archaeological studies of the general area were conducted in 2018. A permit to conduct the archaeological assessment will be requested from the Nunavut Department of Culture and Heritage prior to March 31st, 2021. A Temporary Camp for approximately thirty staff will be required. This camp will be designed and installed in a way that will minimize impacts to the environment and will be removed upon completion of the construction phase. The camp will be installed in the first few weeks of the 2021 season. Camp facilities will include power generators, fuel storage facilities, garbage disposal containers, heating and cooling units, and necessary appliances and furniture.LandfarmHydrocarbon affected soil has been identified within localized areas throughout the Eureka High Arctic Weather Station (HAWS). Construction of a landfarm is required to store and treat an estimated amount of 4,500-6,000m3 of contaminated soil. The conceptual design of the landfarm is currently underway with the specific location to be determined in summer 2021. Non-Hazardous Solid Waste FacilityA new Non-Hazardous Solid Waste Facility (Facility) is required to store waste from the demolition of various structures and infrastructure. The non-hazardous waste stored will be what is remaining after uncontaminated wood waste is burned on site and hazardous waste appropriately containerized and shipped offsite. The conceptual design of the Facility is currently underway, with the preliminary siting plan having it located southeast of the airstrip. The specific location will be determined in summer 2021. Water/Sewer UpgradesThe project includes the development of a new raw water storage reservoir and associated infrastructure as well as incorporation of the existing raw water storage reservoir. A new packaged wastewater treatment plant will also be constructed, as well as upgrades and conversion of the existing wastewater lagoon to a retention pond. Wastewater discharge piping and overflow will also be upgraded. The overall timing of the upgrades is expected to start in August 2021 and be completed by 2025. Water AmendmentAs part of this application, an Amendment of the current and Extended Water License No. 8B-EUR1621 (Water License) is being requested. The current Water License allows for water pulling from Station Creek. The request as part of this application is to include an Amendment for the use of Black Top Creek and West Remus Creek as sources of water to support station construction activities, dust suppression and use at the Temporary Camp. The Water License is due to expire on August 10, 2021 with the extension requested per application No. 149440. Due to the limited time for acquiring permits, the extension request was included within this initial application to ensure existing water usage can continue at HAWS. Any work/project activities and travel will follow all Territorial and Federal requirements and guidelines regarding COVID 19.

ᐅᐃᑮᑎᑐᑦ: Environnement et Changement climatique Canada (ECCC) prévoit construire une nouvelle installation d'épandage et de traitement de déchets solides non dangereux et moderniser complètement les infrastructures de traitement des eaux et des égouts de la station météorologique de l'Extrême-Arctique (HAWS) d'Eureka. Il est également demandé que le permis d'utilisation des eaux actuel soit modifié pour inclure l'utilisation du ruisseau Station, du ruisseau Black Top et du ruisseau West Remus. La HAWS est située sur le côté nord du fjord Slidre, à l'extrémité nord ouest de la péninsule de Fosheim, sur l'île d'Ellesmere, au Nunavut. La communauté la plus proche de la HAWS est le hameau de Grise Fiord. Les activités de construction pour ces projets devraient avoir lieu entre août 2021 et août 2025, et l'exploitation des installations s'étendra de 2022 à 2042, ce qui correspond à la durée de vie de l'installation de traitement de déchets solides non dangereux. Pendant la construction, environ 30 employés devront être présents sur le site. Le transport vers le site se fera par avion affrété pour le personnel, la nourriture et les petites fournitures, et par bateau pour le matériel et les fournitures plus imposantes.Des évaluations archéologiques seront effectuées pour toutes les zones potentiellement touchées qui n'ont pas encore été évaluées. Elles seront menées au printemps 2021, en conjonction avec d'autres investigations. Si des zones archéologiques d'importance sont repérées, elles seront protégées par des mesures d'atténuation approuvées par le ministère de la Culture et du Patrimoine du Nunavut. Les mesures d'atténuation peuvent comprendre l'installation de clôtures autour des zones sensibles et l'établissement de zones de protection. Les études archéologiques précédentes de l'ensemble de la zone ont été menées en 2018. Un permis pour effectuer les évaluations archéologiques sera demandé au ministère de la Culture et du Patrimoine du Nunavut avant le 31 mars 2021. Un camp temporaire pour une trentaine d'employés sera nécessaire. Ce camp sera conçu et installé de manière à minimiser les impacts sur l'environnement, et il sera retiré à la fin de la phase de construction. Le camp sera installé au cours des premières semaines de la saison 2021. Les installations du camp comprendront des génératrices, des installations de stockage de carburant, des conteneurs à ordures, des unités de chauffage et de refroidissement, ainsi que des appareils électroménagers et du mobilier.Installation d'épandageDes sols contaminés par des hydrocarbures ont été repérés dans certaines zones de la station météorologique du Haut-Arctique (HAWS) d'Eureka. La construction d'une installation d'épandage est nécessaire pour stocker et traiter une quantité estimée de 4 500 à 6 000 m3 de sol contaminé. La conception de l'installation d'épandage est en cours, et son emplacement précis sera déterminé à l'été 2021. Installation de traitement de déchets solides non dangereuxUne nouvelle installation de traitement de déchets solides non dangereux est nécessaire pour stocker les déchets provenant de la démolition de diverses structures et infrastructures. Les déchets de bois non contaminés seront brûlés sur place, les déchets dangereux seront convenablement mis en conteneurs et expédiés hors du site, et le reste des déchets non dangereux seront stockés. La conception de l'installation est en cours, et le plan préliminaire de localisation situe l'installation au sud-est de la piste d'atterrissage. L'emplacement précis sera déterminé à l'été 2021. Réfection des canalisations d'eau et d'égoutsLe projet comprend la construction d'un nouveau réservoir de stockage d'eau brute et d'infrastructures connexes, ainsi que l'intégration du réservoir de stockage d'eau brute existant. Une nouvelle station compacte de traitement des eaux usées sera également construite, et l'étang d'épuration existant sera modernisé et converti en un bassin de rétention. La tuyauterie d'évacuation des eaux usées et du bassin de débordement sera également modernisée. Le calendrier général des travaux de réfection devrait commencer en août 2021 et s'achever en 2025. Modification du permis

d'utilisation des eauxDans le cadre de cette demande, une modification du permis étendu d'utilisation des eaux n° 8B-EUR1621 (permis d'utilisation des eaux) est demandée. Le permis actuel permet d'utiliser l'eau du ruisseau Station. La modification demandée vise l'utilisation du ruisseau Black Top et du ruisseau West Remus comme sources d'eau pour soutenir les activités de construction de la station et de suppression de la poussière, ainsi que les divers besoins en eau au campement temporaire. Le permis d'utilisation des eaux doit expirer le 10 août 2021 avec la prolongation demandée en vertu de la demande n° 149440. Compte tenu du temps limité pour l'obtention d'un permis, la demande de prolongation a été incluse dans cette demande initiale afin de s'assurer que l'utilisation actuelle d'eau à la HAWS ne soit pas interrompue. Toutes les activités et tous les déplacements liés aux travaux/projets seront conformes à l'ensemble des exigences et directives territoriales et fédérales liées à la COVID 19.

ᐃᓄᒃᑎᑐᑦ: ᐊᕙᑎᓕᕆᓂᕐᒥ ᐊᒻᒪ ᓯᓚᐅᑉ ᐊᓯᔾᔨᖅᐸᓪᓕᐊᓂᖓ ᑲᓇᑕᒥ (ECCC) ᐸᕐᓇᖅᒪᑕ ᐱᓕᕆᔪᒪᓪᓗᑎᒃ ᓄᑖᒥᑦ ᓄᓇᖃᕐᕕᐅᓚᐅᖅᑐᒥᑦ, ᐅᓗᕆᐊᓇᖅᑎᑦᑐᓄᑦ ᑕᖅᑭᓕᖅᓂᑦ ᐃᒋᑕᐅᔪᓄᑦ ᐱᓕᕆᕝᕕᒃ ᐃᓚᒋᔭᐅᓗᓂ ᓈᒪᓗᓂ ᓄᑖᕈᕆᐊᖅᑕᐅᓂᖓ ᐱᓕᕆᔾᔪᑕᐅᔪᑦ ᐃᒥᕐᒥᑦ ᐊᒻᒪ ᑭᓈᕐᓗᖕᒥᒃ ᓴᓗᒪᖅᓴᐃᕝᕕᒃ ᐋᖅᑭᒃᓱᖅᓯᒪᓂᖓ ᑕᐃᒃᑲᓂ ᐃᐅᓇᒃ ᖁᑦᑎᒃᑐᖅ ᐅᑭᐅᖅᑕᖅᑐᕐᒥ ᓯᓚᓐᓂᐊᕐᕕᖕᒥ (HAWS). ᑐᒃᓯᕌᖕᒍᕐᑲᓯᐅᑎᓪᓗᓂ ᑕᒪᓐᓇ ᐊᑐᖅᑕᐅᔪᖅ ᐃᒥᕐᒧᑦ ᐱᓕᕆᔪᓐᓇᐅᑎ ᐋᖅᑭᕆᐊᖅᑕᐅᓗᓂ ᐱᖅᑲᓯᐅᔾᔨᓕᕐᑯᓗᒍ ᐊᑐᖅᑕᐅᓂᕐᒪᓂᑦ ᐱᓕᕆᕝᕕᒃ ᒎᓚᓛᒃ, ᖃᖕᒐ ᕿᕐᓂᖅᑕᖅ ᖃᖕᒐ ᒎᓚᓚᒃ ᐊᒻᒪ ᐱᖕᒐᓐᓇᖅ ᓇᓪᓕ ᒎᓚᓚᒃ. ᖁᑦᑎᒃᑐᖅ ᐅᑭᐅᖅᑕᖅᑐᕐᒥ ᓯᓚᓐᓂᐊᕐᕕᖕᒥ (HAWS) ᐃᓂᖃᕐᒪᑦ ᐊᒡᒍᐊᓂ ᓯᓚᑐᓇ ᑲᖕᒥᖅᐳᐸ, ᑕᐅᕙᓂ ᐊᒡᒍᐊᓂ ᐱᖕᒐᓐᓇᖅᐸᓯᖕᒪᑕ ᓄᕗᐊᓂ ᐸᓯᐃᒻ ᓄᕗᒍᑦᐸ, ᐊᐅᓯᐃᑦᑑᑉ ᕿᑭᖅᑖᓗᐊ, ᓄᓇᕗᑦ. ᖃᓂᒌᖅ ᓄᓇᓕᒃ ᖁᑦᑎᒃᑐᖅ ᐅᑭᐅᖅᑕᖅᑐᕐᒥ ᓯᓚᓐᓂᐊᕐᕕᖕᒧᑦ (HAWS) HLᓕᒥᔭᐅᖕᒪᑦ ᐊᐅᓯᐃᑦᑐᕐᒧᑦ. ᓴᓇᔭᐅᓂᖓᓄᑦ ᑕᒪᒃᑯᐊ ᓴᓇᔭᒃᓴᐃᑦ ᐃᓱᒪᒋᔭᐅᔫᑦ ᐱᒋᐊᕐᓂᐊᖅᑐᓇᔭᐅᓪᓗᑎᒃ ᐊᒡᒍᓐᓂᖓᓐᓂ ᐊᐅᒍᓯ 2021 ᐊᒻᒪ ᐊᐅᒍᓯ 2025, ᐊᒻᒪ ᐊᐅᓚᓕᕿᓐᓇᕋᔭᖅᓗᑎᒃ ᑕᒪᒃᑯᐊ ᐱᓕᕆᕝᕕᖕᒍᑎᑦ ᐱᒋᐊᕋᔭᖅᑐᓇᔭᐅᔫᑦ ᐊᒡᒍᓐᓂᖓᓐᓂ 2022 ᐊᒻᒪ 2042, ᑕᒪᒃᑯᐊᓗ ᐊᑐᕋᔭᖅᑐᓇᔭᐅᓪᓗᑎᒃ ᐅᓗᕆᐊᓇᖅᑎᑦᑐᓄᑦ ᑕᖅᑭᓕᖅᓂᑦ ᐃᒋᑕᐅᔪᓄᑦ ᐱᓕᕆᕝᕕᖕᒧᑦ. ᐱᓕᕆᐊᖕᒍᑎᓪᓗᒍ ᓴᓇᔭᐅᓂᖓ, ᒥᒃᓴᐅᓴᓪᓗᒥᑦ 30 ᐱᓕᕆᕝᕕᐅᔪᓂ ᐃᖅᑲᓴᐃᔭᖅᑎᖃᕆᐊᖃᕋᔭᖅᐳᑦ. ᐃᖕᒥᖁᔾᔪᑎᑦ ᓄᓇᒥᔭᐅᔪᒧᑦ ᒪᑯᑎᒍᓇᖅᓂᐊᖅᐳᑦ ᐊᑐᖅᑕᐅᓗᑎᒃ ᐊᑭᓕᖅᑕᐅᓯᒪᔪᑦ ᖃᖓᑕᓯᑦ ᐃᖅᑲᓇᐃᔭᖅᑎᓄᑦ, ᓂᕿᓄᑦ ᐊᒻᒪ ᒥᑭᔫᑕᐅᓂᖅᓴᓄᑦ ᑭᓯᖑᑎᒥᔭᐅᓂᐊᖅᑐᓄᑦ ᐊᒻᒪ ᐅᒥᐊᕐᔪᐊᒃᑯᖅᑎᑕᐅᓗᑎᒃ ᐱᓕᕆᐊᔾᔪᑎᑦ ᐊᒻᒪ ᐊᖕᒥᔫᑕᐅᓂᖅᓴᐃᒃ ᑭᓯᒥᔭᐅᓂᐊᖅᑐᑦ.ᐃᑦᑕᕐᓂᓴᒥᓂᖅᑕᓕᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᕐᒥᑦ ᐱᔭᕇᒃᑕᐅᒐᔭᕐᒪᑕ ᐃᓅᓐᓇᑎᒃ ᐊᑐᖅᑕᐅᑐᐃᓐᓇᕆᐊᓕᑦ ᓇᔪᒐᐃᑦ ᑕᐃᒃᑯᐊ ᒫᓇᒃᑯᑦ ᖃᐅᔨᓇᓯᐊᖅᑕᐅᓯᒪᕐᒥᑦᑐᑦ. ᐃᑦᑕᕐᓂᓴᒥᓂᖅᑕᓕᑦ ᖃᐅᔨᓴᖅᑕᐅᓂᕐᒥᑦ ᐱᓕᕆᐊᖑᓂᐊᕐᒪᑕ ᐅᐱᕐᖠᖕᒥ 2021 ᐱᓕᕆᐊᖑᕐᑲᓯᐅᑎᓗᑎᒃ ᐊᓯᖕᒥᑦ ᖃᐅᔨᓇᓯᐊᖅᑕᐅᔪᓄᑦ. ᑕᐃᒪᓕ ᐱᑕᕐᑲᑐᐊᖅᐸᑦ ᐃᑦᑕᕐᓂᓴᒥᓂᖅᑕᓕᖕᓂᑦ ᓇᔪᒐᕐᓂ ᓇᓗᓇᕐᒥᑦᑎᐊᕐᓂᕐᒥᑦ ᓇᓗᓇᐃᖅᑕᐅᒃᐸᑕ, ᓴᐳᒻᒥᔭᐅᓂᐊᖅᑐᑦ ᐊᒃᓯᐋᓗᕿᓐᓃᖅᑎᑕᐅᓗᑎᒃ ᐱᓕᕆᐊᖑᓂᕐᒥᑦ ᐊᕐᒥᖅᑕᐅᓯᒪᓗᑎᒃ ᓄᓇᕗᑦ ᐃᓕᖅᑯᓯᓕᕆᔨᒃᑯᓐᓂᑦ. ᐊᒃᓯᐊᓘᕿᓐᓃᖅᑎᑕᐅᓂᕐᒥᑦ ᐱᖅᑲᔨᐅᔾᔨᔮᓐᓇᖅᑐᑦ ᐊᕙᓗᓕᖅᑕᐅᓗᓂ ᐊᕙᑖ ᐊᓯᕿᕐᓂᐅᓴᓂᖓ ᓇᔪᒐᐃᑦ ᐊᒻᒪ ᐋᖅᑭᒃᑕᐅᓗᑎᒃ ᑭᖑᒧᒥᐊᖅᑕᐅᕝᕕᖕᒥᑦ. ᐱᓕᕆᐊᖑᕋᑖᓚᐅᖅᓯᒪᔪᑦ ᐃᑦᑕᕐᓂᓴᒥᓂᖅᑕᓕᖕᓂᑦ ᖃᐅᔨᓇᓯᐊᕐᓃᑦ ᐱᓕᕆᐊᖑᓪᓗᐊᑦᑕᖅᑐᒥ ᐱᓕᕆᐊᖑᓚᐅᖅᓯᒪᖕᒪᑕ 2018-ᒥ. ᐱᓕᕆᔪᓐᓇᐅᑎ ᐱᓕᕆᐊᖑᕐᑯᓪᓗᒍ ᐃᑦᑕᕐᓂᓴᒥᓂᖅᑕᓕᖕᒥᑦ ᖃᐅᔨᓴᖅᓯᓂᖅ ᑐᒃᓯᕌᖕᒍᓂᐊᕐᒪᑦ ᓄᓇᕗᑦ ᐃᓕᖅᑯᓯᓕᕆᔨᒃᑯᓐᓄᑦ ᓯᕗᓂᖕᒎᑦ ᒫᔾᔨ 31ᖓᓂ, 2021. ᓇᔪᖅᑕᐅᕐᑲᑦᑲᐃᓇᕐᓂᐊᖅᑯᒥᑦ ᒥᕐᓵᓂᐸᓗᒃᑐᓄᑦ 30 ᐃᖅᑲᓇᐃᔭᖅᑎᓄᑦ ᐱᔭᐅᔪᕐᑲᓇᐊᕐᑲᕐᓂᐊᖅᑐᖅ. ᑖᓐᓇ ᓇᔪᖅᑕᐅᓂᐊᖅᑐᖅ ᓴᓇᓯᒪᓂᕐᑲᕐᓂᐊᖅᐳᖅ ᐊᒻᒪ ᐋᖅᑭᒃᑕᐅᓗᓂ ᒥᑭᓛᒥᒃ ᐊᒃᑐᐃᓂᕐᑲᕋᔭᕐᓗᓂ ᐊᕙᑎᑦᑎᓐᓂᑦ ᐊᒻᒪ ᐲᖅᑕᐅᔪᒫᕐᓗᓂ ᐱᔭᕇᒃᑕᐅᑎᓪᓗᒍ ᓴᓇᔭᐅᓂᖓᑕ ᐱᓕᕆᐊᖑᓂᖓ. ᓇᔪᖅᑕᐅᒐᔭᖅᑐᖅ ᐋᖅᑭᒃᑕᐅᓂᐊᕐᒪᑦ ᓯᐳᓪᓕᖅᑳᖓᓐᓂ ᖃᑦᓯᒃᑲᓪᓚᐃᑦ ᐃᓇᓯᐊᑭᓯᑦ ᑕᒪᓂ 2021 ᓇᓪᓕᕉᑎᓂᕐᒥ. ᓇᔪᖅᑕᐅᓂᐊᖅᑐᒥ ᑭᓯᑐᐃᓐᓇᕐᑯᑎᑦ ᐃᓚᕐᑲᕐᓂᐊᖅᐳᑦ ᓯᑲᓐᓇᖅᑐᓚᐅᕈᑎᑦ ᐊᐅᓚᐅᑎᓂᑦ, ᐅᖅᓯᒃᓴᓂᑦ ᑐᖅᑯᐃᕝᕕᖕᒥᑦ ᐃᓂᖅᑲᑎᑦᑎᔪᑎᓂᑦ, ᐃᒋᑕᐅᔪᓄᑦ ᐃᒥᑦᑎᔪᑎᓂᑦ ᔫᖅᑲᐃᕝᕕᖕᓂᑦ, ᐅᖅᑰᔾᔪᑎ ᐊᒻᒪ ᓂᑉᓕᓇᕈᑎᓄᑦ ᐱᓕᕆᔪᑎᓂᒃ, ᐊᒻᒪ ᐊᑐᖅᑕᐅᔭᕆᐊᓕᖕᓂᑦ ᑭᓯᓕᕆᔾᔪᑎᓂᑦ ᐊᒻᒪ ᐃᓗᒥᐅᑕᓚᖕᓂᑦ.ᐅᖅᓯᐊᓗᖅᑲᐅᑎᖅᑳᑦᐃᑭᓐᓂᑯᓄᑦ ᐊᒃᑐᖅᑕᐅᔪᖅ ᐃᔾᔪᖅ ᓇᓗᓇᐃᖅᑕᐅᓯᒪᓕᖅᐳᖅ ᐃᓗᐊᓂ ᐊᓯᐊᓅᖅᓯᒪᓇᓂ ᓇᔪᒐᐃᑦ ᐃᓅᓐᓇᓖᖓᓂ ᐃᐅᓇᒃ ᖁᑦᑎᒃᑐᖅ ᐅᑭᐅᖅᑕᖅᑐᕐᒥ ᓯᓚᓐᓂᐊᕐᕕᖕᒥ (HAWS). ᓴᓇᔭᐅᓂᖓ ᓄᓇᖃᕐᕕᐅᓚᐅᖅᑐᑦ ᐱᔭᐅᓯᒪᔪᓇᐊᖃᕐᒪᑦ ᑐᖅᑯᐃᕝᕕᐅᖃᕐᓗᒍ ᐊᒻᒪ ᓴᓗᒪᖅᓴᐃᕝᕕᐅᓚᐅᖅᑐᓂ ᒥᒃᓵᓂᐸᓗᒃᑐᓄᑦ 4,500-6,000 ᒥᑕᑦ ᑭᑉᐹᓇᒃᑐᖅ ᓯᑭᒃᑕᐅᓯᒪᔪᑉ ᐃᔾᔫᑉ. ᐃᓱᒪᒋᔭᐅᑐᐃᓐᓇᖅᓯᒪᔪᑦ ᓴᓇᓯᒪᓂᖓᑕ ᓄᓇᖃᕐᕕᐅᓚᐅᖅᑐᑉ ᒫᓐᓇ ᐱᓕᕆᐊᖑᕙᓪᓕᐊᓕᕐᒪᑦ ᑕᐃᑲᓪᓗᐊᖅ ᐃᓂᖅᑲᕋᔭᕐᓂᖓ ᐃᓱᒪᓕᐅᕈᑕᐅᓂᐊᖅᑐᖅ ᐊᐅᔭᖓᓂ 2021. ᐅᓗᕆᐊᓇᖅᑐᓄᑦ ᑕᖅᑭᓕᖅᓂᑦ ᐃᒋᑕᐅᔪᓄᑦ ᐱᓕᕆᕝᕕᒃᓄᑖᖅ ᐅᓗᕆᐊᓇᖅᑐᓄᑦ ᑕᖅᑭᓕᖅᓂᑦ ᐃᒋᑕᐅᔪᓄᑦ ᐱᓕᕆᕝᕕᒃ (ᐱᓕᕆᕝᕕᒃ) ᐱᔭᐅᓯᒪᔪᓇᐊᖃᕐᒪᑦ ᑐᖅᑯᐃᕝᕕᐅᖃᕐᓗᒍ ᐃᒋᑕᐅᔪᓄᑦ ᓯᕋᑦᑎᖅᑕᐅᔪᓂᑦ ᐊᔾᔨᒦᖅᑐᓂᑦ ᓴᓇᓯᒪᓂᐅᔪᓂᑦ ᐊᒻᒪ ᐋᖅᑭᒃᓯᖅᓯᒪᓂᕐᓂᑦ. ᐅᓗᕆᐊᓇᖅᑐᑦ ᐃᒋᑕᐅᔪᑦ ᑐᖅᑯᒃᑕᐅᓯᒪᔪᑦ ᒪᑯᐊᖑᓚᔭᕐᒪᑕ ᐊᒥᐊᒃᑯᑦ ᑭᖑᓂᖓᒍᑦ ᓯᑭᕐᓇᖅᑐᖅᑲᖅᑐᑦ ᕿᔪᐃᑦ ᐃᒋᑕᐅᔪᑦ ᐃᑭᑕᐅᓯᒪᓕᕐᓗᑎᒃ ᐃᓂᖓᓂ ᐊᒻᒪ ᐅᓗᕆᐊᖅᑐᑦ ᐃᒋᑕᐅᔪᑦ ᐃᒪᖑᓕᔭᖅᑐᒃᓴᐅᓪᓗᑎᒃ ᔫᖅᑲᒃᑕᐅᓗᑎᒃ ᐊᒻᒪ ᐊᐅᓪᓚᖅᑎᑕᐅᓗᑎᒃ ᑖᓂᑦᑐᓐᓃᕐᓗᑎᒃ. ᐃᓱᒪᒋᔭᐅᑐᐃᓐᓇᖅᓯᒪᔪᑦ ᓴᓇᓯᒪᓂᖓᑦ ᐱᓕᕆᕝᕕᑉ ᒫᓐᓇ ᐱᓕᕆᐊᖑᕙᓪᓕᐊᓕᖅᑐᑦ, ᖃᐅᔨᒪᖅᓯᑎᑦᑎᑕᐅᓗᓂ ᐃᓂᖅᑲᒃᑎᑕᐅᓂᕐᒪᓄᑦ ᐸᕐᓇᒍᑎ ᐃᓂᖅᑲᒃᑎᑕᐅᒐᔭᕐᓗᓂ ᐅᖁᒥ ᑲᓇᖕᓇᖅᐸᓯᖕᒪᓂ ᒥᑯᕕᐅᑉ. ᑕᓐᓇᓗᐊᖅ ᐃᓂᒋᔭᖅᑕᖓ ᐃᓱᒪᓕᐅᕆᑕᐅᓂᐊᖅᐳᖅ ᐊᐅᔭᖓᓂ 2021. ᐃᒪᖅᑲᐅᑎ/ᑭᓈᕐᓗᓕᕆᕝᕕᒃ ᓄᑖᕈᕆᐊᖅᑕᐅᓂᕐᑦᓴᓇᔭᒃᓴᖅ ᐃᓚᖃᒃᐳᖅ ᐱᕙᓪᓕᐊᑎᑕᐅᓂᖓᓄᑦ ᓄᑖᑉ ᖃᓄᐃᓕᒋᐊᖅᓯᒪᕐᒥᑦᑐᖅ ᐃᒥᕐᒥᑦ ᑐᖅᑯᐃᕝᕕᒃ ᐃᒥᖅᑕᕐᕕᖕᒥᑦ ᐊᒻᒪ ᐋᖅᑭᒃᓯᖅᓯᒪᓂᕐᔫᖕᒐᔪᑦ ᐃᓚᒋᔭᐅᓗᓂ ᐃᓚᒥᓕᐅᑎᓯᒪᔪᖅ ᐊᑐᖅᑕᐅᔪᖅ ᖃᓄᐃᓕᒋᐊᖅᓯᒪᕐᒥᑦᑐᖅ ᐃᒥᖅ ᑐᖅᑯᐃᕝᕕᒃ ᐃᒥᖅᑕᕐᕕᖕᒥᑦ. ᓄᑖᖅ ᑲᑎᑕᐅᓯᒪᔪᑦ ᐅᐊᑦᑕᑯᖕᒥᑦ ᓴᓗᒪᖅᓴᐃᕝᕕᒃ ᓴᓇᔭᐅᓂᐊᕐᒥᔪᖅ, ᐃᓚᒋᔭᐅᓗᓂ ᓄᑖᕈᕆᐊᖅᑕᐅᓗᓂ ᐊᒻᒪ ᐊᓯᑭᒃᑕᐅᓗᓂ ᐊᑐᖅᑕᐅᔪᖅ ᐅᐊᑦᑕᑯᒃᑯᕕᒃ ᑯᕕᓯᕕᒃ ᕿᑲᖅᑎᑦᑎᕕᐅᓕᕐᓗᓂ ᐃᒪᖅᑰᓕᕐᓗᓂ. ᐅᐊᑦᑕᑰᑉ ᑯᕕᓯᕕᖓ ᓯᓪᓗᓕᒃ ᐊᒻᒪ ᑕᑕᓗᐊᕐᕕᖓ ᓄᑖᕈᕆᐊᖅᑕᐅᓂᐊᕐᒥᔫᒃ. ᐃᓅᓐᓇᓖᖓᑕ ᓇᓚᓈᖅᑕᐅᕆᐊᕐᓂᖓ ᓄᑖᕈᕆᐊᖅᑕᐅᓂᖓᓄᑦ ᓂᓇᐅᒥᔭᐅᑯᖅ ᐱᒋᐊᖅᑕᐅᒐᔭᖅᑐᓇᔭᓪᓗᓂ ᐊᐅᒍᓯ 2021-ᒥ ᐊᒻᒪ ᐱᔭᕇᒃᑕᐅᒐᔭᕐᓗᓂ ᑎᑭᓪᓗᒍ 2025. ᐃᒥᓕᕆᓂᕐᒧᑦ ᐋᖅᑭᒋᐊᖅᓯᔪᑎᐃᓚᒋᔭᐅᓗᓂ ᑐᒃᓯᕋᐅᑎᒧᑦ, ᐋᖅᑭᒋᐊᖅᑕᐅᓗᓂ ᒫᓐᓇ ᐊᒻᒪ ᐊᑯᓂᐅᓂᖅᓴᐅᓕᖅᑎᑕᐅᒋᐊᑭᑎᖓ ᐃᒥᓕᕆᓂᕐᒧᑦ ᐱᓕᕆᔪᓐᓇᐅᑎ ᓈᓴᐅᑎᖓ 8B-EUR1621 (ᐃᒥᓕᕆᓂᕐᒧᑦ ᐱᓕᕆᔪᓐᓇᐅᑎ) ᑐᒃᓯᕌᖕᒍᓕᖅᐳᖅ. ᒫᓐᓇ ᐃᒥᓕᕆᓂᕐᒧᑦ ᐱᓕᕆᔪᓐᓇᐅᑎ ᐱᔭᐅᔪᓐᓇᖅᑎᑦᑎᖕᒪᑦ ᐃᒥᕐᒥᑦ ᒥᓪᓗᐊᕐᕕᖕᒥᑦ ᑕᐃᑲᓂ ᐱᓕᕆᕝᕕᖕᒥ ᒎᓚᓕᖕᒥ. ᑐᒃᓯᕋᖕᒍᔪᖅ ᐃᓚᒥᓗᓂᐅᒃ ᑖᑦᓯᒪ ᑐᒃᓯᕋᐅᑎᐅᑉ ᐱᖅᑲᓯᐅᔾᔨᓇᓯᐊᕐᒪᑦ ᐋᖅᑭᒋᐊᖅᑕᐅᔪᑎᖕᒪᓂᑦ ᐊᑐᖅᑕᐅᒐᕐᓂᖕᒪᓄᑦ ᕿᕐᓂᖅᑕᖅ ᖃᖕᒐ ᒎᓚᓚᒃ ᐊᒻᒪ ᐱᖕᒐᓐᓇᖅ ᓇᓪᓕ ᒎᓚᓚᒃ ᐃᒪᖅᑲᑭᑕᐅᒐᕐᓂ ᒪᑭᒪᑎᑦᑎᔪᑕᐅᓗᓂ ᐱᓕᕆᕝᕕᐅᑉ ᓴᓇᔭᐅᓂᖕᒥᑕ ᐱᓕᕆᐊᖑᓂᖏᓐᓄᑦ, ᐳᔪᐊᕐᓕᖅᑲᓗᐊᖅᑎᑦᑕᐃᓕᒪᔾᔪᑎ ᐊᒻᒪ ᐊᑐᖅᑕᐅᓗᓂ ᑕᐃᑲᓂ ᓇᔪᖅᑕᐅᑲᐃᓐᓇᕋᔭᖅᑐᒥ. ᐃᒥᓕᕆᓂᕐᒧᑦ ᐱᓕᕆᔪᓐᓇᐅᑎ ᐃᓱᓕᓐᓂᐊᕐᒪᑦ ᐊᐅᒍᓯ 10, 2021-ᒥ ᐊᑯᓂᐅᓂᖅᓴᐅᓕᖅᑎᑕᐅᔪᒪᓗᓂ ᑐᒃᓯᕌᖕᒍᓯᒪᐳᖅ ᐅᑯᑎᒍᓇ ᑐᒃᓯᕋᐅᑎ ᓈᓴᐅᑖ 149440. ᐱᔾᔪᑎᒋᓪᓗᒍ ᑭᓪᓕᖅᑲᒃᑎᑕᐅᓂᖓ ᐱᕕᖅᑲᕐᓂᖕᒪᓄᑦ ᐱᔭᐅᒐᔭᕐᓗᓂ ᐱᓕᕆᔪᓐᓇᐅᑎᐅᑉ, ᐊᑯᓂᐅᓂᖅᓴᐅᓕᖅᑎᑕᐅᓂᖓ ᑐᒃᓯᕌᖕᒍᓯᒪᐳᖅ ᐱᖅᑲᓯᐅᑎᔭᐅᕐᑯᓗᒍ ᐱᒋᐊᖅᑎᑕᐅᒐᔭᕐᓂᖕᒪᓄᑦ ᑐᒃᓯᕋᐅᑎ ᐱᔭᐅᕐᑯᓗᒍ ᐊᑐᖅᑕᐅᔪᖅ ᐃᒥᓕᕆᓂᕐᒧᑦ ᐊᑐᖅᑕᐅᓂᖓ ᑲᔪᓯᔪᓐᓇᕋᔭᕐᓂ ᑕᐃᑲᓂ ᐃᐅᓇᒃ ᖁᑦᑎᒃᑐᖅ ᐅᑭᐅᖅᑕᖅᑐᕐᒥ ᓯᓚᓐᓂᐊᕐᕕᖕᒥ (HAWS). ᖃᓄᐃᑦᑐᐊᓇᐃᑦ ᐃᖅᑲᓇᐃᔭᑦ/ᓴᓇᔭᒃᓴᑦ ᐱᓕᕆᐊᖑᔪᑦ ᐊᒻᒪ ᓇᓕᐊᖕᓄᕋᓃᑦ ᒪᓕᖕᓂᐊᕐᒪᑕ ᐃᓅᓐᓇᖕᒥᓂᑦ ᓄᓇᓕᖅᐱᐅᔪᑦ ᐊᒻᒪ ᒪᕙᒧᕐᑲᑦᑯᑦ ᒪᓕᒃᑕᐅᔭᕆᐊᖃᒃᑎᑦᑕᕐᒥᓂᑦ ᐊᒻᒪ ᒪᓕᒃᑕᐅᔭᕆᐊᓕᖅᑐᑦ ᑐᕌᖓᔪᓂᑦ ᓄᕙᒡᔪᐊᕐᔪᐊᖅ 19.

Inuinnaqtun: Avaatalikiyiit tatvalo Hillap Alangokpalianinganik Kanatami (ECCC) parnaivaliayot hannavalialikmiyot notamik Nunami Ikkakukvighamik tatvalo Pitakangitonik-Ulugianaktonik Ikkakukviop Igluutaitni tatvalo huli innikhilugit hapkua aolahimaaktot Immakakvik tatvalo Annaktakviop Hallumakhiviatni Ihoakutait tatvani Eureka-mi Kuuktinikpami Hilalikvikmikmi (HAWS). Tughiktoktaohimangmiyok tatvalo una aolahimaaktok Immamik Laisighak ihoaghaktaokuyaoyok ilaliotilugit hapkua Station Creek, Black Top Creek tatvalo West Remus Creek. Hamna HAWS tahamaniitok hivurani haffuma Slidre Fjord, tahamani hivugani uatani tikikakjuangani haffuma Fosheim Peninsula, Ellesmere Island, Nunavut. Una kanniknighaoyok nunaliitni tatvunga HAWS-mut una Hamlat Ausuittuq. Hannayaoniakhimayot hapkua havagiyaoyot nigiogiyaoyot hannaliklugit Aggasimi 2021-mi tatvalo 2025-mi, tatvalo aolatjutait hapkua igluutaita havagiyaohimaakniaktot akkungani 2022-mi tatvalo 2042-mi, tatvalo hapkua igluutait nappagaakniaktoghaovut ukkua Pitakangitonik-Ulugianaktonik Ikkakukviop Igluutaitni. Tatva iglulioktaohimaaktitlugit, tatva 30-nik tahamani havakvikmi havaktoghanik piyagiakakniaktot. Ingilgatjutigait tatvunga havakvighamut atogaoniaktot tingmitjat aakjaotighait hapkua havagiaktoktot, nikkiit tatvalo hunavaloit tammayaghait tatvalo umiakutlo hapkua angiyot hannatjutighait tatvalo tammayaotighait aakjaktaoniaktot.Una innitokliitnik naonaiyaotighait inniktaoniaktot hapkunani ikpigiyaoniaktoni nunani kinguani naonaiyaktaohimaitoni. Hapkua Innitokliitnik naonaiyaotighait ihivgioktaoniaktot tavani upingami 2021-mi pikataolotik hapkua havagiyaoniaktot naonaiyaklogit. Tatva naliaknin innitokliohimayonit nalvakviohimanikat pionighaoyonik naonaiyaktaolotik, munagiyaoniaktot maligalikinikut tatva angiktaolotik tatanaga Nunavumi Iliitkuhikiniyiitkunin Ingilgaknitalikiyiitkuniitlo. Hapkua ihoaghainik ilaliotiyungnaktat hamna avaatitoinik hapkuninga ahigotiktaokunagit nunaotait tatvalo iliogaklogit hapkua aktoktaolaitjutighaitnik. Kingoani hapkua inniktokliit naonaiyakataohimayot tatvani 2018-mi. Una laisighak naonaiyaotighak innitokliitnik toghiktotaoniaktok tatvanga Nunavumi Havakviatnin Iliitkuhilikiyiit tatvalo Ingilgaknitalikiyiitkunitlo tikitinago Masi 31,2021. Hamna hadjakaffuk Igluliokvighak 30-nik inuknik havagiaktokataktoghanik piyagiakakniaktot. Una iglukpaghak hannayaoniaktok tatva ihoiyaotaongitangani ikpigiyaongitangani avatingniit tatvalo ahivaktaoniaktok piiktaoloni hamna havagiyaoniaktok iglukpiokvighak inniktaokpat. Hamna manikami tupikpakakvighak

hannayaoniaktok kaffinik pigianiknik tatvani 2021-mi, tatvalo hapkua ihoakutighait tatvani manikami tupikpakakvikmi ilaliotiniaktot hapkua kullikutit ingilgotit, uhokjuakhakvighait, ikkakukviit, unnakutit tatvalo niiklamaviit, tatvalo kukivighait tatvalo ihoakutighait tammayat ihivaotavaloit.Manikami IkkakukvighaatHamna ullugiaknakninga illangutihimayok tahamani hiikmikmi naonaiyaktaohimayok tahamani manikiami nayuugani haffuma Eureka-mi Kuutiniikpami Hilalikivimi (HAWS). Hamna hannaninga haffuminga manikami ikkakukvighamik piyagiakakmat totkomavigiyaoluni immakak iitkomayaoyonik 4,500-6,000m3 haffuminga huugoktiktaohimayonik hiikmiknik illangotihimayonik manikakmi. Hamna tiitigaoyatiakhimayonik haffuma ikkakukvighap kanogitonigha hafjaoyok havagoyaohimaaliktot tatvalo humminigiagha nayokvigha ihomagotaoniaktok tatvani auyami 2021-mi. Pitakangitonik-Ulugianaktonik Ikkakukviop IgluutaitniUna nuutak Pitakangitonik-Ulugianaktonik Ikkakukviop Igluutighaat (Igluutighaat) piyagiakakniaktok totkomavioluni ikakukhimayonik igiitaohimayonik angiyoniklo ikkakuktaohimayonik. Pitakangitonik-Ulugianaktonik Ikkakuktaohimayot tatvunga totkoktaoniaktot tatva hapkua ulugianangitot kiiyoit igitaohimayot ikkualayaotaatkata tahamani manikami tatvalo hapkua ulugianaktokaknikat ikkakukhimayonik puuktaotakhimalikata aolaktitaoyoghat tatvanga iglukpakakvikmit. Hamna titigaoyaktaohimaliktok kanok iliikuhigha haffuma Igluutighaita havagiyaovluni, hamnalo iglukpiokvighaita paknaiyaotaatni tatva napaktaoniaktot tunnoani kivataatni haffuma miitakviop. Hamna naonaiyaktaotiakniaktok iglukpiokvighaat tatvani auyami 2021-mi. Immap/Annaktakvikhaita IlingaiyaotighaitHamna havagiyaoniaktok ilaliotiniaktok hapkuninga hannatjutighaitnik notamik hallumaitonik immakakvighamik tatvalo ihoakutighaitnik tatvalo ilingaiyaklugulo una aolahimaaktok hallumaitonik immakakvighaat. Una notaak Itiptigialik immap halumakhaotighanik igluutat napaktitaoniakmiyok, tatvalo huli notangoktiklogit tatvalo ihoaghaklogit hapkua aolayot hallumailonik annaktakvioyot koviogakvighaitnik tahigakmik. Hallumailgonik koviogakvighaitnik toghoaliktoklogit tatvalo kukloakvighaitnik ilingaiyaktaoniakmiyot. Hamna kakugo ilingaiyaotighait nigiogiyaoyot hannayaoliklogit tatvani Aggasi 2021-mi inniktaolotik tatvani 2025-mi. Immap IhoaghaotighaitIllaliotihimayok tatvunga toghiktotaoyomot, una ihoaghaotighak huli atoghimaaktomik tatvalo illavaliotighamik Immap Laisighaktakutighamik 8B-EUR1621 (Immap Laisighaktakutighak) toghiktotaohimayok. Una aolahimaaktok Immap Laisighaat pitjutaoyok hamna Immap Laisigha pitjutaoniakmat immakmik pikatakniakmata tatvanga Station Creek. Una toghiktotaat ilaliotihimayok tatvunga Ihoaghaotighamut atotighaitnik tahapkunanga Black Top Creek tatvalo tatvanga West Remus Creek ihagiatigomik atoghaghamik immakmik iglulioghimaakniaktitlugit, apkutaita hiokap tingilgalaktailitjutighanik tatvalo atogaoyoghanik tatvani Havakviokaffukniaktomi Iglukpakakvikmi. Una immap laisighanga kiklikakmat tatvunga Aggasi 10,2021-mun huli toghiktoktaoyok tatva hivuvakpaligiaklugo kiklikha haffuma toghiktotat No. 149440. Hamna amigakutaoniakmat piyagiakakninga laisighaktakutighaitnik, hamna hivivagiakpalikutighat ilaliotihimayok tatvunga toghiktotaohimayomut taimatot hamna attutinga immakutaitnik huli atogaoningagiangani tatvani HAWS-mi Kuutinikpaami Kujaginaak havakvioyomi/havagiyaoyoni tatvalo ingilgatjutaitnik aolagiakakta kittot Inuit malikayagiakakniaktot hapkuninga Aviktoghimayoni tatvalo Kavamatokatkut maligagiyaitnik tatvunga Kallakjuaknik 19 pitjutaotitlugo.

Personnel

Personnel on site: 30

Days on site: 704

Total Person days: 21120

Operations Phase: from 2021-07-29 to 2025-08-28

Operations Phase: from 2022-06-28 to 2042-10-28

Post-Closure Phase: from to

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ᓇᒥ	ᖃᓄᐃᑦᑑᒥᑦ ᐱᓕᕆᐊᖃᕐᓂᐊᖅᐸ	ᑭᒃᑯᑦ ᓄᓇᕐᑰᑖᓂ	ᑐᓴᐅᒪᔭᒃᓴᑦ ᓄᓇᐅᑉ ᖃᓄᖅ ᐊᑐᒐᐅᓚᐅᖅᓯᒪᔭᕆᐊᖕᒐᓐᓂᒃ	ᐃᑦᓴᕐᓂᑕᖃᕐᕕᐅᕙᓚᐅᖅᐸ ᐃᓄᖕᓄᑦ ᓇᔪᖅᑕᐅᖃᑦᑕᕐᓂᑰᕙᓗ ᑕᐃᑦᓯᒪᓂᑐᖃᐅᓕᖅᑐᖅ	ᖃᓂᓐᓂᖅᐹᖅ ᓄᓇᓕᒋᔭᐅᔪᖅ ᐊᒻᒪᓗ ᓴᐳᒻᒥᒃᓲᕕᐅᕙᓗ ᓯᓇᓄᑦ
f2021291189053-Eureka_LandReserveBoundary_20210204	Camp	Inuit Owned Surface Lands	The Eureka High Arctic Weather Station (HAWS) is located on the north side of Slidre Fjord, at the northwestern tip of Fosheim Peninsula, Ellesmere Island, NU. Since 1947, Environment & Climate Change Canada (ECCC) has owned and managed the overall operations and maintenance of the site under Land Reserve #1021. The total area of the Project is approximately 2.23 hectares. There are presently 15 primary buildings and other facilities at the HAWS. The Eureka runway is located 1.5 km NE of camp.	An archaeological assessment will be completed for all potentially impacted areas that haven't been previously assessed. They will be conducted in 2021 in conjunction with other investigations. If any archaeological areas of significance are identified, the Nunavut Department of Culture and Heritage (GoN) will be notified, they will also be protected with mitigation advised by GoN. A permit to conduct the archaeological assessment will be requested from GoN prior to March 31st, 2021.	The closest community is the hamlet of Grise Fjord, which has a population of approximately 130(as of the 2011 census), and it is located approximately 400 km south of Eureka, at the southerntip of Ellesmere Island. This Inuit community is the northernmost community in Canada (ParksCanada, 2009b; Statistics Canada, 2012a).The Key Bird Habitat Site – Fosheim Peninsula overlaps the site. The Napaqtulik/Napurtulik Proposed Territorial Park is approximately 50km west of the site.
f2021291189053-Eureka_LandReserveBoundary_20210204	Landfarm	Inuit Owned Surface Lands	The Eureka High Arctic Weather Station (HAWS) is located on the north side of Slidre Fjord, at the northwestern tip of Fosheim Peninsula, Ellesmere Island, NU. Since 1947, Environment & Climate Change Canada (ECCC) has owned and managed the overall operations and maintenance of the site under Land Reserve #1021. The total area of the Project is approximately 2.23 hectares. There are presently 15 primary buildings and other facilities at the HAWS. The Eureka runway is located 1.5 km NE of camp	An archaeological assessment will be completed for all potentially impacted areas that haven't been previously assessed. They will be conducted in 2021 in conjunction with other investigations. If any archaeological areas of significance are identified, the Nunavut Department of Culture and Heritage (GoN) will be notified, they will also be protected with mitigation advised by GoN. A permit to conduct the archaeological assessment will be requested from GoN prior to March 31st, 2021.	The closest community is the hamlet of Grise Fjord, which has a population of approximately 130(as of the 2011 census), and it is located approximately 400 km south of Eureka, at the southerntip of Ellesmere Island. This Inuit community is the northernmost community in Canada (ParksCanada, 2009b; Statistics Canada, 2012a).The Key Bird Habitat Site – Fosheim Peninsula overlaps the site. The Napaqtulik/Napurtulik Proposed Territorial Park is approximately 50km west of the site.
f2021291189053-Eureka_LandReserveBoundary_20210204	Site Cleanup/Remediation	Inuit Owned Surface Lands	The Eureka High Arctic Weather Station (HAWS) is located on the north side of Slidre Fjord, at the northwestern tip of Fosheim Peninsula, Ellesmere Island, NU.	An archaeological assessment will be completed for all potentially impacted areas that haven't been previously assessed. They will	The closest community is the hamlet of Grise Fjord, which has a population of approximately 130(as of the 2011

			Since 1947, Environment & Climate Change Canada (ECCC) has owned and managed the overall operations and maintenance of the site under Land Reserve #1021. The total area of the Project is approximately 2.23 hectares. There are presently 15 primary buildings and other facilities at the HAWS. The Eureka runway is located 1.5 km NE of camp	be conducted in 2021 in conjunction with other investigations. If any archaeological areas of significance are identified, the Nunavut Department of Culture and Heritage (GoN) will be notified, they will also be protected with mitigation advised by GoN. A permit to conduct the archaeological assessment will be requested from GoN prior to March 31st, 2021.	census), and it is located approximately 400 km south of Eureka, at the southerntip of Ellesmere Island. This Inuit community is the northernmost community in Canada (ParksCanada, 2009b; Statistics Canada, 2012a).The Key Bird Habitat Site – Fosheim Peninsula overlaps the site. The Napaqtulik/Napurtulik Proposed Territorial Park is approximately 50km west of the site.
f2021291189053-Eureka_LandReserveBoundary_20210204	Landfill	Inuit Owned Surface Lands	The Eureka High Arctic Weather Station (HAWS) is located on the north side of Slidre Fjord, at the northwestern tip of Fosheim Peninsula, Ellesmere Island, NU. Since 1947, Environment & Climate Change Canada (ECCC) has owned and managed the overall operations and maintenance of the site under Land Reserve #1021. The total area of the Project is approximately 2.23 hectares. There are presently 15 primary buildings and other facilities at the HAWS. The Eureka runway is located 1.5 km NE of camp.	An archaeological assessment will be completed for all potentially impacted areas that haven't been previously assessed. They will be conducted in 2021 in conjunction with other investigations. If any archaeological areas of significance are identified, the Nunavut Department of Culture and Heritage (GoN) will be notified, they will also be protected with mitigation advised by GoN. A permit to conduct the archaeological assessment will be requested from GoN prior to March 31st, 2021.	The closest community is the hamlet of Grise Fjord, which has a population of approximately 130(as of the 2011 census), and it is located approximately 400 km south of Eureka, at the southerntip of Ellesmere Island. This Inuit community is the northernmost community in Canada (ParksCanada, 2009b; Statistics Canada, 2012a).The Key Bird Habitat Site – Fosheim Peninsula overlaps the site. The Napaqtulik/Napurtulik Proposed Territorial Park is approximately 50km west of the site.

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ᓄᓇᕗᑦ	ᐊᑎᑦ	ᑲᑐᔾᔨᐊᖅᑎᑎᑦᕈᔾᔨᖅ	ᖃᖅᖢᓗ ᑐᓴᖅᑎᑕᐅᓕᐅᓇᐊᖏᓐᓂᒃ
ᐊᐅᓚᐃᐸᑦ	Hamlet of Grise Fiord Administrative Officer	Municipal Office of the Hamlet	2021-01-18
ᐊᐅᓚᐃᐸᑦ	Members of the Hunters & Trappers Organization	Iviq Hunters & Trappers Organization	2021-01-18

ᓚᐃᓴᓐᓰᑦ ᐱᒍᓐᓇᐅᑏ ᐊᓐᓂᖅᑕᐅᓯᒪᔪᑦ

ᓇᒦᒥᐊᓐᒥᓐᓂᒃ ᐱᓕᕆᐊᕆᕝᕕᐅᓂᐊᖅᑐᑦ ᑎᑎᕋᖅᓗᒥᑦ:

North Baffin

ᓚᐃᓴᓐᓰᑦ ᐱᒍᓐᓇᐅᑏ ᐊᓐᓂᖅᑕᐅᓯᒪᔪᑦ

ᒐᕙᒪᒋᔭᐅᔫᑉ ᐊᕕᒃᑐᖅᓯᒪᐅᕐᓂᖓᓐᓂ ᒪᓕᒐᕐᓅᖓᔪᓂᒃ ᐱᖁᔭᕐᓅᖓᔪᓂᒡᓗ ᑲᒪᔩᑦ ᐱᔪᓐᓇᐅᑎᑖᕆᑎᓂᒃ ᓚᐃᓴᓐᓯᓄᓪᓗ ᑲᔪᓯᒃᑲᐃᔩᑦ	ᖃᓄᐃᑦᑐᓪᓚᕆᐅᕙ ᓚᐃᓴᓐᓯᑖᕈᑕᐅᔪᖅ ᐱᔪᓐᓇᐅᑎᑖᕈᑕᐅᔪᖅ ᐊᓐᓂᖅᑕᐅᔪᕐᓗᓐᓃᑦ	ᒫᓐᓇ ᖃᓄᐃᓕᖓᕙ	ᐅᓪᓗᒥ ᑐᓂᔭᖅ/ ᑐᒃᓯᖅᑑᑕᐅᓚᐅᖅᓯᒪᔪᖅ	ᑭᒡᓕᖅᑲᕐᕕᖓ
ᑲᓇᑕᒥ ᓄᓇᖃᖅᑳᖅᑐᓕᕆᔩᒃᑯᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᕙᓪᓕᐊᔪᓕᕆᔩᓪᓗ	Land Use PermitPermit/License Number: N2017N0017	Active	2017-06-04	2022-07-03
ᑲᓇᑕᒥ ᓄᓇᖃᖅᑳᖅᑐᓕᕆᔩᒃᑯᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᕙᓪᓕᐊᔪᓕᕆᔩᓪᓗ	Land Use Permit (Amended)Permit/License Number: N2017N0017	Active	2018-06-18	2022-07-03
ᑲᓇᑕᒥ ᓄᓇᖃᖅᑳᖅᑐᓕᕆᔩᒃᑯᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᕙᓪᓕᐊᔪᓕᕆᔩᓪᓗ	Quarry PermitPermit/License Number: 2018QP0001	Active	2018-06-18	2021-06-17
ᑲᓇᑕᒥ ᓄᓇᖃᖅᑳᖅᑐᓕᕆᔩᒃᑯᑦ ᐅᑭᐅᖅᑕᖅᑐᒥ ᐱᕙᓪᓕᐊᔪᓕᕆᔩᓪᓗ	Quarry PermitPermit/License Number: 2020QP0002	Active	2020-02-27	2023-02-26
ᓄᓇᕗᒥ ᐃᒪᓕᕆᔩᑦ ᑲᑎᒪᔨᖏᑦ	Water Licence (Type B)Permit/License Number: 8BC-EUR1621	Active	2016-08-11	2021-08-10
ᓄᓇᕗᒥ ᐃᒪᓕᕆᔩᑦ ᑲᑎᒪᔨᖏᑦ	Water Licence (Type B)Permit/License Number: 8BC-EUR1621, Amendment No. 1	Active	2018-07-18	2021-08-10
Government of Nunavut, Department of Culture, Language, Elders, and Youth	Archaeology and Paleontology Research Permit, Class IIPermit/License Number:	Not Yet Applied		

Project transportation types

Transportation Type	ᓱᓇᒎᑦ ᐊᑐᒐᐅᓂᐊᖅᐸ	Length of Use
Air	Transportation to site will be through the use of chartered aircraft for personnel, food and smaller supplies. Any work/project activities and travel will follow all Territorial, Federal and ECCC Departmental requirements and guidelines regarding COVID 19.	
Water	Transportation to site will be through the use of sealift for equipment and larger supplies. Any work/project activities and travel will follow all Territorial, Federal and ECCC Departmental requirements and guidelines regarding COVID 19.	

Project accomodation types

Temporary Camp

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ᐱᖁᑦ ᐊᖏᔪᖅ ᐊᑐᖅᑕᐅᓂᐅᓴᔪᖅ ᐃᓚᖃᓯᐅᑎᓗᒋᑦ ᐃᑯᑕᐃᑦ, ᒥᓪᓗᐊᕈᑏᑦ, ᖃᖓᑕᓲᖅ, ᓄᓇᓯᐅᑦ ᐊᓯᖏᓪᓗ

ᐊᖏᔪᖅ ᐱᖁᑦ ᐊᑐᒐᐅᓂᐊᖅᑐᖅ ᖃᓄᐃᑦᑑᓂᖓ	ᖃᑦᓯᐅᕙᑦ	ᐊᖏᓂᖏᑦ - ᐳᖅᑐᓂᖏᑦ	ᓱᓇᒧᑦ ᐊᑐᒐᐅᓂᐊᖅᐸ
Excavator	tbd	various	Load borrow material
Rock trucks	tbd	various	Aggregate transport
Bulldozer	tbd	various	Grading and fill spreading
Vibratory roller	tbd	various	Compact the soils
Grader	tbd	various	Grading of granular material
Loader	tbd	various	Load borrow material
All Terrain Vehicle (ATV)	tbd	various	Crew Transportation
Side by Sides	tbd	various	Crew Transportation
Pick Up Truck	tbd	various	Crew Transportation
Bobcat	tbd	various	Liner installation
Loader	tbd	various	Excavation of granular material
Excavator	tbd	various	Removal and transportation of granular material
Dump Truck	tbd	various	Transportation of granular material
Bulldozer	tbd	various	Removal and transportation of granular material
Small Loader	tbd	various	Excavation of granular material
Till Handler	tbd	various	Removal of granular material
Bobcat	tbd	various	Transportation of granular material
Backhoe	tbd	various	Excavation/digging of granular material
Generator	tbd	various	Temporary camp operations
Tractor and Trailer	tbd	various	Movement of equipment
Snowblower	tbd	various	Snow Removal
Snowmachine	tbd	various	Crew Transportation

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ᓱᓇᒧᑦ ᐅᖅᓱᒃᓴᒡᒋᐊᖅ ᐊᑐᒐᐅᓂᐊᖅᐸ	ᖃᓄᐃᑦᑐᓪᓚᕆᐅᕙ ᐅᖅᓱᒃᓴᒡᒋᐊᖅ	ᖃᑦᓯᐅᕙᑦ ᐅᖅᓱᒃᓴᖃᐅᑏᑦ	ᐆᒃᓴᐅᒃ ᐃᒪᖄᖅᑎᒋᔪᓐᓇᕐᓂᖓ	ᑲᑎᓪᓗᒍ	ᐆᒃᓴᐃᑦ ᐊᒥᓲᓂᖏᑦ	ᓱᓇᒧᑦ ᐊᑐᒐᐅᓂᐊᖅᐸ
Gasoline	fuel	7	200	1400	Liters	Fuel for equipment
Gasoline	fuel	52	5000	260000	Liters	Excavation equipment
Diesel	fuel	8	60000	480000	Liters	Temporary Camp

ᐃᒪᖅ ᐊᑐᖅᑕᐅᔾᒫᖅᑐᖅ

ᐅᓪᓗ ᑕᒫᖅ ᐊᑐᖅᑕᐅᓂᐊᖅᑐᖅ	ᖃᓄᖅ ᐃᒥᖅᑕᖃᑦᑕᕐᓂᐊᖅᐸᑦ	ᓇᑭᑦ ᐃᒥᖅᑕᖃᑦᑕᕐᓂᐊᖅᐸᑦ
4	Pumping from Station Creek, Black Top Creek and West Remus Creek	Station Creek, Black Top Creek, West Remus Creek

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Camp	ᐊᑲᑕᔪᑦ ᐃᓱᐊᓪᑕᐅᔪᓐᓇᖅᑐᑦ	40000 litres	Food waste and paper waste, Incinerated	Ashes deposited in non-hazardous waste facility and capped
Camp	ᐊᑲᑕᔪᑦ ᐃᓱᐊᓪᑕᐅᔪᓐᓇᖅᑐᑦ	5000 lbs	Incinerated on site	n/a
Site Cleanup/Remediation	ᐊᑲᑕᔪᑦ ᐃᓱᐊᓪᑕᐅᔪᓐᓇᖅᑐᑦ	31.5 m cubed	Solids, sludge from water treatment facility.	n/a
Camp	ᐃᒪᐃᑦ ᐊᑐᖅᑕᐅᕗᓯᖅᓭᒪᔪᑦ	35000 gallons	Contained in holding tanks and released to the environment pending receipt of acceptable weekly lab test results. Kitchen will be provided with grease traps.	n/a
Camp	ᐃᒪᐃᑦ ᐊᑐᖅᑕᐅᕗᓯᖅᓭᒪᔪᑦ	9000 m3/year	Decant into Slidre Fjord	Sewage lagoon sedimentation
Camp	ᐊᑲᑕᔪᑦ ᐃᓱᐊᓪᑕᐅᔪᓐᓇᖅᑎᑦᑐᑦ	tbd	Disposed on-site in non-hazardous waste facility	n/a
Camp	ᖃᐅᖅᑕᓂᓇᓂᖅ	4500 lbs	Pacto toilets will be provided to handle black water waste which will be incinerated on site	Residual ash waste from incinerator 400 lbs

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Impacts: - Temporary decrease to ambient air quality of the project area, potential increase of dust and greenhouse gas emissions. - Construction activities have the potential to increase ambient noise. - The potential to affect the soil including removal of infrastructure, material handling (loading and dumping); and the - refueling of vehicles/equipment. - Construction activities have the potential to affect the hydrology and water and sediment quality of the site. - Movement of heavy equipment may increase sediment transport during the summer construction period. - Physical damage to vegetation during construction and changes in the soil surface layer, leading to potential soil and permafrost - erosion, changes in surface water hydrology and thermokarst. Fugitive dust may also suppress plant growth within a zone around - construction zones. - Construction activities will occur during the summer, the time that nesting and denning occur for many bird and mammal species. For - birds and mammals, the interactions include behavioral changes such as avoidance and/or attraction to the site and changes in the - dominant species in areas adjacent to the site. Mitigation - Optimize fuel consumption and minimize dust production resulting from vehicle/equipment travel as well as noise. - Employ standard operating procedures for equipment/machinery - Reduce dust resulting from construction activities: Execute work using methods to minimize raising dust from construction activities. - Refueling of vehicles and equipment to occur in designated areas following all applicable regulations. - Effective sediment and erosion control measures will be installed prior to starting work (temporary matting, geotextile silt control filter (curtains) fabric, etc.) - All water intake hoses will be equipped with a screen of an appropriate mesh size to ensure fish are not entrained. - Work will occur in summer months.

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

Once projects are constructed and operational, the temporary camp will be disassembled and sea-lifted from site. Conditions at the temporary camp will be returned to natural conditions as much as possible.

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 11: Municipal Development

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Eureka is located on Ellesmere Island, Nunavut, which is the northernmost island in the Canadian Arctic Archipelago. The Arctic Ocean surrounds the Archipelago to the north and west, with Greenland to the east and the Canadian mainland to the south. Eureka itself is on the western side of Fosheim Peninsula in northern Ellesmere Island. Eureka is located on the north side of Slidre Fjord and surrounded to the northeast and northwest by ridges that rise about 600 m above mean sea level. Eureka's climate is typical for the Canadian Arctic Archipelago. Eureka experiences a long, dark winter and a short, intense summer with continuous daylight. The winter conditions promote a strong surface-based temperature inversion. The transition to summer occurs with a rapid warming and the breakdown of the Arctic winter vortex. Atmospheric Environment In an effort to characterize the existing air quality and noise environment within the Project area, a monitoring program was completed in August 2015. Details and results of the monitoring program as well as a description of climate and meteorology in the Project area are provided in the following sections. The weather station at Eureka (WMO ID no. 71917; latitude 79.98°N, longitude 85.93°W) has been operated by the Metrological Service of Canada since 1947. The hourly surface observation record begins on 1 January 1953 at 01:00 LST (06:00 UTC) and observations are recorded at an altitude of 10.4 m above mean sea level. Upper-air observation data from radiosondes are available starting in 1961. Lesins et al. (2010) provide a comprehensive summary of weather observations made at Eureka from 1953 to 2007, which is briefly discussed in the following sections. Lesins et al. (2010) define the winter months as the three coldest months of the year (January, February, and March) and summer as the three warmest months (June, July, and August).Somewhat unconventionally, autumn is defined to comprise the period of September to December, which is based on the fact that the stable winter boundary layer is not fully formed until January. Spring comprises the rapidly warming months of April and May. Over the 54 year record, the average temperature at Eureka is -19.1°C, with the highest and lowest observed temperatures of 20.0°C and -54.6°C recorded 22 July 2007 and 15 February1979, respectively. Trends in temperature across the entire observing record can be summarizedas follows:•A cooling trend from the early 1950s to early 1970s;•A warming period from the early 1970s to early 1980s;•A brief cooling period in the mid-1980s; and A warming trend up to the present day. Eureka is typified by a polar desert climate. Annual precipitation averages only 79.1 mm per year, with the majority (60.3 mm on average) falling as snow in the autumn and winter months. Rain is typically confined to the months of July and August, where rainfall events can be intense. The maximum recorded daily precipitation events observed at Eureka in July and August were20.8 mm (27 July 1997) and 41.7 mm (17 August 1953), respectively .Surface wind speeds at Eureka are greatest in the summer months, averaging about 17 km/h across the period from 1954 to 2007. Wind speeds in autumn, winter and spring are reduced, ranging between approximately 8 and 11 km/h over the same period. Lesins et al. (2010),however, note that the observations show a weakening trend of approximately -0.6 km/h per decade over the period from 1954 to 2007, which persists despite the slight weakening of the surface-based temperature inversion over the same period. Surface winds are primarily out of thewest in the late spring and summer (May to August), switching to the east and southeast for theremainder of the year.Although variable, Lesins et al. (2010) note that there has been no significant change in upper airwind speeds at the 500 mb level.Air QualitySpot measurements of ambient dust were made at seven pre-defined monitoring locations underexisting conditions. The seven monitoring locations are summarized below:•NM-1 – West of the main station•NM-2 – South end of the main station at the sealift unloading location•NM-3 – Northwest of the powerhouse within the main station•NM-4 – North of the existing sewage lagoon within the main station•NM-5 – North end of the main station at the dead line•NM-6 – North of the west end of the runway at the DND facilities•NM7 – South of the west end of the runway at Fort EurekaAmbient particulate matter (PM) data was collected using a DustTrak dust monitor (model DRX8533) in August 2015. Calibration of the dust monitor was completed in the field at test conditionsbefore and after each measurement campaign with a zero filter. Calibration was valid during the period of monitoring. Spot measurements of ambient dust (i.e., particulate) levels were completed through multiple1-minute DustTrak logs at each monitoring location at various observation periods. Levels of total PM, as well as PM less than 10 and 2.5 microns (μm) in diameter (PM10 and PM2.5) were measured. The dust monitoring data are summarized in Table 4.3 for total PM, PM10 and PM2.5.At the time of monitoring, construction of the new multipurpose building project was underway. The ongoing activity included clearing and excavation of the footprint for the building foundation. For the purposes of establishing ambient particulate levels in the project area, the minimum recorded particulate levels are considered to represent the true ambient dust levels and the maximum recorded particulate levels are considered to represent the ambient dust levels as influenced by the ongoing project work and other operations within the Project area. Based on the monitoring results, NM-5 would be most reflective of true background and indicative of a remote wilderness environment where particulate levels are low and influenced by wind induced dust. The monitoring data shows that levels of PM2.5 are high in comparison to total PM, which suggests that the PM is primarily influenced by the exhaust of passing vehicles. The fact that the lowest monitored levels of PM were observed at the monitoring location farthest from an adjacent roadway (i.e., NM-5) supports this conclusion. A comparison of the maximum monitored levels in close proximity to the ongoing activity at NM-3 to the maximum monitored levels at NM-5 shows that the effects of ongoing activity are limited to within 300 meters. If activity level is similar for future project work, local effects are expected to be kept within 300 to 500 meters. A review of an air quality effects assessment submitted to the NIRB for a nearby project (MaryRiver Project, Baffin Island) was completed to characterize ambient air quality in a similar environment. The Mary River Project is located approximately 1,000 km south of the HAWS in comparable settings. The assessment of background air quality for the Mary River Project described in Air Quality Baseline Study, Baffin Iron Mines Corporation, Mary River Project (RWDI Air Inc., December2008) measured total PM concentrations of 3.0 to 7.0 μg/m3 which "represent low, pristine levels that can be viewed as typical of remote Arctic areas". Similarly, PM10 concentrations of 1.5 to3.8 μg/m3 were measured. PM2.5 measurements were not performed for the Air Quality Baseline Study, Baffin Iron Mines Corporation, Mary River Project (RWDI Air Inc., December 2008) because" based on experience in such pristine environments, where particulate matter levels In summary, the ambient particulate levels observed at NM-5 are comparable to the particulate levels identified during the literature search, which are pristine and typical of remote Arctic areas. Noise/Sound level data was collected using a Quest SoundPro DL-2-1/1 sound level meter in August2015. Calibration of the sound level meter was completed in the field at test conditions before and after each measurement campaign with the QC-10 acoustic calibrator. Calibration was valid during the period of monitoring. Spot measurements of ambient sound levels were completed by observing and recording the minimum and maximum slow response A-weighted sound levels within 5-minute observation periods. For the purposes of establishing ambient noise levels in the project area, the minimum recorded sound levels are considered to represent the true ambient sound levels and the maximum recorded sound level are considered to represent the ambient sound levels as influenced by the ongoing project work and other operations within the project area. The noise monitoring data are summarized in Table 4.4. The true ambient data are indicative of a remote wilderness environment where noise levels are relatively low and are strongly influenced by sounds of nature and wind induced noise effects. A review of a noise effects assessment submitted to the NIRB for the Mary River Project was completed to identify noise levels in a similar environment. The assessment of ambient noise for the Mary River Project described in Noise Baseline Study, Baffin Iron Mines Corporation, Mary River Project (RWDI Air Inc., November 2008) concluded that "average 24-hour sound exposures ranged from 25 to 30 dBA, depending on location". The baseline monitoring locations most comparable to the HAWS environment (i.e., in close proximity to Arctic

Ocean waterway inlets)had baseline monitoring results of 29 and 30 dBA. In summary, the minimum uninfluenced ambient sound levels observed in the HAWS area (i.e.,natural sounds of nature at NM-2, NM-5, NM-6 and NM-7) are comparable to the sound levels identified during the literature search. With consideration of the above information, a conservative approach to establishing background sound levels was applied. An existing noise level of 35 dBA was selected for 24-hour sound levels and applied as the background value for assessing the relevance of potential changes in sound levels as a result of Project Improvement activities at the HAWS. The HAWS is situated in the Eureka Hills Ecoregion, within the Northern Arctic Ecozone. The topography in the area is rolling and ridged, and reaches altitudes of no greater than 1000 m above sea level. Underlying strata include Mesozoic and Tertiary sandstone and shale, which have large trenches cut out of them. The trenches form the sinuous, curving drainage that is apparent in the area (Phase I ESA - PWGSC, 2007). The geology of the HAWS site was observed by Columbia/Franz (2010) to be composed of silty clay, with some gravel and cobble. Hydrogeologic information was obtained from Columbia/Franz (2010). Regionally, sinuous drainage formed by carving of the underlying sandstone is apparent, as well as within the study area. Water has formed gullies and seasonal creeks that drain into the Slidre Fjord of the Fosheim Peninsula, and subsequently into the Eureka Sound and Arctic Ocean. The main natural source of surface fresh water at the HAWS is Station Creek, which is seasonally flowing. It flows in early June on the west side of the main facilities at the HAWS, from north to south. Flow from the creek discharges into the salt water of Slidre Fjord and ultimately into Eureka Sound and the Arctic Ocean. The HAWS is in an area of continuous permafrost. In high, dry locations the active layer is at approximately 0.60 metres below surface and in wet, low areas permafrost is located at approximately 0.80 metres below surface. On south facing slopes, the active layer can reach a depth of approximately 1.2 metres. The water reservoir is the source of domestic water, which is also located on the west side of the main facilities. The reservoir is replenished yearly by the seasonal pumping of Station Creek. A sewage lagoon is located at the south end of the site's facilities on the shore of Slidre Fjord (Columbia/Franz, 2010).Soils Negligible chemical weathering and plant action in the arctic environment contribute to poor soil profile development. Thus, soils at the HAWS are composed mostly of sand/gravel fill, underlain by silty, sandy clays – mainly sands, silts, and clays. Specifically, these soils are composed of lithosols and regosols of the Rawmark Great Soil Group, and are typically 18% sands, 47% silts, and 35% clays. Soils include Regosolic Static Crysosols and Orthic Turbic Cryosols over top of colluvial, alluvial and marine deposits (Phase I ESA - PWGSC, 2007).

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The site is in ecodistrict 21, situated within the Eureka Hills ecoregion of the Northern Arctic ecozone. The ecoregion includes Axel Heiberg and Ellesmere Islands. General descriptions of plant communities include low-growing herbs and shrubs such as purple saxifrage, Dryas spp., arctic willow, sedge and arctic poppy. The extreme environmental conditions have a significant impact on the ecological recovery of vegetation at disturbed sites at Eureka. Low light levels, extremely low ambient temperatures and lack of moisture and nutrients limit plant productivity. While a precipitation value of 50-150 mm per year has been used for HAWS assessments (PWGSC 2007), the climate conditions listed by Agriculture Canada for the ecodistrict indicates average precipitation at the lower end of this range. Average total precipitation for the ecodistrict is 68 mm/year, 53 mm of which is snow. Due to evaporation of moisture during summer months, the area experiences a deficit of 361 mm of moisture annually. There are only 16 effective growing days annually (days above 5°C adjusted for day length) in the area around Eureka. The area has >90% continuous permafrost, with <20%ground ice. Changes to vegetation are expected in the High Arctic terrestrial ecosystem as a result of warming ambient temperatures. Long-term monitoring programs were established in Quttinirpaaq National Park in 1990 using several measures of environmental change (Broll et al. 2003). Changes recorded between 1990 and 2002 include warming soil temperatures, with an increase in the depth of the active layer. Changes in permafrost caused changes in the hydrological conditions and soil moisture. A review of climate changes in the Canadian Arctic indicate that the ambient temperature has increased 1.5 to 3°C between 1953 and 2007, while precipitation has increased by roughly 10% (Stein et al. 2013). If these trends continue, the plant community will undergo changes in species and numbers in response to the changing environment. The HAWS has been in place since 1947; however, there are no rigorous surveys of the animal community in the area, the species abundance, or other measures of species presence. While some ecological information is available for many species based on studies conducted in the Arctic, further south of Eureka, important site specific data, such as the numbers of nesting sites for breeding birds, or the density of small mammal species, are not available. For example, the number of ground nesting breeding birds during the summers would allow some estimation of the impacts of disturbed ground from borrow sites or new construction. The Arctic Biodiversity Assessment (CAFF, 2013) estimated that the High Arctic portion of the Canadian Archipelago has a very low biodiversity, with roughly 10 resident mammalian species. Wildlife sightings are recorded weekly at the HAWS and provide some site specific information on wildlife species in the area and potential interactions with workers on site. The most common sightings are for muskox, arctic hare and wolves, with many sightings within the boundary of the site. Waterfowl, including red-necked loons, have been observed on the Fjord but their nesting sites relative to the station are unknown. Polar bears have been observed in the area but at some distance from the HAWS. Some data are available from breeding bird surveys at other sites in the High Arctic. Pattie (1977) reported the numbers of regular and occasional breeding birds on Devon Island, a High Arctic ecosystem roughly 500 km to the south of Eureka. Most of the bird species were shorebirds, seabirds and colonial waterfowl. The dominant terrestrial birds that were present every year of the survey were the rock ptarmigan, the Lapland longspur and the snow bunting, with the raven and snowy owl less common. Pattie reported a density of 40 birds per km2 in July 1972 at Sildre Fjord, with 12 species of birds, equivalent to other high Arctic sites. These results corresponded with a survey reported by Nettleship and Maher (1973) at Hazen Lake, roughly 300 km to the northeast of Eureka. Trefry et al. (2010) reported several years of breeding bird survey results from the east coast of Ellesmere Island. Snow buntings, Lapland longspur and Baird's sand piper were the most abundant species. The density of snow buntings was 1.0 to 1.5 pairs per km2,while the Lapland longspur reached 1.5 to 2.0 pairs per km2. These results were used to include the snow bunting as a representative songbird in the selection of Valued Ecosystem Components in the current assessment. Parks Canada has conducted periodic surveys of wildlife on north Ellesmere Island to establish wildlife presence and numbers before the establishment of Quttinirpaaq National Park. Data for1989 to 1997, 2002 and 2008 were obtained in spreadsheet form from J.Chisholm, Nunavut Field Unit, Parks Canada, Iqaluit. No detailed methods were included in the data, although most transects were flown with two observers in small aircraft in early to mid-June. The 1989 to 1997 data set included a number of marine species, including ringed seal, bearded seal and walrus, however the marine transects extended far north of Ellesmere Island and are not relevant for Eureka. The surveys indicated that the dominant terrestrial mammal is the muskox, with several dozen in the area at any time. Peary caribou are also present although their numbers were consistently low. The number of arctic hare is variable with only 10 reported annually for the 10 year span from 1989 to 1997, yet over 3500 in 2008. The arctic hare was often observed in groups of 20-30 animals. Dominant birds include the gyrfalcon and the snowy owl. Snow geese are also reported in fairly large numbers. The attached EIA provides a summary of species reported to be present in the area, as well as the associated Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and/or SARA status. The HAWS is located in an extreme climate with long, very cold winters and short, cool summers. The field season for the completion of construction activities is, understandably, extremely short. It consists of (at most) July, August and the beginning of September. Outside these months, the ground is frozen and there is no water flowing in the water bodies in the Project location area. Remus Creek and West Remus Creek, and the portions in which the Project will be taking place, are temporary, ephemeral watercourses, which are only filled with water during

the spring freshet period. Hydrology assessments have been previously conducted at the HAWS for Station Creek and Black Top Creek and some historical data is available. Generally, flow within all watercourses at the site begins in mid June (around June 15) and ends in late August or Early September. Based on a desktop review and on discussions with station staff regarding local conditions and observations relating to fish and fish habitat at Station Creek, and aquatic species and mammal observations during their time at the HAWS site (Environmental Impact Assessments (EIAs) conducted in 2016 and 2018 (Arcadis)), no species listed under the Species at Risk Act (SARA) or assessed under COSEWIC have been identified within the Project area. Furthermore, no species have been identified under the Nunavut Wildlife Act.

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While Eureka has no permanent residents, a number of research and operational staff rotate through the HAWS facility. The closest Inuit community is the hamlet of Grise Fjord, located 400 km south of Eureka at the southern end of Ellesmere Island. There are hundreds of archaeological sites located on Ellesmere Island, the majority of which are concentrated in Quttinirpaaq National Park, located approximately 225 km to the north east of Eureka. About 285 archaeological sites have been documented in the national park (Parks Canada, 2009b). Archaeological evidence unearthed in Quttinirpaaq National Park has revealed that the park and the surrounding region have been occupied by humans for centuries. People have resided on Ellesmere Island for thousands of years, beginning with the arrival of the Paleo-Eskimos of the Independence I culture (approximately 2000 – 4000 B.C.). They were named after the Independence Fjord in northern Greenland, where the first evidence of these people was identified by the Danish archaeologist Count Eigel Knuth. These Paleo-Eskimos arrived after crossing the Bering Strait from Siberia. Artifacts such as tent rings and stone tools were discovered. In addition, remains of their campsites found in the national park, characterized by box-shaped hearths, reveal that they were few in number and that they were present in the area for only about 300 – 400 years. In these hearths, they burned willow, grasses, driftwood, and muskox bones. They were resilient people who hunted muskox and caribou, using whatever material they could find to produce heat during the long, dark arctic winters. They lived in aboveground tents year-round, which were most likely covered in muskox hide (Parks Canada, 2009a;Rast, 2015).For many centuries after the existence of the Paleo-Eskimos, no evidence has been found in the national park to suggest human occupation. Approximately 3000 years ago, a second wave of Paleo-Eskimo people of the Independence II culture migrated across the arctic islands and reached Quttinirpaaq (1000 – 500 B.C.). The Dorset people later arrived and remained on the island until approximately 1000 years ago (A.D. 800 – 1000). The Thule people followed (A.D.1600 – 1850) and became skillful hunters of whales and other marine mammals. The Thule culture survived elsewhere in the arctic. However, Ellesmere Island and Quttinirpaaq was abandoned by the Thule as the climate became colder and harsher, leading up to the Little Ice Age. The Thule are the ancestors of the modern Inuit (Parks Canada, 2009a). In addition to these relics, those of historic Inuit/Inughuit cultures and of exploratory, scientific, and government activities of the nineteenth and twentieth centuries have also been unearthed (Parks Canada, 2009b). It has been mentioned that a Thule tent ring had been sighted in an area located approximately 10 km from the EC reserve at Eureka, during discussions with the HAWS station manager during the site visit which took place in August 2015.Post Contact History Northern Ellesmere Island was first visited by Europeans in 1875, when the British Arctic Expedition sailed through the Nares Strait and established wintering quarters for the HMS Discovery off Lady Franklin Bay, in the sheltered harbour. The HMS Alert, the sister ship to Discovery, wintered 160 km to the north on the shore of the Arctic Ocean. The harbour is now known as Discovery Harbour. Sledging parties departed from the ships in the spring of 1876 to explore the northern terrain. The expedition was forced to return to England later in 1876 due to the explorers' becoming ill with scurvy (Parks Canada, 2009b).The United States Army's Lady Franklin Bay Expedition arrived at the same site in 1881, under the leadership of Lieutenant Adolphus Greely, for one of two expeditions staged by the United States in contribution to the International Polar Year (an undertaking by twelve countries in an effort to establish scientific stations in regions bordering the North Pole). The US expedition established a station that they named Fort Conger. When supply ships failed to reach the group in 1882 and 1883, they retreated and became stranded on Pim Island, located on Ellesmere Island's eastern coast. Only seven out of the 26 men survived. In 1899, Robert Peary, and American explorer, arrived at the abandoned Fort Conger, in hopes of using the Fort as a base station to reach the North Pole. This expedition was accompanied by Inughuit guides from northwestern Greenland. Aboriginal traditional knowledge including the use of fur and local food, allowed the expedition to better cope with the harsh conditions. Combining the traditional knowledge and European technology, the base camp structures at Fort Conger were modified so as to function well in the cold arctic climate. Peary operated expeditions in 1900- 01, 1905-06, and 1908-09 from the refurbished Fort Conger. The fort later provided shelter to American, Norwegian, Danish, and British/Canadian expeditions in 1915, 1920, 1921, and 1935. The Fort Conger is presently a significant archaeological resource, and it has been designated as Classified Federal Heritage Buildings protected by Quttinirpaaq National Park as important cultural resources (Parks Canada, 2009a).Communities The closest community is the hamlet of Grise Fjord, which has a population of approximately 130 (as of the 2011 census), and it is located approximately 400 km south of Eureka, at the southern tip of Ellesmere Island. This Inuit community is the northernmost community in Canada (Parks Canada, 2009b; Statistics Canada, 2012a).Other communities on Ellesmere Island consist of transient communities conducting scientific research, including universities and government agencies, which is a major activity in the national park region, and in Eureka. The Polar Continental Shelf Project (PCSP) (Natural Resources Canada (NRCan)), based in Resolute Bay, provides logistical support for these activities (Parks Canada, 2009b).The residents of Ellesmere Island include the year-round permanent residents of Grise Fjord, the military and civilian personnel associated with Canadian Forces Station, Alert (located approximately 480 km northeast of Eureka and 45 km northeast of the national park), the summer base of operations for the Canadian Department of National Defense at Eureka, the personnel working at the weather station at Eureka, and Parks Canada.

Miscellaneous Project Information

Note that for this application, the number of personnel, fuel usage and waste management is what is being used currently for the operation of the site.

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Air quality Interactions: Demolition activities have the potential to temporarily increase ambient air concentrations of dust (i.e., particulate) and greenhouse gas emissions. Effects: During demolition, there will be an increase in local airborne particulate (dust) and tailpipe (fuel combustion) emissions from heavy-duty construction equipment operation and construction activities. The tailpipe emissions will include greenhouse gas emissions and therefore have the potential to contribute to climate change. Mitigation: •Optimize fuel consumption and minimize dust production resulting from vehicle/equipment travel: Employ standard operating procedures for equipment/machinery and ensure that regular maintenance is performed in accordance with good engineering practices or as recommended by suppliers such that the equipment is kept in good operating condition. Other activity-specific mitigation measures will include the use of appropriate exhaust emissions controls such as catalytic converters and diesel particulate filters to mitigate fuel combustion emissions from heavy equipment and vehicles. Additionally, the number of equipment/vehicle movements and travel distances will be optimized to reduce fuel consumption

and minimize dust and greenhouse gas emissions. Lowering vehicle speeds on unpaved road surfaces, applying water as well as implementing good road maintenance practices will minimize the potential for road dust emissions. Demolition work will be completed by methods that minimize dust generation from operations, in accordance with the Environmental Protection Plan. •Reduce dust resulting from demolition activities: Execute work using methods to minimize raising dust from decontamination operations. Implement and maintain dust and particulate control measures as determined necessary by applicable regulations and standards during demolition work and in accordance with applicable authorities. The use of oil for dust control is prohibited. Prevent dust from spreading to beyond the immediate work area. Departmental Representative or designate may stop work at any time when Contractor's control of dusts and particulates is inadequate for worker exposure relative to indoor conditions, or when air quality monitoring indicates that release of fugitive dusts and particulates into the work area equals or exceeds specified levels. If Contractor's dust and particulate control is not sufficient for controlling dusts and particulates into atmosphere, stop work. Contractor must discuss procedures that Contractor proposes to resolve problem. Make all necessary changes to operations prior to resuming work that may cause release of dusts or particulates. Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures. Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads. Noise Interactions: Demolition activities have the potential to temporarily increase ambient noise. Effects: During demolition clean up, there will be an increase in noise emissions from heavy-duty construction equipment operation and construction activities. These effects are typical of a construction site, localized, and of a temporary nature. The physiological and ecological impacts of noise on wildlife needs to be considered, acutely loud noises can cause hearing loss in wildlife. Behavior patterns of wildlife may differ from their natural suite of behaviors. Mitigation: •The Project will employ standard operating procedures for equipment/machinery and ensure that regular maintenance is performed. As well, personnel will adhere to conditions outlined in all permits, authorizations and/or approvals. Sediment and soil quality Interactions: Demolition activities have the potential to affect the soil include removal of buildings, infrastructure, material handling (loading and dumping); and the refueling of vehicles/equipment. Effects: During demolition soil quality is most likely affected as a result of fuel spills and leaks from equipment refueling efforts or otherwise, and from compounds located inside the structures materials. Conduct a complete on-site evaluation of the area to determine exact measures to be taken to protect permafrost. Mitigation: •Prevention of fuel spills/leaks: Refueling of vehicles and equipment to occur in designated areas following all applicable regulations. •Sediment, erosion and drainage control: Effective sediment and erosion control measures will be installed prior to starting work to prevent entry of sediment into watercourses and waterbodies. These measures will be inspected daily and repaired if damaged by construction, precipitation or snowmelt. Sufficient supplies for erosion, sediment and drainage control will be available on site to keep in compliance with federal and territorial fisheries and environmental protection legislation. Aquatic environment Interactions: Demolition activities have the potential to affect the hydrology and water and sediment quality of the site. These activities include, removal of buildings, infrastructure, material handling (loading and dumping); and the refueling of vehicles/equipment. Effects: surface water contamination could potentially occur due to leaks/spills that may occur during the re-fuelling of vehicles and construction machinery on site. Debris from demolition efforts may end up into the hydrological system. Mitigation: •Suitable erosion and sediment suppression measures will be implemented to prevent sediment from entering Black Top Creek, Station Creek or other water bodies. Erosion control structures (temporary matting, geotextile silt control filter (curtains) fabric, etc.) are to be used. Vehicles/machinery are to be checked for leakage of lubricants or fuel and are maintained in good working order. Re-fueling should occur in designated areas only. Basic petroleum spill clean-up equipment will be kept on-site. Barriers will be required during extraction of contaminated soils to prevent material from entering surface water, Station Creek or the reservoir. Aquatic Community Interactions: The demolition work does not involve direct disturbance of the water bodies, Work projects are isolated from the water bodies, although movement of heavy equipment may increase sediment transport during the summer construction period. Effects: Concerns about sediment loading in nearby water bodies are important to address. Mitigation: •Best practice is to mirror aquatic environment mitigations. Should water pulling from Station Creek be required during the demolition period the most appropriate time of year to do so would be during the freshet period. Vegetation Communities and Species Interactions: Physical damage to vegetation during construction and changes in the soil surface layer, leading to potential soil and permafrost erosion, changes in surface water hydrology and thermokarst. Fugitive dust may also suppress plant growth within a zone around construction zones. Effects: The damage to the vegetation will be equal to the footprint of the demolition, storage and the dust footprint. Mitigation: •Due to the extreme conditions at Eureka, construction will be conducted during the brief summer months. Damage can be reduced by covering the ground, possibly using matting, prior to construction to reduce physical disruption of the soil. Fugitive dust can be suppressed at its source. Additionally, vehicles will remain on pre-established roads/trails. Workers are to be advised of sensitivity of environment and limits of equipment travel will be determined. Wildlife Communities and Species Interactions: Demolition activities will occur during the summer, the time that nesting and denning occur for many bird and mammal species. For birds and mammals, the interactions include behavioral changes such as avoidance and/or attraction to the site and changes in the dominant species in areas adjacent to the site. Effects: Effects are unlikely as demolition activities will keep to areas of existing building and established roads. However, minimization of impacts is important as the area in general as the potential for sensitive species migration. Mitigation: •The Wildlife and Wildlife Habitat Management Plan (SLR, 2018) will be followed. •Temporary workers will be informed of station protocols for the control and disposal of food and refuse to ensure that local wildlife is not attracted to the site. •Temporary workers involved with demolition activities will trained to avoid contact with all wildlife and their nests (particularly with species at risk) and to report sightings to a central authority (i.e., supervisors) immediately. Movements of workers in off-hours should also be restricted to ensure nesting sites and denning areas are not disturbed. •In the event that SARA listed birds or mammals are located in the area, construction crews will be prepared to modify, or delay, activity that might harm the protected species. For example, if nests with eggs are located for a protected species, activity in the area might be delayed until after hatching.

Cumulative Effects

There are no adverse residual project effects to be considered in a cumulative effects assessment. That there are no identified adverse residual project effects is not surprising for a construction project such as this, where the works and activities are very limited in geographic extent and time.

Impacts

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	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
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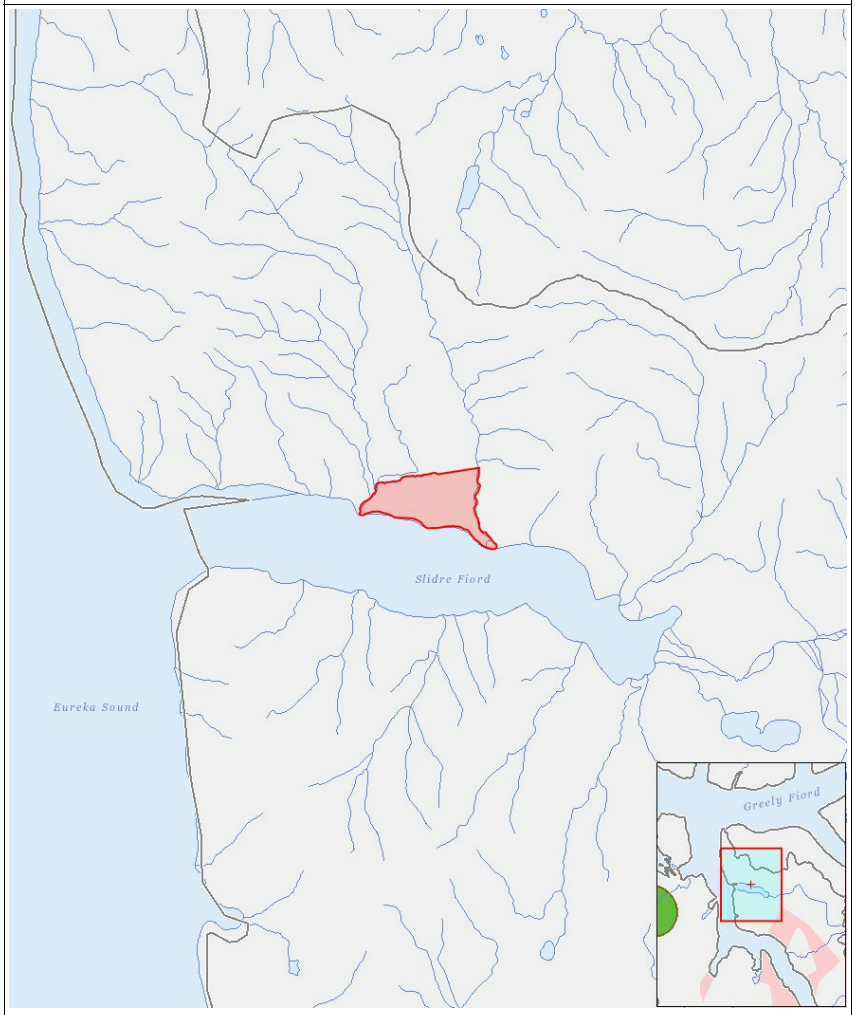

List of Project Geometries

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