



መጀገጥ ፈጀብር በጀትና ክበላሪያን በንግድ የሚከተሉ ስነ #125627

Cambridge Bay New Power Plant and Bulk Fuel Storage Facility

ንግድ ተቋማ
ና መልካም ስለ:

New

ለመጀገጥ የሚከተሉ ስነ
ና መልካም ስለ:

የሚከተሉ ስነ ለ

የመጀገጥ የሚከተሉ ስነ: 7/17/2021 12:17:07 PM

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

የደረሰ እና የሚከተሉ ስነ: from 0001-01-01 to 0001-01-01

ለመጀገጥ የሚከተሉ ስነ:
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PO Box 250
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QULLIQ ENERGY CORPORATION

Cambridge Bay Power Plant Project

Project Description: Qulliq Energy Corporation (QEC) is a Government of Nunavut territorial corporation. Through the operation of 25 stand-alone diesel power plants, QEC is the sole provider of electricity to approximately 15,000 customers in the territory. Qulliq Energy Corporation is proposing to construct and operate a new power plant in the Hamlet of Cambridge Bay located in the Kitikmeot Region of Nunavut (the project). Cambridge Bay is a community with increasing demand for electricity, reflecting its growing population and increasing government and commercial enterprise. The existing Cambridge Bay power plant was constructed in 1958 and now suffers from several deficiencies. As the systems continue to age and become more outdated, it will become more difficult to maintain the facility, and plant reliability will become an issue. This proposed multi-year project will include a new five-engine power generation facility with installed capacity of 5,500 kilowatts, designed for a 40-year life and will incorporate new technology to improve reliability, efficiency, operation, and safety. The new plant will be capable of integrating renewable energy sources. A bulk fuel storage system consisting of two 2-million litre vertical fuel tanks, a secondary containment berm, one 90,000 litre double wall horizontal fuel tank, piping and pumping facilities will also be constructed. Additionally, QEC has plans for a Quonset garage, transformer storage, pole racks, oil and glycol drum storage, and waste disposal area with containment. Space will be allocated for sea can storage and a back-up emergency generator. Approximately 2 kilometres (km) of distribution line will be required to connect to the new power plant. The power plant building will include offices, electrical control room, line shop, and garage/workshop, in addition to the power generation hall. An approximately 400-metre long pipeline will be constructed to connect to the Petroleum Products Division (PPD) bulk fuel facility. The proposed lot is approximately 14,400 square metres located on Commissioner's Land within Lot 1017 Plan 4573 which will become Lot 3 Block 67 Plan 4781 (Sketch 500-SK-2019). The location is on the east side of Road R36, approximately 2 km southwest of the Hamlet of Cambridge Bay, approximately 1 km east of the Cambridge Bay Airport, and approximately 400 metres northeast of the PPD bulk fuel storage facility. There are no natural drainages, or watercourses within 100 metres of the project location. There are no designated wildlife areas, marine protected areas, territorial or national parks or Inuit owned lands in conflict with the power plant location. An archaeological impact assessment will be carried out in July 2021 to determine if archaeological sites are in potential conflict with the project and identify any necessary avoidance or mitigation measures. The project schedule is shown in Table 1.

Task	Timeline
Secure Land and Complete Archaeological Impact Assessment	March 2021 to March 2022
Detailed engineering design	April 2022 to March 2023
Contracting and procurement	April 2023 to March 2024
Construction	April 2024 to December 2025 (seasonal)
Testing and commissioning	January 2026 to March 2026
Plant handover	March/April 2026

The contractor awarded the construction tender will determine the required labour force to meet project requirements; however, it is estimated that 35 workers will be on-site depending on the construction phase. Contractors will be obligated to meet mandatory Inuit labour levels for all construction work. QEC has staff in the community of Cambridge Bay responsible for the day to day operation of the power plant. This includes a Plant Superintendent, Assistant Operator, and Relief Operator. It is expected that existing staff will transition over to the new power plant once it has been constructed and commissioned. Once the lines/maintenance shop and storage area is constructed, the power line technician crew, maintenance crew, and stores keeper will establish their offices here. In total, there will be up to 14 QEC staff working from the new power plant location. The majority of construction materials for the project will be delivered by sealift. Some materials may be sourced locally or delivered via cargo plane depending on size and quantity. The contractor will be responsible for sourcing construction equipment. This may include a combination of sub-contracting locally available equipment or bringing equipment to the community through the annual sealift. This project is anticipated to provide an overall benefit to the Hamlet of Cambridge Bay with more efficient use of diesel, a non-renewable resource, and the reduction of greenhouse gas emissions. It will also allow QEC to improve power generation infrastructure in the community, support continued

community growth and achieve its mandate for the provision of safe, reliable electrical power to the communities it serves.

Inuinnaqtun: Qulliq Alrujaqtuqtunik Ikumadjutiit(QEC) Nunavut Kavamanut (GN) ukiuqtaqtumi kuapuliisiujut. Aulapkaivaktut 25nik uqburjuaqtuqtunik pauwaqarviinik, QEC-kut avaliittut tuniuqhajijuut alrujaqtuutikhanik imaatut amigaittunut 15,000 atuqtijujut ukiuqtaqtumi.Qulliq Alrujaqtuqtunik Ikumadjutiit uukturumajut nappaqtirilutik aulapkailutiklu nutaamik pauwaqarvikhamik Hamlangani Iqaluktuutiami ittuq hamani Kitikmeot Avikturniani Nunavunmi (Havaakhaq). Iqaluktuutiaq nunagijaujuq amigairjuumiliqtunik pijumajaujunik alrujaqtuqtukhanik, naunairjuumiutaujuq amigaigjuumiliqtut inugiangningit imaalu amigaigjuumiliqtut kavamatkut ukualu nanminirijaujut havagvigjuat. Tadja Iqaluktuutiami pauwaqariat nappaqtqtauhimajuq 1958mi imaalu ajuqhautiqaqpaliqtuq amigaittut ihuirtauvaliqtut naamalluarungnaiqhutik. Pauwaqarviit utuqqanguliramik imaalu utuqqaanguqpallaramik, ajurnaqhitioniaqtuq munaqhijaami, pauwaqarvianik imaalu pauwaqarviat naammalluarnaiqhungejuq ajuqhautaulirniaqturlu. Una uuktuqtaujumajuq amigaittui-ukiuni havaarijakhaq ilaqrniaqtuq tallimanik-ingniqutiqarluni pauwaqariami janulitaqariangini pauwaqarvikhanik iliurailutik imaatut 5,500 kilowatts, piliuhimajumik 40-ukiuni atugakhamik ilaqrniaqturlu nutaanik ihuaqutikhainik, ihuaqtumik, auladjutikhainik imaalu qajangnaittumik. Nuutaq pauwaqarvikhat aulaniqarniaqtuq ilaujukhanik atuqtauffaagiaqqaqtunik auladjutikhainik. Angijunut uqhuqarviit uqburjuaqarvikhat atuqtakhat piqaqtut malruuk 2-million litre qunmuujuk uqhuqarviik, tuklianik ingalaitkutikhainik avaluuk, atuhiq 90,000 litre qaliktariik haninmungajuq uqhuqarvik, turhuangit pappirvikhangitlu iliuraqtauniaqtut hanajauniaqtut. Unaluttauq, QEC-kut upalungaiqhimajut nappaktirijamingni Quonset akhaluutiqarvikhamik, transformer tutquumavikhanik, napariakhainik, kiniqtat ukualu glycol qattarjungnik tutquumavikhanik ingalaitkutikhqaqtumik . Inikhaqarniaqtut umiakkut agjautainik havigalingnik tamajaqariinik umingal uallamiklu qilamiurutiqarumik janulitakhamik. Imaatut 2 kilometres (km) alrujaqtuutikhanik alrujamik pijariaqaqtut iliurautikhainik atadjuktukhanik nutaamut pauwaqarvingmut. Pauwaqarvikhat igluqpat ilaqrniaqtuq havagviit, alrujaqtuutikhanik munaqhivikhanik igluarmik, alrujanik hanaviat, akhaluutiqarvik/hanavikhat, ilaliutihimajumik pauwaliurutikhainut tutquumavikhat. Imaatut aktigijumik 400-metre takujut turhuat nappaktiqauniaqtun atajunik Uqburjuaqiqikkut Uqburjuaqiqikkut Havagvia (PPD) angijut uqhuqarviinut. Uukturumajat nunakhaa najugakhaa imaatut aktigijuq 14,400 kikkariktaat metres najugaani Kamisinar Nunait ukunani Lot 1017 Plan 4573 imaatut naunaiqtauniaqtuq Lot 3 Block 67 Plan 4781 (Sketch 500-SK-2019). Najugaani kivataani haffuma Apputaa R36, imaatut unngahiktigijuq 2 km hivuraani Hamlangat Iqaluktuutiamit, imaatut unngahiktigijuq 1 km kivataanit Iqaluktuutiap Milvianit, imaatutlu unngahiktigijuq 400 metres tunnunganit PPD angijut uqhuqarviinut. Piqangittuq nunamit qurluarvikhanik, imainnarmikluunniit 100 miitasnik havaakhamik napaqtirvikhanit. Piqangittuq huradjat najugaani, imarmiuniklu, avikturviuvimi Kanadamilu min'nguviinnik Inuit nunagijainnikluunniit hulaqtikpat pauwaqarvikhaannik najugakhanik. Ingilraangnitatigun aktumattaqtunik ihivriuqhoniaqtut July 2021 mi ihumaliuriami ingilraangnitatigun aktumattaqtunik ihivriuqhoniaqtut January 2026 March 2026 Pauwaqarvik tunijaunikhainik March/April 2026 Kantraqaqtukhamik tunijauniaqtut nappaktirijukhamik uuktuutat naunaiqtauniaqtut pijakhat havaktuhanut ihuaqtumik havaakhamut pijakhanik; kihimi, iitqurniakhimajat 35 nik havaktikhat najugaani-inniaqtun pidjutigilugit nappaktirinikhanut qanurinningit. Kantraaktitaujut pijukhat tikiutilugit piqaqtukhanik Inuit havaktikhanik tamainni nappaktiriligungumik.QEC-kunni haaktiit nunagani Iqaluktuutiami munarijaqaqtut ubluq tamaat aulavikainut pauwaqarvian. Ukuat ilaujut Pauvvaliqivingmi Atan'ngujat, Ikajuqtijuq Aulapkijijumut, umalu Himmautaulaktuq Aulapkijimut. Nahurijaujut tadja havaktiujut nuutirniaqtun nutaamut pauwaqarvikhamut nappaqtqtauqpat iniqqadjuk. Tamna alrujaqarviat/ihuaqhaiviat havaktaujukhanik imalu tutquumavat tamajarviat nappaqtakpat, alrujiqijit havaktingit, ihuaqhaijut havaktingitm tutquumaviiinik munaqhiji iniqtirniaqtzit havagvikhatik hamani. Atauttimut, imaatut aimgaittut 14nik QEC-kuni havaktiit havangniaqtun talvanga nutaami pauwaqarvikhat najugaani.Amigaitqijaujut nappaktirinirmun tamajait

Havaakhamut agjaqtauniaqtut umiakkut. Ilangit tamajait niuviktauniaqtun nunanganit agjaqtaulutikluunniit tingmitikkut naunairutilugit aktilaangit kaffiutilangitlu. Kantraaktitaujuq munarijaqarniaqtuq atuqtilutik nappaqtirutikhanik ingirlutinik. Ilaliutiniarungnaqhijutlu aadlamik kantraaktitaujukhamik nunamingnit hailijunik ingirlutinik imaaluuuniit agjarlugit ingirlutit nunanganut umiakkut. Una havaakhaq niriugijaujuq pivikhaqariami Hamalatkunnut Iqaluktuutiami ihuatqijamik aturiangini uqhurjuanik, hilamit pauwaliurutikhanik, imaalu ikiglijuumiutikhanik algungup pujuanik. Pipkainiaqtullu QEC-kunnut nakuuhivalladjutikhaanun pauwaqautikkut nunallaami, ikajuutikhanik amigaikpallianingat nunanganut, tikiutilugulu hivunikhaliuqtat qajangnaittumik, ihuaqtumik pauwakhainnik nunanganut kivgaqtuqtamingnut.

Personnel

Personnel on site: 30

Days on site: 580

Total Person days: 17400

Operations Phase: from 2024-04-01 to 2026-03-31

Operations Phase: from 2026-04-01 to 2046-03-31

Post-Closure Phase: from to

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Cambridge Bay Proposed Power Plant Lot (area)	Municipal and Industrial Development	Commissioners	The proposed lot for the power plant is unoccupied and undeveloped Commissioner's Land; however, it is within the Municipal Boundary for the Hamlet of Cambridge Bay. The area proposed for the power plant has been designated by the Hamlet as 'restricted industrial' and is proposed for re-zoning as industrial. The Many Pebbles Golf Course is located in the immediate vicinity of the proposed power plant location and may conflict with one of the holes.	An archaeological impact assessment will be carried out in July 2021 to determine if archaeological sites are in potential conflict with the project. •In the event that cultural or archaeological artifacts are encountered, construction activity will stop and the Government of Nunavut Department of Culture and Heritage will be contacted.	The proposed project is approximately 2 kilometres southwest of the Hamlet of Cambridge Bay, approximately 1 kilometre east of the Cambridge Bay Airport, and approximately 400 metres northeast of the PPD bulk fuel storage facility. There are no designated wildlife areas, marine protected areas, territorial or national parks or Inuit owned lands in conflict with the power plant location. There are no natural drainages, or watercourses within 100 metres of the project location.
Cambridge Bay Proposed Power Plant Lot (area)	Fuel and chemical storage	Commissioners	The proposed lot for the power plant is unoccupied and undeveloped Commissioner's Land; however, it is within the Municipal Boundary for	An archaeological impact assessment will be carried out in July 2021 to determine if archaeological sites are in potential	The proposed project is approximately 2 kilometres southwest of the Hamlet of Cambridge

		<p>the Hamlet of Cambridge Bay. The area proposed for the power plant has been designated by the Hamlet as 'restricted industrial' and is proposed for re-zoning as industrial. The Many Pebbles Golf Course is located in the immediate vicinity of the proposed power plant location and may conflict with one of the holes.</p>	<p>conflict with the project. •In the event that cultural or archaeological artifacts are encountered, construction activity will stop and the Government of Nunavut Department of Culture and Heritage will be contacted.</p>	<p>Bay, approximately 1 kilometre east of the Cambridge Bay Airport, and approximately 400 metres northeast of the PPD bulk fuel storage facility. There are no designated wildlife areas, marine protected areas, territorial or national parks or Inuit owned lands in conflict with the power plant location. There are no natural drainages, or watercourses within 100 metres of the project location.</p>
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አዲስ አበባ	Hamlet Council - Chief Administrative Officer	Hamlet of Cambridge Bay	2020-07-20
አዲስ አበባ	Land Development Officer	Hamlet of Cambridge Bay	2021-03-09

ՀԱՅԻ ՐՅՈՒՄ ԱՐԵՎՈՒՆ ՏՐՈՒԼՔԸ

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Kitikmeot

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Project transportation types

Transportation Type	Length of Use
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Air	Construction labour and some materials will be transported to the community by air	
Water	Construction equipment and materials will primarily be transported to the community by sea lift	

Project accomodation types

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የኢትዮጵያ ስራውን የሚከተሉት በቻ አገልግሎት	የመስማሪው ስራውን የሚከተሉት በቻ አገልግሎት					
Diesel	fuel	1	90000	90000	Liters	Fuel will be used to run the generators for the power plant. Fuel will be stored in an above ground horizontal fuel storage tank.
Diesel	fuel	2	2000000	4000000	Liters	Fuel will be used to run the generators for the power plant. QEC bulk fuel supply. Fuel will be stored in vertical tanks within a secondary containment berm.
solvent	hazardous	4	205	820	Liters	generator maintenance/operation
engine oil	hazardous	16	205	3280	Liters	generator operation

propylene glycol	hazardous	1	2000	2000	Liters	power plant operations, heat transfer
Diesel	fuel	1	0	0	Liters	Fuel will be required during construction for all equipment used on site. Fuel storage and handling during construction will be the responsibility of the contractor. Details regarding the location and volume of fuel storage and location of equipment refueling during construction are not known at this time. The contractor will be required to have a fuel management plan.

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ΔL ^q C ^q C ^q C ^q C ^q C ^q	ΔL ^q C ^q C ^q C ^q C ^q C ^q	ΔL ^q C ^q C ^q C ^q C ^q C ^q
0	To be determined by the construction contractor.	To be determined by the construction contractor.

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			south as part of QECs annual waste shipment.	
Fuel and chemical storage	4°Cæ⁹b)⁹bC᷇c	2,460 litres	The amount of liquid waste generated during operation will vary annually. Waste fuel, oil, glycol, and solvent will be collected in drums, stored within secondary containment and shipped south for disposal.	none
Municipal and Industrial Development	4⁹Cj⁹ Δd4c_CD⁹⁹_a⁹⁹C⁹	unknown	During construction, the contractor will be responsible for the disposal of non-combustible waste. The amount of non-combustible waste generated during operations will vary annually. Material will be stored in quatrex bags or other appropriate containment and shipped south for disposal.	none
Fuel and chemical storage	4⁹Cj⁹ Δd4c_CD⁹⁹_a⁹⁹C⁹	unknown	During construction, the contractor will be responsible for the disposal of non-combustible waste. The amount of non-combustible waste generated during operations will	none

Please refer to the attached Project Description (Table 4). Note: The environmental impact identified for permafrost, sediment and soil quality, air quality, and noise levels should be negative/mitigable for the construction and operation phases of the Municipal and Industrial Development and Fuel and Chemical Storage activities. The selection changes automatically to negative/non-mitigable every time this page is viewed.

Additional Information

SECTION A1: Project Info

SECTION A2: Allweather Road

SECTION A3: Winter Road

SECTION B1: Project Info

SECTION B2: Exploration Activity

SECTION B3: Geosciences

SECTION B4: Drilling

SECTION B5: Stripping

SECTION B6: Underground Activity

SECTION B7: Waste Rock

SECTION B8: Stockpiles

SECTION B9: Mine Development

SECTION B10: Geology

SECTION B11: Mine

SECTION B12: Mill

SECTION C1: Pits

SECTION D1: Facility

SECTION D2: Facility Construction

SECTION D3: Facility Operation

SECTION D4: Vessel Use

SECTION E1: Offshore Survey

SECTION E2: Nearshore Survey

SECTION E3: Vessel Use

SECTION F1: Site Cleanup

SECTION G1: Well Authorization

SECTION G2: Onland Exploration

SECTION G3: Offshore Exploration

SECTION G4: Rig

SECTION H1: Vessel Use

SECTION H2: Disposal At Se

SECTION 11: Municipal Development

Please refer to the attached Project Description docu

Please refer to the attached Project Description.

Please refer to the attached Project Description

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Please refer to the attached Project

Miscellaneous Project Information

Please refer to the a

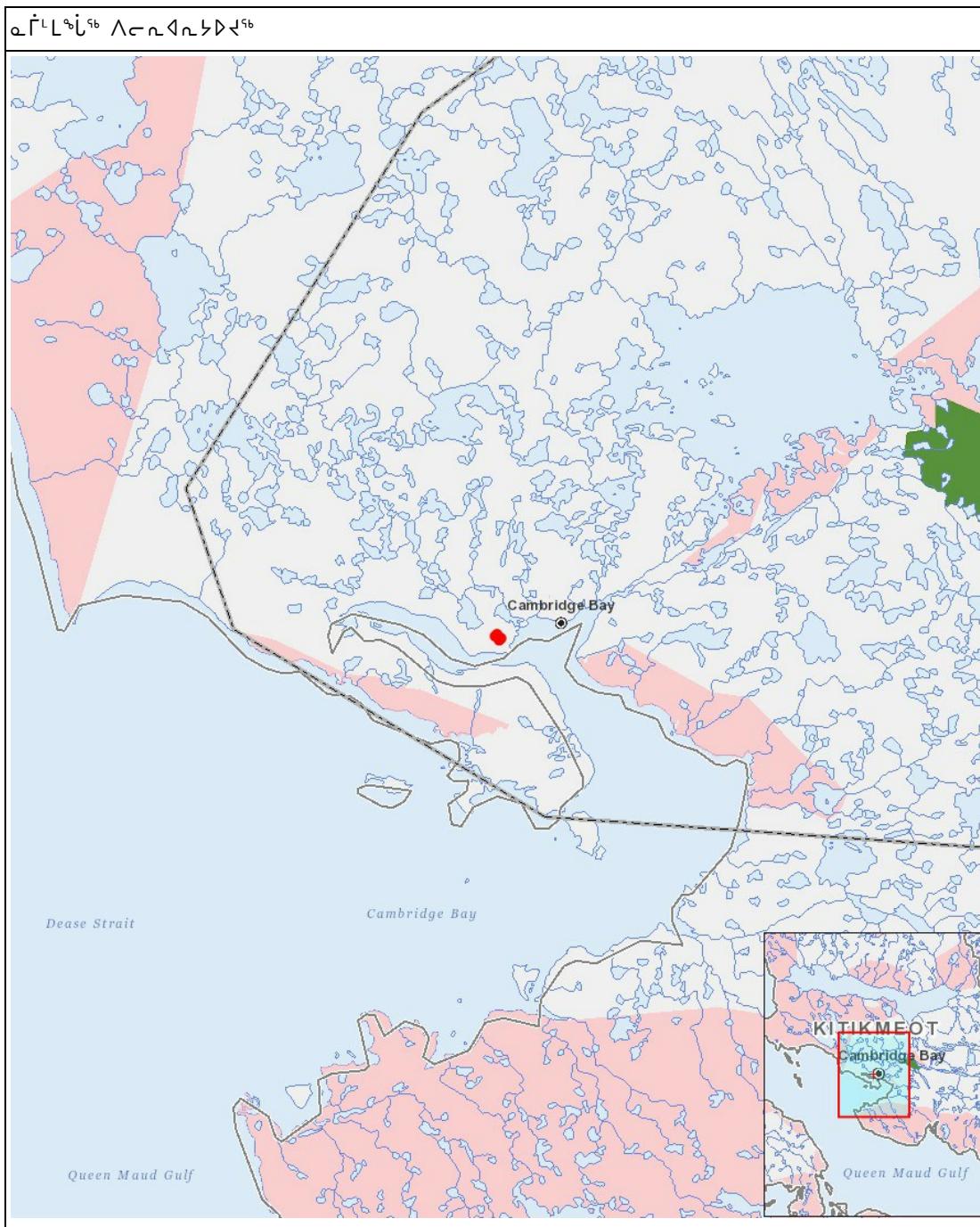
Cumulative Effects

Impacts

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PHYSICAL		Designated environmental areas										BIOLOGICAL										SOCIO-ECONOMIC																					
		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		Vegetation		Wildlife, including habitat and migration patterns		Birds, including habitat and migration patterns		Aquatic species, incl. habitat and migration/spawning		Wildlife protected areas		Archaeological and cultural historic sites		Employment		Community wellness		Community infrastructure		Human health	
Fuel and chemical storage	-	-	N	-	-	-	-	-	-	N	-	N	N	-	-	-	-	-	-	-	-	-	-	-	U	P	-	P	-	-													
Municipal and Industrial Development	-	-	M	-	-	-	-	-	-	M	-	M	M	-	-	-	-	-	-	-	-	-	-	-	U	P	-	P	-	-													
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Fuel and chemical storage	-	-	N	-	-	-	-	-	-	N	-	N	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	P	-	-										
Municipal and Industrial Development	-	-	M	-	-	-	-	-	-	M	-	M	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	P	-	-	P	-	-									
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(P = የሚከተሉ የቅርቡ ስራውያንድ, N = የሚከተሉ የቅርቡ ስራውያንድ በቃል እና የሚከተሉ የቅርቡ ስራውያንድ, M = የሚከተሉ የቅርቡ ስራውያንድ በቃል እና የሚከተሉ የቅርቡ ስራውያንድ, U = የሚከተሉ የቅርቡ ስራውያንድ)



List of Project Geometries

- | | | |
|---|---------|---|
| 1 | polygon | Cambridge Bay Proposed Power Plant Lot (area) |
| 2 | point | Cambridge Bay Proposed Power Plant (four corners) |

