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Produced For:
Hamlet of Chesterfield Inlet



Dynamic Ocean Consulting Ltd.



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Table A-1: Project-Specific Information Request Environmental Effects Table	
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1. Project Information

1.1 Introduction

The Hamlet of Chesterfield Inlet (the Hamlet) is interested to build road infrastructure to support the development of a series of gravel sites. The intention of the aggregate sites is to support community maintenance activities (e.g., road and airport runway maintenance, development of housing pads/commercial lots) within the Hamlet. Dynamic Ocean Consulting Ltd (Dynamic Ocean) has been retained by the Hamlet to support with regulatory approvals from Authorities Having Jurisdiction (AHJs). Approval from AHJs will be required for the portions of the road infrastructure that extend outside of the municipal boundaries. Licensing applications outside Municipal boundary is required with various AHJs.

Several access trail routes to the new aggregate sites are being considered, all of which will be constructed outside of municipal boundaries. See Figure 1-1 for project location and access routes, and Table 1-1 for summary of expected lengths. The Hamlet will be responsible for construction and utilization of the gravel material. The roads will be constructed as funding becomes available with Trail Nos. 2 and 3 expected to be prioritized. An Aggregate Development Plan was developed for Chesterfield Inlet in 2015, which has supported the consideration of priority areas for aggregate sites (Journeaux Assoc., 2015).

This report provides the information required to support the Screening by the Nunavut Impact Review Board (NIRB).

Table 1-1: Access Trail Road Descriptions

Access Trail No.	Route Length (km)
1	12.6
2	33.9
3	11.4



<p>Legend</p> <ul style="list-style-type: none"> Access Trail 1 existing road access trail 2 Proposed Aggregate Sites access trail 3 	<p>WGS 84 / Arctic Polar Stereographic Properties Units: meters Dynamic (relies on a datum which is not plate-fixed) Celestial body: Earth Based on World Geodetic System 1984 ensemble (EPSG:6326), which has a limited accuracy of at best 2 meters. Method: Stereographic</p> <table border="1"> <tr> <td>Scale</td> <td>Figure</td> <td>Draw</td> </tr> <tr> <td>As Shown</td> <td>20230616-001</td> <td>C.Knight</td> </tr> </table>	Scale	Figure	Draw	As Shown	20230616-001	C.Knight			<p>Figure 1-1 Chesterfield Inlet Access Road Project And Proposed Aggregate Sites</p>
Scale	Figure	Draw								
As Shown	20230616-001	C.Knight								



1.2 Project Name

Access Trail Project Chesterfield Inlet (the Project).

1.3 Proponent Name

Hamlet of Chesterfield Inlet.

1.4 Contact Persons

The contact information for the Project is provided in Table 1-2.

Table 1-2: Project Contact Details

Contact Category	Contact Details
Name of Proponent Contact / Primary Contact	David Kattegatsiak, CEDO
Proponent Mailing Address	Hamlet of Chesterfield Inlet P.O. Box 10 Chesterfield Inlet, Nunavut, X0C 0B0 Telephone: 867-989-4603 Email: edo_hamlet@qiniq.com
Name of Consultant	Victoria Burdett-Coutts Marine Biologist and Regulatory Lead, M.Sc., R.P.Bio.
Consultant Mailing Address	Dynamic Ocean Consulting 1490 Union Street Port Moody, BC, V3H 3X5 Mobile: 778-839-2372 Email: Victoria@dynamicocean.ca

1.5 Project Purpose

Due to limited gravel within Municipal boundary, the Hamlet is looking into other potential aggregate sites to develop and maintain gravel production; this is the Municipality of Chesterfield Inlet's goal and objective.



1.6 Project Location

Project location details for Chesterfield Inlet are summarized in Table 1-3 and depicted in Figure 1-1.

Table 1-3: Project Location

Location Coordinates		Location Description	Planning Region	Administrative Region
Latitude	Longitude			
63° 20.251'N	90° 42.205'W	Chesterfield Inlet is a hamlet located on the western shore of Hudson Bay in the Kivalliq Region of Nunavut, Canada, at the mouth of Chesterfield Inlet. Chesterfield Inlet it is the oldest community in Nunavut.	Keewatin Regional Land Use Plan (KWLUP) Region	Kivalliq Region

1.7 Schedule

Construction is dependent on funding opportunities with the territorial and federal governments, however, the Project is expected to initiate in 2024. Construction of the full extent of the trail route may occur gradually over a period of 10 years. In total it is expected that construction can be completed in approximately 40 days but as above, may occur gradually over a period of a decade. Construction will be undertaken during 12-hour day shifts, seven days a week. It is anticipated that construction will require six to 10 construction workers.

2. Material Use

2.1 Equipment Use

Equipment type, specifications and proposed use are outlined in Table 2-1.



Table 2-1: Equipment Use

Equipment		Size	Use
Type	Number		
Loader	1	20.25 ft high x 7.91 ft wide	Access Trail construction
Excavator	1	14.95 ft long x 7.65 ft wide	Access Trail construction
Dump Truck	1	21 ft long x 8.5 ft wide	Access Trail construction

2.2 Fuel Use

Fuel use and storage methods are outlined in Table 2-2.

2.3 Hazardous Materials and Chemical Use

Hazardous and chemical materials expected to be required during construction are outlined in Table 2-2.



Table 2-2: Estimates of Material Use and Storage Methods

Type	Details				Proposed Storage Methods	Proposed Use
	Number of Containers	Capacity	Total Volume	Metric		
Fuel						
Diesel	1	100,000	100,000	Litres (L)	Supplied by the PPD and dispensed from existing facilities in the Hamlet	Mobile equipment, generators and heaters
Gasoline	1	5,000	5,000	L	Supplied by the PPD and dispensed from existing facilities in the Hamlet	Mobile equipment, generators and heaters
Propane	5	20	100	L	Appropriate storage, such as metal cylinder rack, will be arranged by the contractor.	heaters
Hazardous Materials and Chemical Use						



Type	Details				Proposed Storage Methods	Proposed Use
	Number of Containers	Capacity	Total Volume	Metric		
Lube and oils	10	5	50	Gallons (G)	Drums on pallets, in lined storage area	Maintenance of mobile equipment



2.4 Waste Management

The Project waste management activities are outlined in Table 2-3.

Table 2-3: Waste Management – Types and Disposal Methods

Type of Waste	Anticipated Waste	Projected Amount Generated	Method of Disposal
Combustible wastes	Food waste, wood crating/packaging, cardboard and paper, plastics	2 tons	Hamlet landfill
Non-combustible wastes	Scrap steel, glass	0.5 ton	Hamlet landfill
Overburden	Organic soil, unsuitable fill material	Negligible	What little overburden exists at the aggregate site will be set aside and stockpiled
Hazardous waste	Waste oil/grease, batteries, antifreeze, contaminated soils	2,000 litres	Returned to south in sealed drums or lined bags, transported in 20 ft shipping containers and disposed in accordance with regulatory procedures.



3. Authorities Having Jurisdiction

3.1 Nunavut Planning Commission

As stipulated in the *Nunavut Planning and Project Assessment Act* (NuPPAA), the Nunavut Planning Commission (NPC) is the 'gate keeper' (Responsible Authority) in the determination of referrals to NIRB, which are communicated through a Conformity Determination. When the NPC takes the decision for referral, this includes notification to pertinent Federal and Territorial regulators.

An information package was submitted to NPC. The NPC referred the Project the NIRB, with an accompanying positive conformity determination with the Keewatin Regional Land Use Plan, on July 28, 2020.

3.2 Nunavut Impact Review Board

The NIRB received a referral for the Project from NPC on July 28, 2020 and determined that a screening would be required. The NIRB screening process is conducted over a period of 45 to 60 days, which includes a 21-day consultation period. Consultation consists of a public comment period via the NIRBs online registry and a NIRB determined distribution list, which will include pertinent AHJs, hamlets/municipalities, the Arviq Hunters and Trappers Association (HTA), the Kivalliq Inuit Association (KIA), and non-government organizations.

A record of communications to date with the NIRB regarding the Project (File No. 20AN020) is provided in Table 3-1. This report supports the request to reinstate the NIRB screening.



Table 3-1: Nunavut Impact Review Board Communication Record

Date	Communication	Reference
28-Jul-20	<ul style="list-style-type: none"> NIRB received a referral from NPC to Screen the Project, and Project was assigned Referral No. 20AN020. NIRB made several Information Requests (IRs) to support the initiation of the screening which included: <ul style="list-style-type: none"> Completion of Portal online application form. Project map to demonstrate location of activities. Nontechnical summary in English and Inuktitut. Supplemental Supporting documentation to be equivalent to a construction environmental management plan (CEMP). 	NA
30-Jul-20 06-Aug-20 20-Aug-20	<ul style="list-style-type: none"> Information Request letter No. 1 provided by the NIRB requesting information be submitted by 20-Aug-20. Follow up from the NIRB on the IR as detailed above. 	(NIRB, 2020a)
24-Aug-20	<ul style="list-style-type: none"> Information Request letter No. 2 provided by the NIRB requesting information be submitted by 31-Aug-20. 	(NIRB, 2020b)
27-Aug-23	<ul style="list-style-type: none"> The Hamlet responded to the IR letters. 	
30-Oct-20	<ul style="list-style-type: none"> Notice that the Project was being put on hold and re-initiation will need to be before 06-Sept-23. 	(NIRB, 2020c)
17-Apr-23	<ul style="list-style-type: none"> NIRB engaged to reinitiate communications on the Project. 	(NIRB, 2023b)
26-Aug-23	<ul style="list-style-type: none"> NIRB application submitted 	(NIRB, 2023a)



Information that is required by the NIRB and summarized in this document includes:

- Project Description (PD).
- Effects Assessment (EA) that outlines potential residual effects on the environment due to the construction and operation of the access road.
- Environmental Management Plan (EMP) to document measures to be followed during construction.

3.3 Government of Nunavut – Culture & Heritage

It is understood that an Archaeological Impact Assessment (AIA) will need to be undertaken prior to construction.

3.4 Other Authorities Having Jurisdiction

Engagement with other AHJs may be required. Should there be water crossings that are fish bearing, engagement will be undertaken with the Nunavut Water Board (NWB) and Fisheries and Oceans Canada – Fish and Fish Habitat Protection Program (DFO-FFHPP) to confirm appropriate approvals are in place prior to construction.

Potential approvals required from AHJ are outlined in Table 3-2.



Table 3-2: Potential Approvals

Authority Having Jurisdiction	Activity	Approval Required	Legislation
NPC	Development of land and water resources within Nunavut.	Conformity Determination	<p><i>Nunavut Land Claims Agreement Act</i> (Nunavut Agreement, or NA) Article 11</p> <p><i>Nunavut Planning and Project Assessment Act</i> (NuPPA)</p> <p><i>Nunavut Waters and Nunavut Surface Rights Tribunal Act</i> (NWNSRTA)</p> <p>Nunavut Water Regulations.</p> <p>https://laws-lois.justice.gc.ca/eng/acts/N-28.75/page-2.html#h-370569</p>
NIRB	Any development of land and water resources within Nunavut as determined by NPC's conformity determination.	Screening Decision Report	<p><i>Nunavut Planning and Project Assessment Act</i></p> <p>https://laws-lois.justice.gc.ca/eng/acts/N-28.75/page-2.html#h-370569</p>
The Hamlet	Approval of the aggregate site.	Aggregate permit	<i>Nunavut Land Claims Agreement</i> , Article 14 (Planning and Lands Section)



Authority Having Jurisdiction	Activity	Approval Required	Legislation
NWB	Construction of roads where culverts or water crossings over water bodies are required.	Type B license	<i>Nunavut Waters and Nunavut Surface Rights Tribunal Act</i> , Nunavut Water Regulations https://www.canlii.org/en/ca/laws/regu/sor-2013-69/latest/sor-2013-69.html
Government of Nunavut – Culture and Heritage (GN-C&H)	Confirmation that construction will not impact any important archaeological features will be important. Dynamic Ocean will engage with GN-C&H and if required an AIA will be undertaken prior to construction.	Class 2 Archaeologist Permit	
GN – Community and Government Services (CGS)	If any of the road passes through Commissioners land, a Land Use Permit (LUP) will be required from the GN-CGS.	LUP	Land Use Territorial Regulations, <i>Territorial Lands Act</i>
KIA	If any of the road passes through Inuit Owned Land (IOL).	Right of Way	https://www.kivalliqinuit.ca/access-to-inuit-owned-lands-2/
DFO-FFHPP	Should the Project involve water crossings, or if culverts are fish bearing, in water or near water works associated with the construction of the Project that have the ability to result in the harmful alteration,	Request for Review (RFR) expected to result	<i>Fisheries Act</i> https://laws-lois.justice.gc.ca/PDF/F-14.pdf



Authority Having Jurisdiction	Activity	Approval Required	Legislation
	disruption or destruction to fish or fish habitat, as defined under the <i>Fisheries Act</i> .	in a Letter to avoid/mitigate.	



4. Environmental and Socio-Economic Impacts

4.1 Potential Environmental and Social Impacts

Potential environmental and social impacts that may occur during the construction and operation of the access trail are categorised based on the NIRBs screening assessment categories as outlined in Table 4-1. Potential impacts were identified and assessed using the existing conditions data, which was collected through desktop review.

Potential environmental and social impacts are summarized in Table 4-2.

A detailed summary of potential effects to Valued Ecosystem Components (VECs) and Valued Socio-Economic Components (VSECs) is provided in Appendix A, Table A-1.

Table 4-1: Potential Effects

Category	Term in Table 4-2	Definition
Positive	P	Net gain in functionality after construction or during operations
Negative, non-mitigatable	N	Negative and will remain as a residual effect, after construction or during operations
Negative, mitigatable	M	Negative, but measures can be put in place to minimize or eliminate the effect
Unknown	U	Information is not available to confirm what effects will be
No impact	Blank	There is a no effect, and thus considered neutral



Table 4-2: Potential Environmental and Social Impacts

Potential Effect	Description	Type	Project Phase	Construction Activity
Accidental leaks and spillages of substances such as fuel or petroleum-based lubricants to the environment.	There is the potential for accidental leaks or spillages during equipment operation and refueling. Spills will be managed as described in Table 5-1.	M	Construction	All
Disturbance to fish and fish habitat (if there are water crossings over fish bearing creeks/rivers).	Disturbance to fish and fish habitat may occur if access trails require crossing over fish bearing creeks or rivers. Prior to construction, the access trail route will be confirmed, and any water crossings will be identified and assessed to confirm if they are fish bearing. Appropriate AHJ will be engaged (DFO-FFHPP, NWB) to confirm requirements in the event that fish bearing crossings occur along the access trail, and mitigation and monitoring measures will be implemented (see Section 5.1 and 5.2 respectively).	M	Construction	Culverts, bridge crossings (if required)
Disturbance of terrestrial wildlife.	Disturbance to terrestrial wildlife may occur due to the Project but is expected to be minimal as construction is anticipated to require only one month to complete. A terrestrial survey will be conducted prior to construction to confirm no migratory bird nests or wildlife habitat features are present within the Project footprint.	M	Construction / Operation	All



Potential Effect	Description	Type	Project Phase	Construction Activity
	Once operational, the access trail will have regular use by rock trucks hauling materials from the aggregate site(s) to the community. This is not expected to have negative impacts to terrestrial wildlife.			
Changes to traffic patterns.	There will be minimal changes to traffic patterns due to the Project. All access trail routes will be constructed outside of municipal boundaries and thus will not impact existing roads or traffic patterns.	M	Construction / Operation	All
Disruption of terrestrial land uses.	There will be minimal disruption to terrestrial land uses. Construction of the access trails is expected to take one month, and once operational, trails will provide improved access to the land for subsistence hunting.	M	Construction / Operation	All
Disturbance to archaeological features.	There is potential for disturbance to archaeological features. An AIA will be undertaken prior to Project construction to identify archaeological resources and confirm mitigations that will be required during construction to ensure that archaeological features remain undisturbed.	M	Construction	All



Potential Effect	Description	Type	Project Phase	Construction Activity
Increased noise, light and dust related to construction activities.	There will be increased noise and dust during construction. However, construction is expected to be completed in one month and will only occur over 12-hour day shifts.	M	Construction	All
Increased pressure on community infrastructure and support services.	The Project is being constructed to support access to additional gravel resources to support continued development and maintenance of community infrastructure.	P	Operation	All



5. Regulatory Compliance

Construction of the Project will require acquiring approvals and permits from AHJs as outlined in Table 3-2.

5.1 Mitigation

Mitigation measures will be implemented to minimize negative effects to the environment during construction of the access road and is summarized in Table 5-1.

Table 5-1: Mitigation Commitments for the Project

No.	Description
General	
G1	An environmental monitor (EM) will be on-site during key construction activities, as described in Section 5.2.
G2	Project activities will be suspended should any dead or injured wildlife (including birds, bird eggs, and their nests) be observed during any works or activities in and around the Project site.
G3	Stop work measures will be implemented should any non-compliance concerns arise. Corrective actions or adaptive management strategies will be discussed with the EM and implemented where appropriate prior to resuming work.
G4	The EM will advise Project personnel if construction activities have caused or are likely to cause an environmental incident and make recommendations for corrective action. Any changes to the compliance procedures will be documented through appropriate management communications.
G5	Appropriate stop-work and non-compliance reporting will be developed and implemented, as outlined in Section 5.5.
G6	The Project will be completed in a manner that will minimize surface disturbance outside of Project areas.



No.	Description
G7	If required, and where possible, the Project will minimize the number of water crossings.
G8	Project site boundaries will be flagged to indicate work are extents and prevent inadvertent loss or alteration of habitat.
Species at Risk	
SAR1	If Species at Risk (SAR) are reported or observed, the EM will record, document, and monitor their presence (including time, date, location, activity, and proximity to Project personnel) and determine potential impacts to SAR, as well as any modification to construction activities that may be required to protect SAR.
Invasive Species Management	
ISM1	The Contractor shall verify that any materials or equipment associated with the Project is free of invasive species.
Terrestrial Vegetation	
TV1	Project personnel will receive training to minimize negative effects on terrestrial vegetation.
TV2	Monitoring of disturbed areas for non-native and invasive species, as defined by the Government of Nunavut (2010) will occur on a regular basis.
Wildlife and Migratory Birds	
WL1	A pre-construction survey and sweep for wildlife (including migratory birds) will be conducted within the Project footprint.
WL2	In the event a sensitive species or wildlife habitat feature is identified, buffers (work exclusion zones) will be implemented to minimize disturbance to wildlife. Any protected



No.	Description
	feature that is harmed, destroyed, or disturbed will be reported, and may result in immediate notification to appropriate AHJ.
WL3	Monitoring of identified nests will be conducted by the EM to determine efficacy of implemented setbacks and buffers. Buffers may need to be increased based on 'alert' and 'flush' behavior to any varying work activities.
WL4	Speed limits will be implemented to minimize negative effects to wildlife.
WL5	Polar bear sightings will be reported immediately so that appropriate actions can be taken to avoid conflict situations. In collaboration with the Hamlet and HTA, the CCEMP will identify who and where sightings are to be reported.
WL6	A zero-tolerance policy regarding the harassment, disturbance, and feeding wildlife whilst working on the Project.
Fish and Fish Habitat	
FFH1	Should the Project cross creeks/streams, the Project shall confirm that no construction activity results in exceedance of the Canadian Council of Ministers of the Environment (CCME) Approved Water Quality Guidelines (WQG) within the waterbody.
FFH2	Should the Project cross creeks/streams, activities shall not interfere with fish passage or result in the stranding or death of fish.
FFH3	Should the Project cross creeks/streams, the EM shall confirm appropriate sediment and erosion control (SEC) monitoring measures are in place to confirm that land-based activities to not result in sediment or other deleterious substances entering aquatic environments.
FFH4	The Contractor shall not deposit any deleterious substances (e.g., fuel, chemicals, waste) into any aquatic environment waterbodies.



No.	Description
FFH5	Stockpiling and storage of material must occur in designated areas and be controlled in a way that debris and sediment entering the aquatic environment will be minimized.
FFH6	Any debris that enters the aquatic environment will be retrieved and disposed of at an approved facility.
Air Quality	
AQ1	Machinery, equipment, and stationary emissions sources (e.g., diesel generators) will be maintained in good working order and operated at optimal loads to minimize emissions. The Contractor will have an appropriate equipment inspection and maintenance program.
AQ2	Engines will be turned off when not in use and idling of vehicles and machinery will be minimized.
AQ3	No burning of oils, rubber, tires, and any other material will take place.
AQ4	Material loads will be covered as appropriate to minimize dust generation.
AQ5	Dust suppressants and/or watering will be used as applicable to reduce dust generation to appropriate levels. Dust suppressants will be in accordance with the GN – Department of Sustainable Development, Environmental Protection Service, and Environmental Guideline for Dust Suppression (Government of Nunavut, 2002). The Contractor will also be required to obtain the approval of the Hamlet for which dust suppressants are acceptable.
Noise	
N1	All sound producing Project activities will be restricted to 12-hours/day during daytime.
N2	Any non-disruptive night works will require consultation with the community and approval by the Hamlet.



No.	Description
N3	All construction and road vehicles must be fitted with standard and well-maintained noise suppressions devices and engine idling shall be minimized.
N4	Equipment will be located and oriented to minimize propagation of noise towards sensitive receptors.
Machinery and Equipment	
ME1	Equipment will be inspected to confirm it is in good operation condition, free of fluid leaks, and invasive species.
ME2	Regular equipment maintenance shall be performed as per manufacturer's requirements or as required to confirm all equipment is in good working order.
ME3	All fuel-carrying equipment will be accompanied with spill prevention, containment, and clean-up materials that are suitable for the volume of fuels carried.
Training	
T1	The Project personnel induction program will include an Inuit cultural awareness component to promote understanding and respect for local culture and residents.
T2	Project personnel will be educated on the wildlife (particularly SAR) expected to occur in the area according to scientific research and IQ/traditional knowledge through site induction and toolbox sessions.
T3	Project personnel will be trained on the risks of damaging or disturbing vegetation and sensitive communities.
T4	Project personnel will be briefed regarding the potential negative effects of construction activities to archaeological and palaeontological resources.



No.	Description
T5	Project personnel will be trained in the use of fire suppression aids.
T6	Project personnel will be trained to safely handle the hazardous waste and materials.
T7	Project personnel will be trained in the spill prevention and response requirements during site induction and subsequent toolbox talk sessions.
Communication	
C1	Appropriate communication and documentation measures will be in place for reportable incidents (Section 5.3.3), non-compliances and adaptive management measures implemented (Section 5.4).
C2	A notification protocol will be implemented with input from the Hamlet, HTA, community members and other stakeholders for advance notification of planned noise-causing activities.
C3	Construction notices will be posted, and the Contractor will detail locations and timeline of construction work.
C4	Communication requirements as required by permit conditions to specific AHJ will be completed as required.
C5	The Contractor will engage with the Hamlet prior to construction to discuss planned construction activities, Project schedule, and to obtain feedback from the community to confirm that construction activities do not impede or interfere with any community activities and harvesting.
C6	The Contractor will include the Hamlet's representative on communications with AHJs, stakeholders or other community groups related to Project activities.
Land and Resource Use	



No.	Description
LRU1	The Contractor will conduct Project activities in a manner that will not interfere with Inuit harvesting or traditional land use activities.
LRU2	Project personnel will not hunt or fish, unless proper Nunavut authorizations have been acquired.
Human Health and Community Wellness, Infrastructure and Services	
HCW1	There will be a zero-tolerance policy for possession or use of marijuana, illicit drugs, or alcohol.
HCW2	First aid response will be conducted in accordance with WSCC requirements and emergency medi-vac procedures will be in place for the construction workforce.
HCW3	The Contractor will provide dedicated trucks to support construction needs should there be a strain on the community from using the Hamlet's trucking services for water or sewage.
HCW4	Traffic management procedures will be in place.
Employment, Training and Business Opportunities	
ETB1	The contractor will comply with the new Treasury Board Directive on Government Contracts Including Real Property Leases, in the Nunavut Settlement Area and will aim to maximize participation of Inuit labour, training and Inuit owned businesses on the Project.
Spill Emergency Response and Prevention	
SERP1	All Project personnel shall be trained in spill prevention and response, including the use of hazardous materials, during site induction and subsequent toolbox talk sessions. All Project personnel will be familiar with the location and use of spill response equipment.



No.	Description
SERP2	The Contractor will be responsible for maintaining an inventory of hazardous materials at the Project site.
SERP3	Appropriate spill containment and clean-up supplies shall be available and kept at accessible locations during construction. Spill kits shall be inspected on a regular basis.
SERP4	During fuelling, spill trays shall be in place and a spill containment kit shall be immediately accessible in the event of an accidental spill.
SERP5	Fuel storage and refuelling facilities will be equipped with drip trays, or other secondary containment of 110% of the fuel stored.
SERP6	<p>Initial response to the spill will at a minimum include the following:</p> <ul style="list-style-type: none">• Stop work.• Maintain your own safety and the safety of others.• Wear personal protective equipment, such as nitrile gloves and safety glasses.• Identify the spilled materials and refer to the material data safety sheet to determine if human health or ignition hazards exist.• If possible and safe to do so, contain the spill by any safe means possible (e.g., plug leak, close/isolate leaking valve).• Obtain assistance of others.• Begin containment of the spill and stop it from spreading.• Clean up the spilled substance using available supplies from the on-site spill kits.• If the spill is to water, use measures such as installing sorbent rolls as floating booms to contain the spill and sorbent pads to soak up the material.• Report the spill as per Section 5.3.3.

5.2 Monitoring

Monitoring measures are summarized in this section. The EM will be responsible for appropriate documentation of Project construction activities and environmental monitoring, and to confirm applicable measures, information, and details are being tracked for conducting necessary communications with AHJs, stakeholders, and the Hamlet.



The Hamlet will engage and Qualified Professional (QP) to confirm EM on-site commitments, which will depend on the sensitivity of construction activities. In general, the primary responsibilities of the EM will be as follows:

- Monitor and adaptively manage work procedures as necessary to limit environmental effects.
- Routinely check to verify that equipment in use is in good working condition.
- Routinely check to determine that the required response materials, including spill kits, are onsite and appropriately stocked.
- Confirm site personnel are aware of and trained in emergency procedures.
- Confirm that applicable mitigations in Section 5.1 are adhered to.
- Report any non-compliance or unplanned events as outlined in Section 5.3.

5.3 Reporting

Reporting requirements, including incident reports, are outlined within this section.

5.3.1 Construction Monitoring Reports

The EM will prepare monthly EM reports, depending on frequency of sensitive construction activities and based on discussions with the Hamlet and QP. The EM reports will at a minimum include the following:

- Description of activities completed.
- Photographs of construction and status of work activities.
- Name(s) of EM onsite.
- Date.
- Weather conditions and visibility.
- Equipment used and its location.
- Environmental meeting notes and key issues discussed.
- Design updates and construction activities.
- Mitigation measures implemented.
- Environmental issues and/or non-compliances, including corrective actions.
- If applicable, sampling data.
- An overview of wildlife observations by the EM and Project personnel during construction and potential negative interactions with construction activities. Project personnel will



report sightings to the EM. This will include a detail of species, number, and behaviours of the wildlife observed.

- Summary of adaptive management actions.

5.3.2 End of Construction Reporting

An end of construction report will be submitted to the NIRB following Project completion and prior to operation. This report will include details of all Project construction activities and outline how all NIRB conditions have been met.

5.3.3 Reportable Incidents

Environmental incident reporting is the responsibility of the Contractor with support of the EM. Reporting shall be carried out for incidents that pose or may pose a threat to the environment, such as spills, encroachment into sensitive areas, or disruption or destruction to habitat. An incident reporting protocol will be developed prior to construction to confirm pertinent AHJs are appropriately informed.

In the event of an emergency that is reportable under the *Canadian Environmental Protection Act, 1999* (CEPA), Government of Nunavut Department of Environment (GN DoE), Environment and Climate Change Canada (ECCC), DFO (if applicable), the Contractor will adhere to the reporting requirements in the following sections.

A reportable incident is defined as:

- An incident resulting in a potential or actual contravention of legislation. According to Section 64 of CEPA, substances are considered harmful if they are entering or could enter the environment in quantities or concentrations or under conditions that:
 - Have or may have an immediate or long-term harmful effect on the environment or its biological diversity.
 - Constitute or may constitute a danger to the environment on which life depends.
 - Constitute or may constitute a danger to human life or health in Canada.
- A potential or actual contravention of a permit or approval condition.
- A significant non-compliance with the project CEMP resulting in environmental effect.

5.3.3.1 Government of Nunavut Department of Environment

All spills that occur in excess of the minimum reportable quantities described in Schedule B of the Spill Planning and Reporting Guidelines (Environmental Protection Act 1999), must be reported to GN-DoE via email (spills@gov.nt.ca) or via the 24-hour spill reporting line (1-867-920-8130).



5.3.3.2 Environment and Climate Change Canada

Environment and Climate Change Canada have authority over the *Migratory Birds Convention Act* (MBCA), terrestrial species protected under the *Species at Risk Act* (SARA), and Section 36(3) of the *Fisheries Act*.

Any harm, destruction, or disturbance to terrestrial species at risk species (plants and animals), as well as birds, nests, or eggs are afforded protection under the MBCA will be considered reportable. Such events result in immediate notification to the Canadian Wildlife Service (CWS) branch of ECCC through the toll-free 24-hour reporting hotline at 1-800-668-6767 or through email (ec.enviroinfo.ec@canada.ca).

Deposit of deleterious substances are prohibited under Section 36(3) of the *Fisheries Act*, unless specifically authorized under a *Fisheries Act* authorization or by a regulation under other federal legislation. Any deposit whether made directly into water frequented by fish or indirectly must be immediately reported to ECCC's environmental notification system by calling the 24-hour telephone number for the region in which the event occurred. Deposit of deleterious substances associated with this Project should be reported to the Government of the Northwest Territories Department of Environment and Natural Resources at 867-920-8130.

5.3.3.3 Fisheries and Oceans Canada

Potential fisheries violations due to the Project must be reported to DFO through the Nunavut office (24-hour reporting hotline) at 867-777-7500. Violations could include harmful alteration, disruption, or destruction (HADD) of fish habitat and death of fish not authorized in a *Fisheries Act* Authorization, or injury/mortality of a marine species protected under the SARA.

5.4 Adaptive Management

During Project construction, it may be necessary to modify methodology and address site conditions not foreseen. Should adaptive measures be required, the EM, in conjunction with Contractor, the Hamlet and the QP will develop an update to Project methodology. A communication plan will be developed to confirm how engagement between the EM, the Contractor, the Hamlet and the QP are carried out to accept any changes. The EM, in conjunction with the QP, will then evaluate any additional potential environmental effects or regulatory requirements. Mitigation and/or monitoring measures will also be updated.

5.5 Stop Work Procedures

The EM will have the authority to implement stop work procedures where activities are adversely affecting, or will adversely affect, the environment. The EM will also make recommendations in the field for avoiding and mitigating effects. A clear communication strategy will be developed to outline how EMs can notify the appropriate Project personnel when this is necessary.



6. References


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- Nunavut Waters and Water Surface Rights Tribunal Act*. S.C. 2002, c. 10 <http://laws-lois.justice.gc.ca/PDF/N-28.8.pdf> Last Amended June 16 2016.
- Nunavut Waters Regulations. SOR/2013-69. Availabel at: <https://laws-lois.justice.gc.ca/eng/regulations/SOR-2013-69/index.html>. Accessed: November 2022. Enabling Act: *Nunavut Land Claims Agreement Act, Nunavut Waters and Nunavut Surface Rights Tribunal Act*.



Appendix A: Environmental Effects Table



Table A-1: Project-Specific Information Request Environmental Effects Table

	Physical	Designated Environmental Areas	Geological Site Conditions	Surface Features	Ground Stability and Permafrost	Hydrology	Air Quality	Noise	Climate Conditions	Marine Sediment and Water Quality	Coastal Morphology and Bathymetry	Tides and Currents	Biological	Vegetation (Terrestrial)	Wildlife	Birds (Migratory and Marine)	Marine Fish Habitat	Fish and Marine Mammals	Species at Risk	Socio-Economic	Employment, training and business opportunities	Land and resource use	Tourism	Local and regional traffic patterns	Community Health and Wellness	Community Infrastructure and services	Archaeological and culturally significant sites
Construction																											
Crushing and screening							M	M						M	M	M		M	M		P	M	M	M	M	M	
Access Trail construction							M	M						M	M	M				M		P	M	M	M	M	M
Drainage for access trail (Culverts, if required)					M									M	M	M					P	M	M	M	M	M	
Mobilization/Demobilization of equipment							M	M						M	M	M				M		P	M	M	M	M	



	Physical	Designated Environmental Areas	Geological Site Conditions	Surface Features	Ground Stability and Permafrost	Hydrology	Air Quality	Noise	Climate Conditions	Marine Sediment and Water Quality	Coastal Morphology and Bathymetry	Tides and Currents	Biological	Vegetation (Terrestrial)	Wildlife	Birds (Migratory and Marine)	Marine Fish Habitat	Fish and Marine Mammals	Species at Risk	Socio-Economic	Employment, training and business opportunities	Land and resource use	Tourism	Local and regional traffic patterns	Community Health and Wellness	Community Infrastructure and services	Archaeological and culturally significant sites
Construction equipment							M	M						M	M	M			M		P	M	M	M	M	M	
Fuel storage, refueling, accidental spills							M							M	M	M			M			M	M	M	M	M	
Construction workforce								M													P	M	M	M	M	M	
Operation																											
Truck Hauling							M	M							M	M					P	M				P	
Fuel storage, refueling, accidental spills							M	M						M	M	M											



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