



NUNAVUT IMPACT REVIEW BOARD

Scoping and Environmental Impact Statement Guidelines for the NIRB's Review of the Grays Bay Road and Port Project

April 2018

Day One

- What is the NIRB and what do we do?
- NIRB's Environmental Assessment Process
- Grays Bay Road and Port Project
- Scoping List for the Grays Bay Project



Nunavut Impact Review Board



Nunavut Aviktulikyit Katimayit

Day Two

- Scoping List (continued)
- Guidelines
- Closing

Why is the NIRB visiting your community?

- **Present:** KitlA/GN's Grays Bay Road and Port Project
- **Explain:** NIRB's environmental assessment (Review) of the Grays Bay Project
- **Ask:** How do you feel about the Project – will it affect you?
- **Listen:** your questions, comments, and concerns
- **Affect:** using the information you share



What is the Nunavut Impact Review Board?

- An institution of public government responsible for environmental impact assessment of proposed projects in Nunavut
- Created as part of the *Nunavut Agreement* between Inuit and the Government of Canada
- Legislation: *Nunavut Planning and Project Assessment Act* (NuPPA)



Who is the NIRB?

- Chair, appointed by GoC and GN, nominated by NIRB
- 4 members appointed by GoC, nominated by Nunavut Tunngavik
 - 1 NTI, 1 from each Regional Inuit Association
- 2 members appointed directly by GoC
 - Both currently vacant
- 2 members appointed directly by GN
- 24 staff members



What does the NIRB do?

PHASE REVIEW ITEMS	PROPOSANT	NIRB	MINES	COMMUNITY
Phase 1: Screening & Guidelines Creation				
1. Project Scoping				public meeting
- Hold community scoping sessions	✓	✓	✓	✓
- Develop EIS Guidelines	✓	✓	✓	✓
- EIS Guidelines Development Workshop (optional)	✓	✓	✓	✓ technical meeting
2. Issue EIS Guidelines	✓	✓	✓	✓
Phase 2: Draft Environmental Impact Statement (EIS)				
3. Prepare and Submit Draft EIS	✓	✓	✓	✓
4. Review Draft EIS for Conformity with Guidelines	✓	✓	✓	✓
5. Technical review of Draft EIS	✓	✓	✓	✓
- Preparation of Information Requests	✓	✓	✓	✓
- Prepare and submit responses to info Requests	✓	✓	✓	✓
- Prepare and submit technical review comments	✓	✓	✓	✓
- Hold community information session	✓	✓	✓	✓ information session
6. Technical meeting	✓	✓	✓	✓ technical meeting
7. Pre-Hearing Conference	✓	✓	✓	✓ public meeting
Phase 3: Final Environmental Impact Statement (EIS)				
8. Submission of Final EIS	✓	✓	✓	✓
9. Compliance review of Final EIS	✓	✓	✓	✓
10. Technical review of Final EIS	✓	✓	✓	✓
11. Final Hearing	✓	✓	✓	✓
12. Issue Final report to Minister	✓	✓	✓	✓

Application for project



Identify impacts



Decide if project should proceed or not



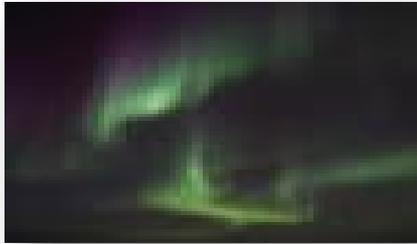
Develop conditions to minimize negative impacts



Monitor effects of project



Changes to the environment



Air quality



Marine life



Birds



Wildlife



Ground Stability



Water



Freshwater life



Vegetation

Changes to communities



Land and Resource Use



Food security



Livelihood



Community infrastructure
and public services



Employment

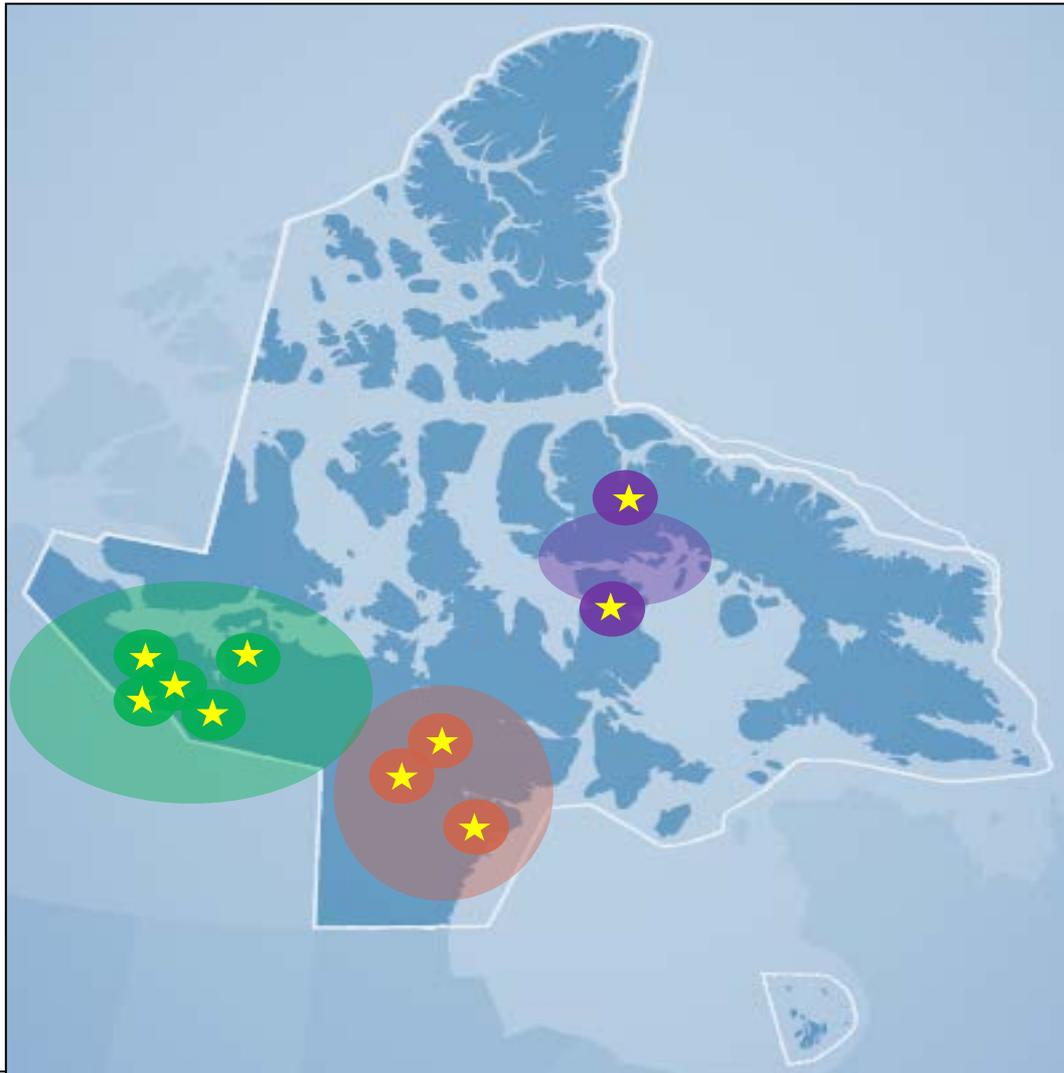


Archaeology

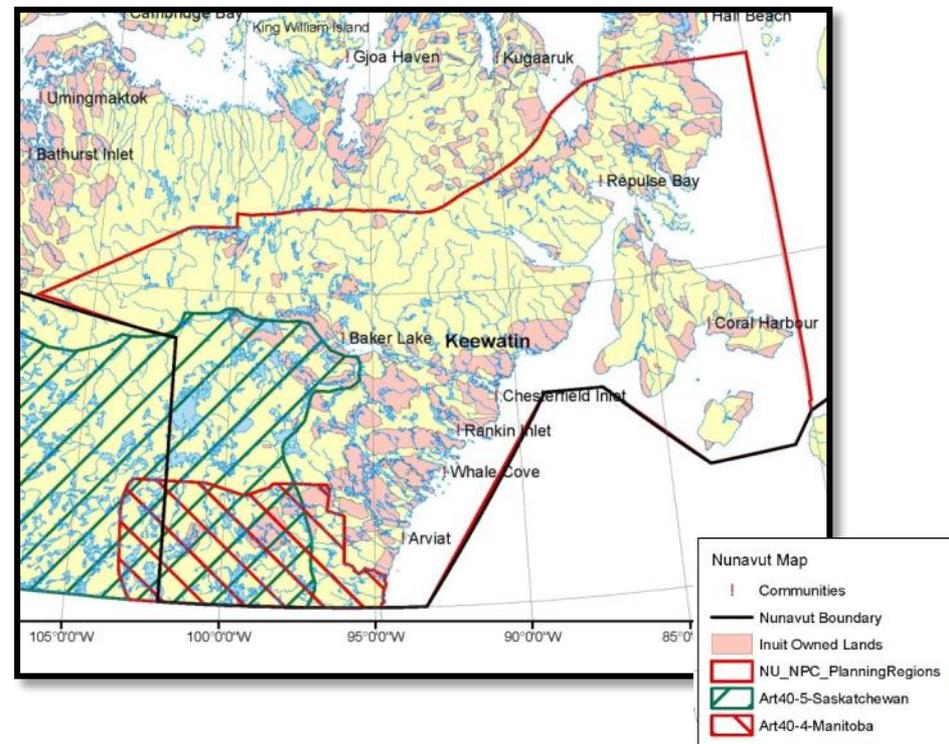


Education and
training

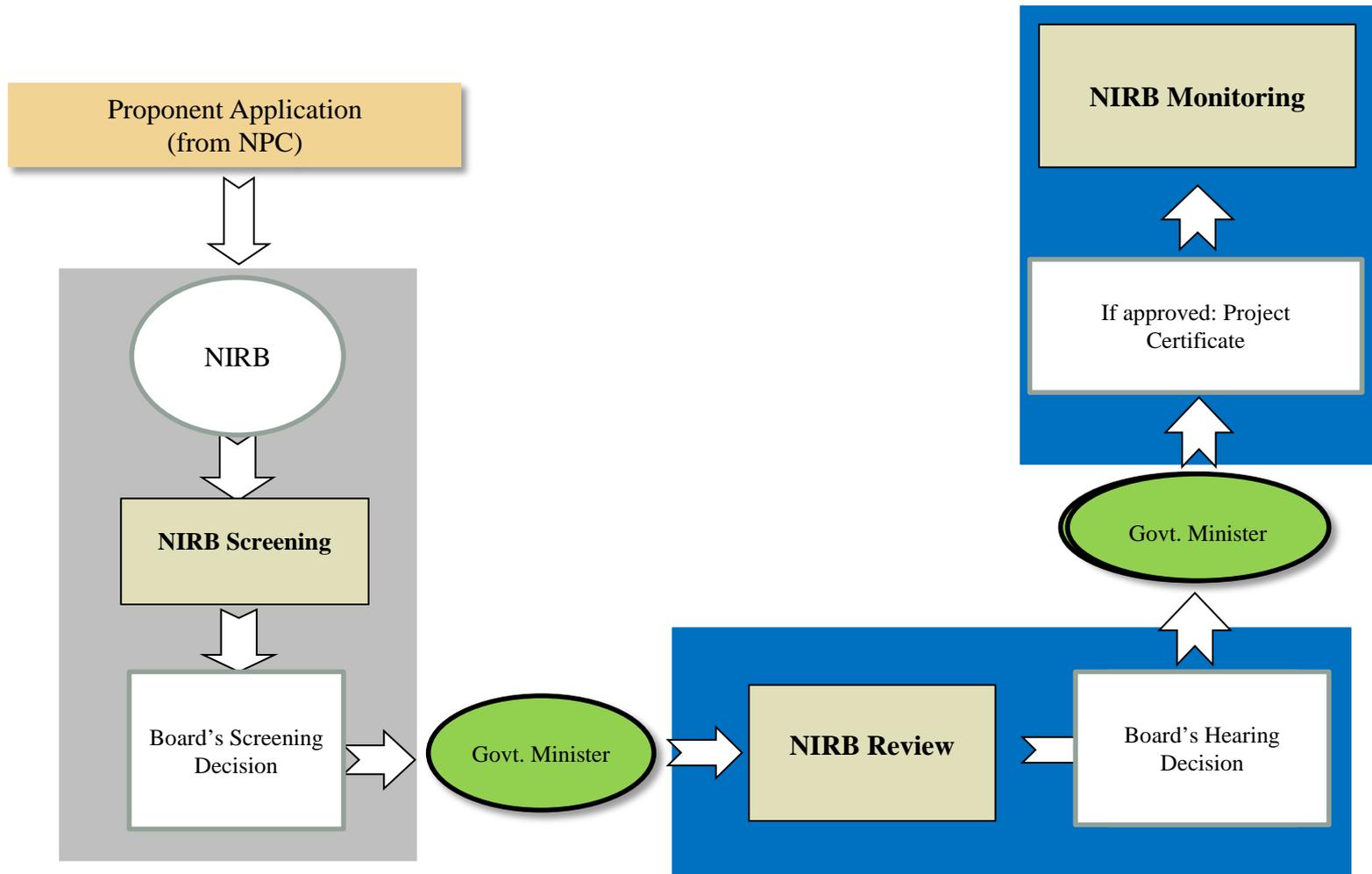
Cumulative Impacts



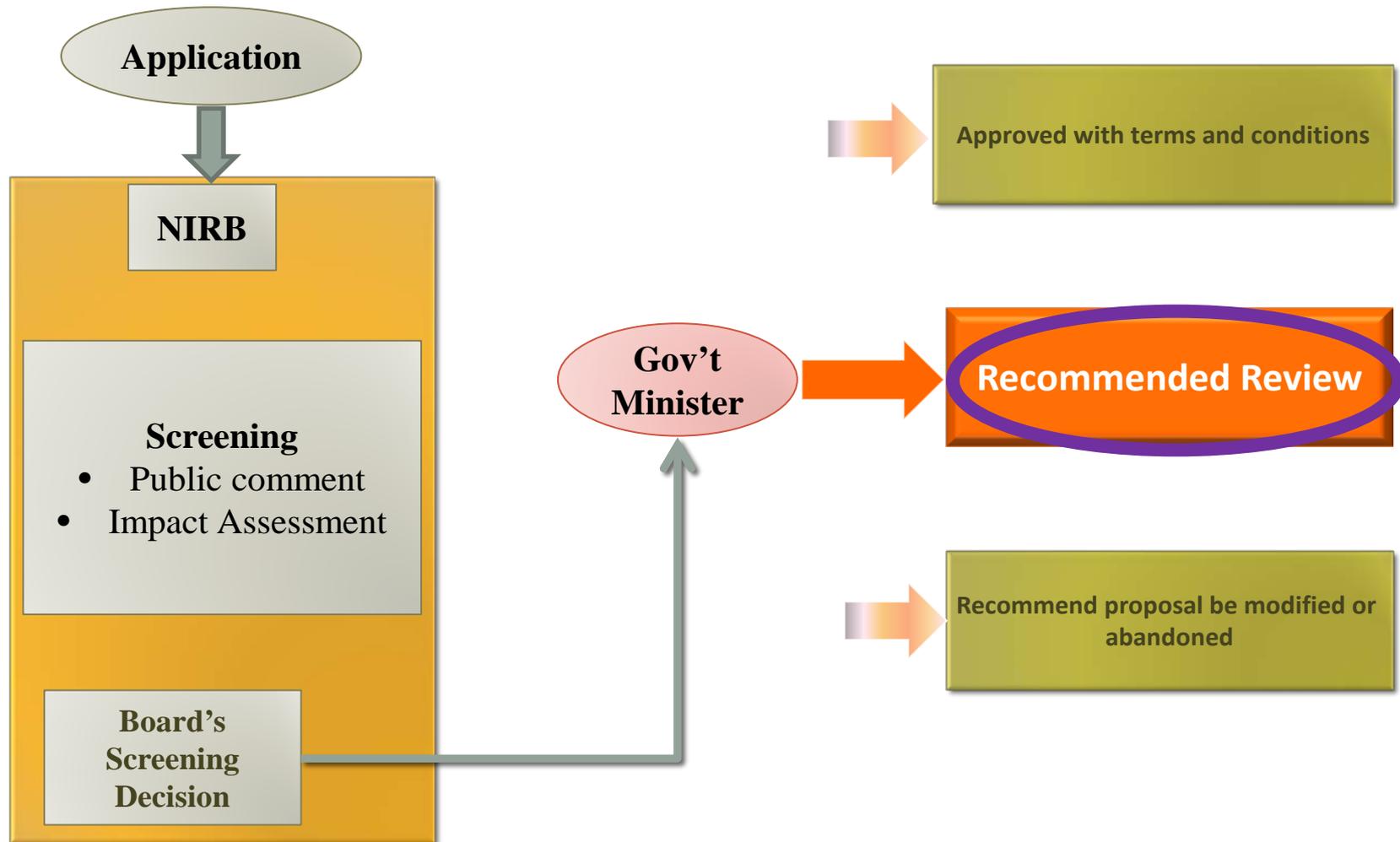
Transboundary Impacts



The NIRB's Impact Assessment Process



The NIRB's Screening Process

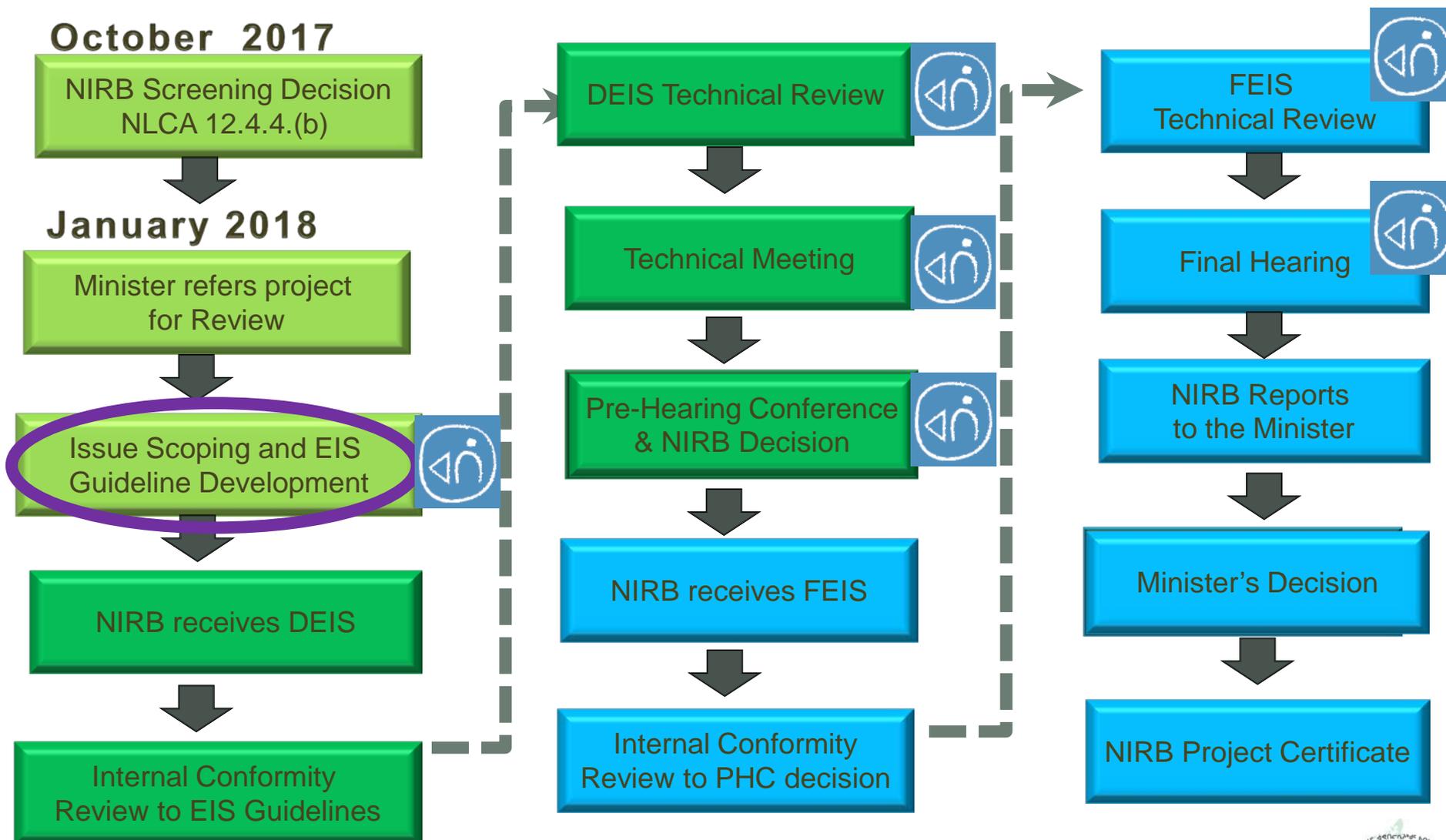


When does the NIRB do a Review?



- Significant impact on the environment, wildlife and Inuit harvesting
- Socio-economic effects on northerners
- Significant public concern
- Involves new technology – unknown effects

Review Process Overview



GRAYS BAY ROAD AND PORT PROJECT

Who is the Proponent?

- Kitikmeot Inuit Association

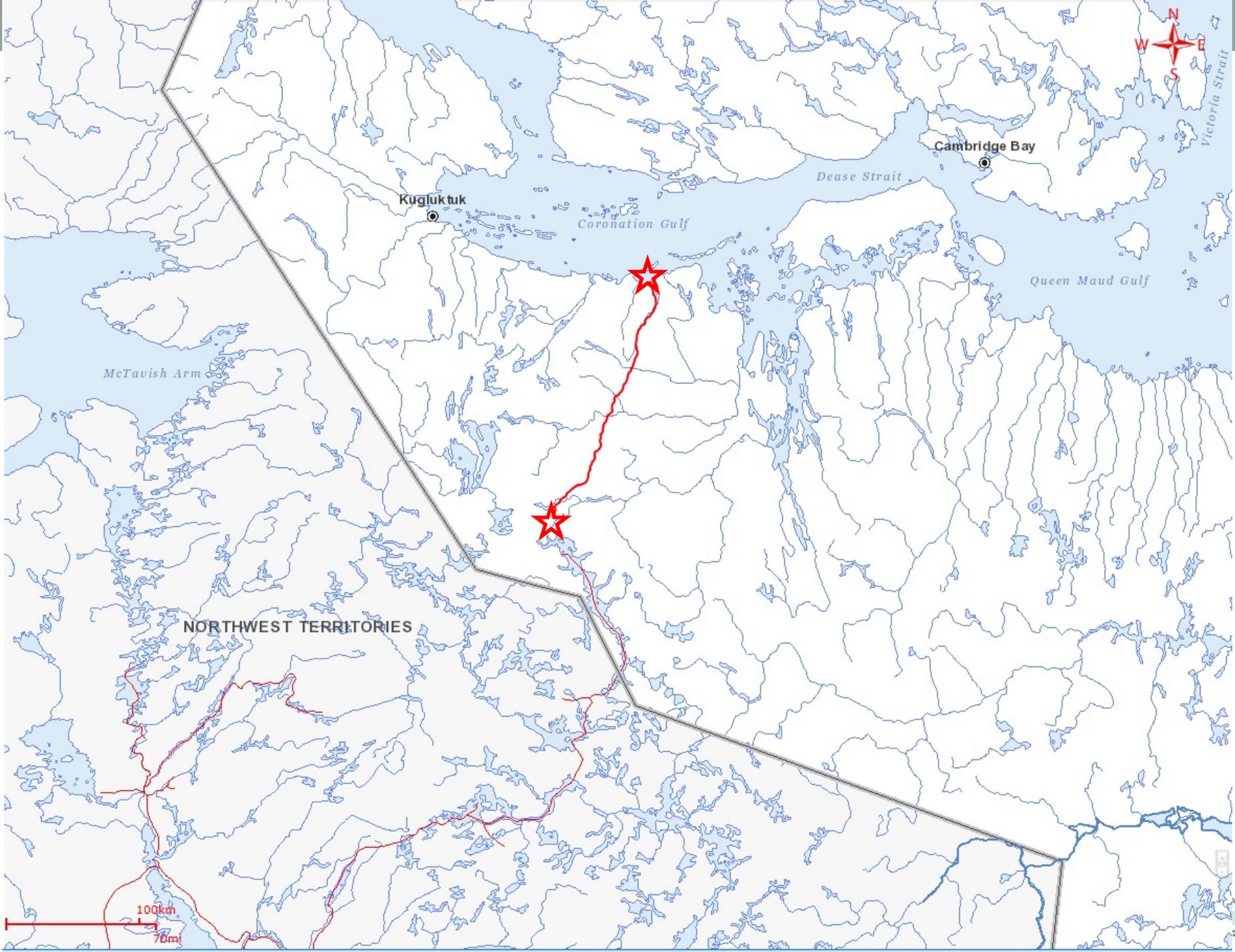


- Government of Nunavut



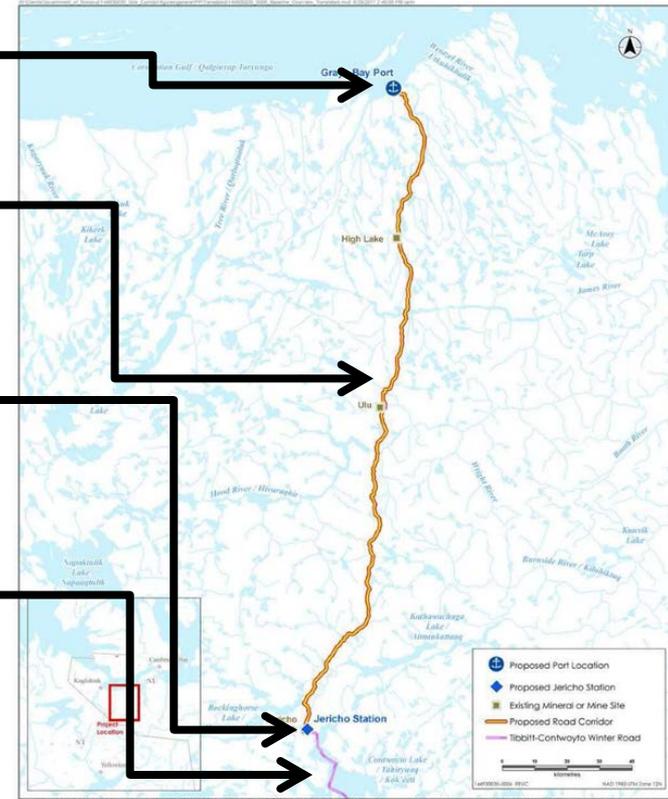
Project Purpose

The Project would be undertaken through a partnership between the Kitikmeot Inuit Association and the Government of Nunavut with the objective of establishing infrastructure connecting the existing Tibbitt-Contwoyto Winter Road to the Northwest Passage and providing an economically viable supply route for Nunavummiut, public, and industrial operators in the area.



Project Components

- Port and airstrip at Grays Bay
- All-Weather Road from the Port to Jericho Station
- Jericho Station
- Winter Road connection to Tibbit-Contwoyto Winter Road
- Open Water Marine and Road Shipping
- Road and Ice Road Shipping



Grays Bay Port

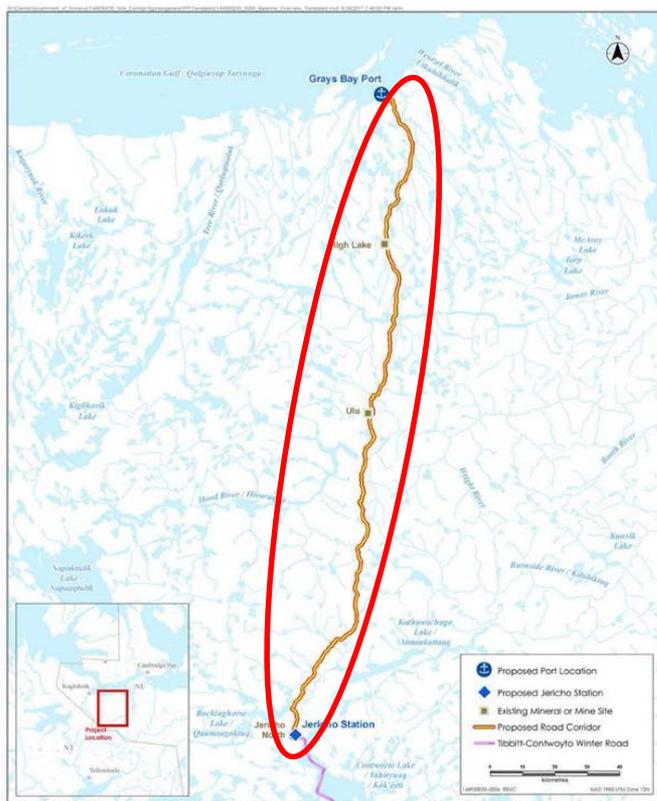


Project Overview

Figure 1-1

- Open Water shipping
 - (July – October)
- Wharf for 75,000 dwt ships
- Laydown areas
- Small Craft Harbour
- 1,800 m Airstrip
- 20 person camp
 - (80 during construction)
- Tank farm (25 M litres to start, up to 100 M litres)
- Roads and other infrastructure
- Dredging

Grays Bay Road



Project Overview

Figure 1-1

- 230 km all-season toll road
- 18 bridges
- 50 large culverts (1.5-5 m)
- Four 80-person camps for construction
- Winter road from Jericho Station to Contwoyto Lake and Tibbitt-Contwoyto Winter Road

Other Project Activities

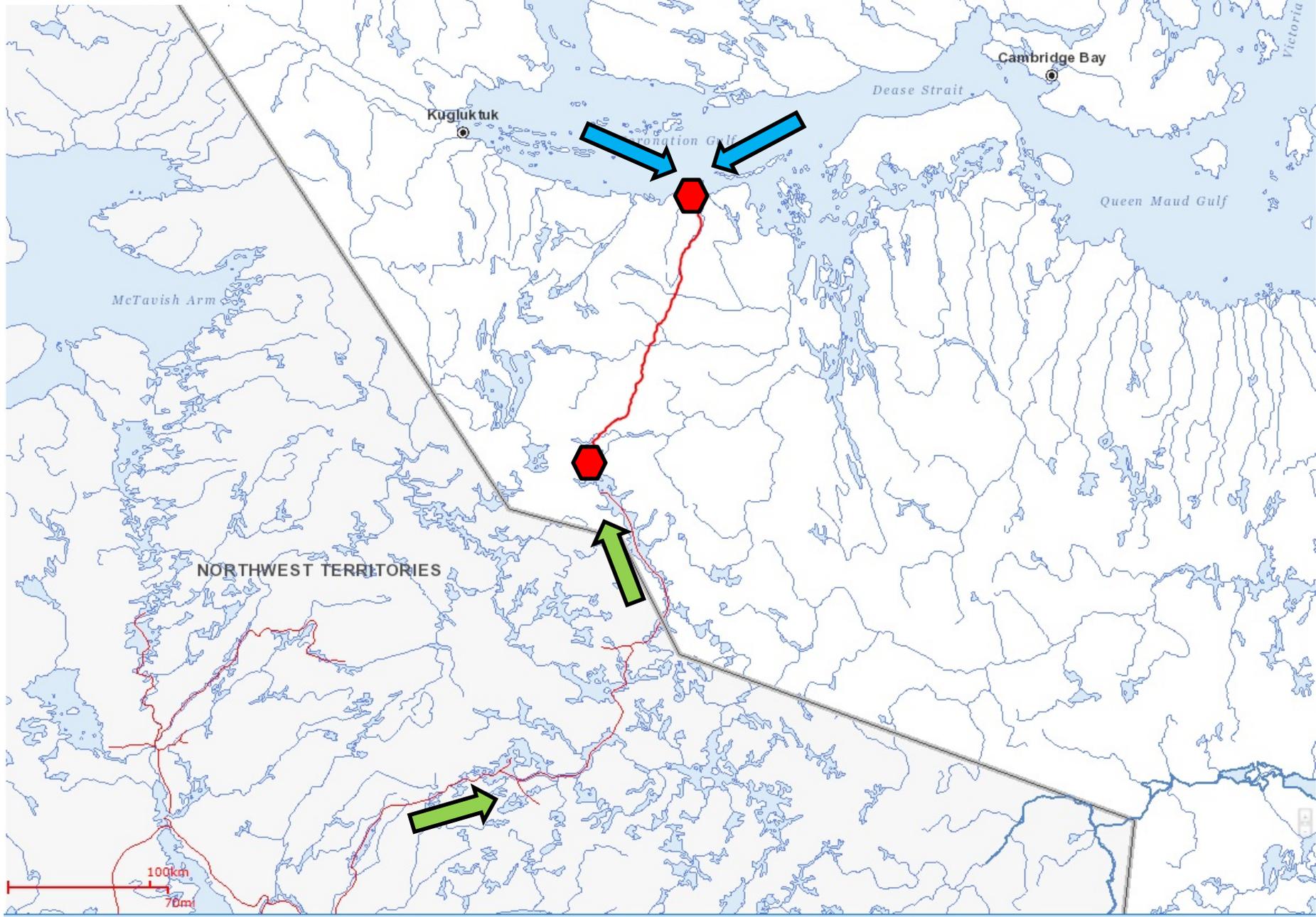
- Approx. 40 quarries for construction and maintenance
 - Approx. every 7 km along road
 - 1/3 (14) possibly permanent



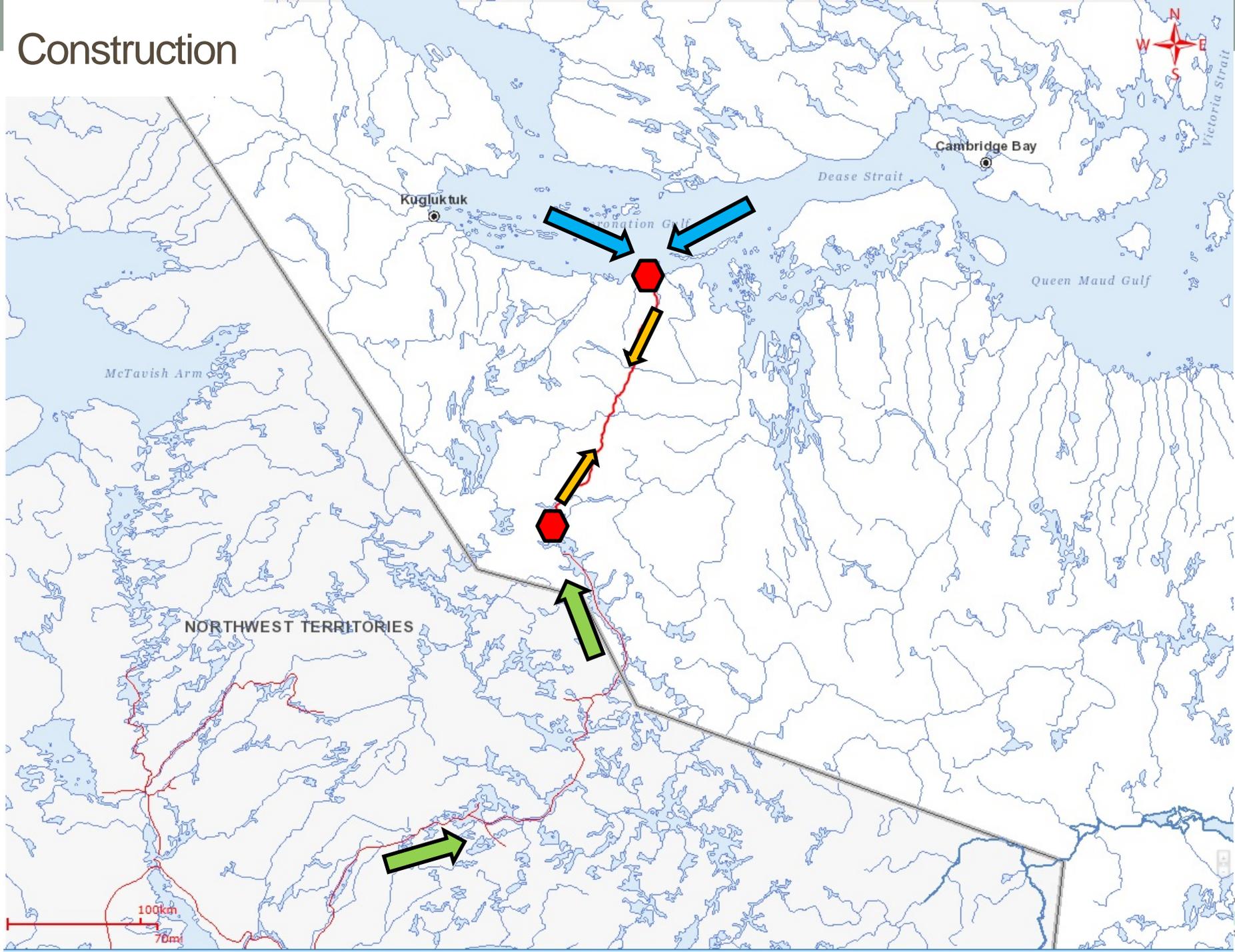
Project Overview

Figure 1-1

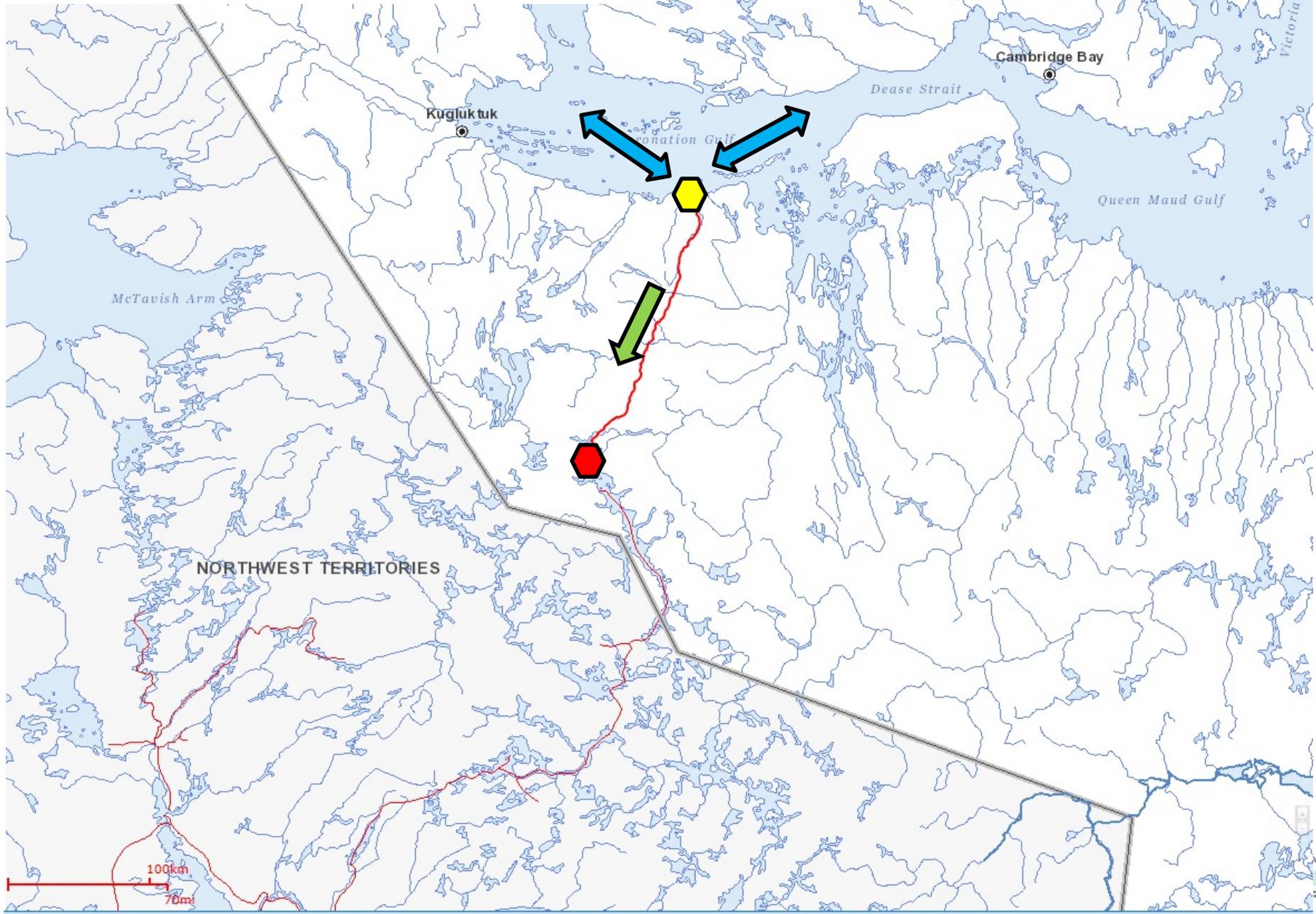
Mobilization



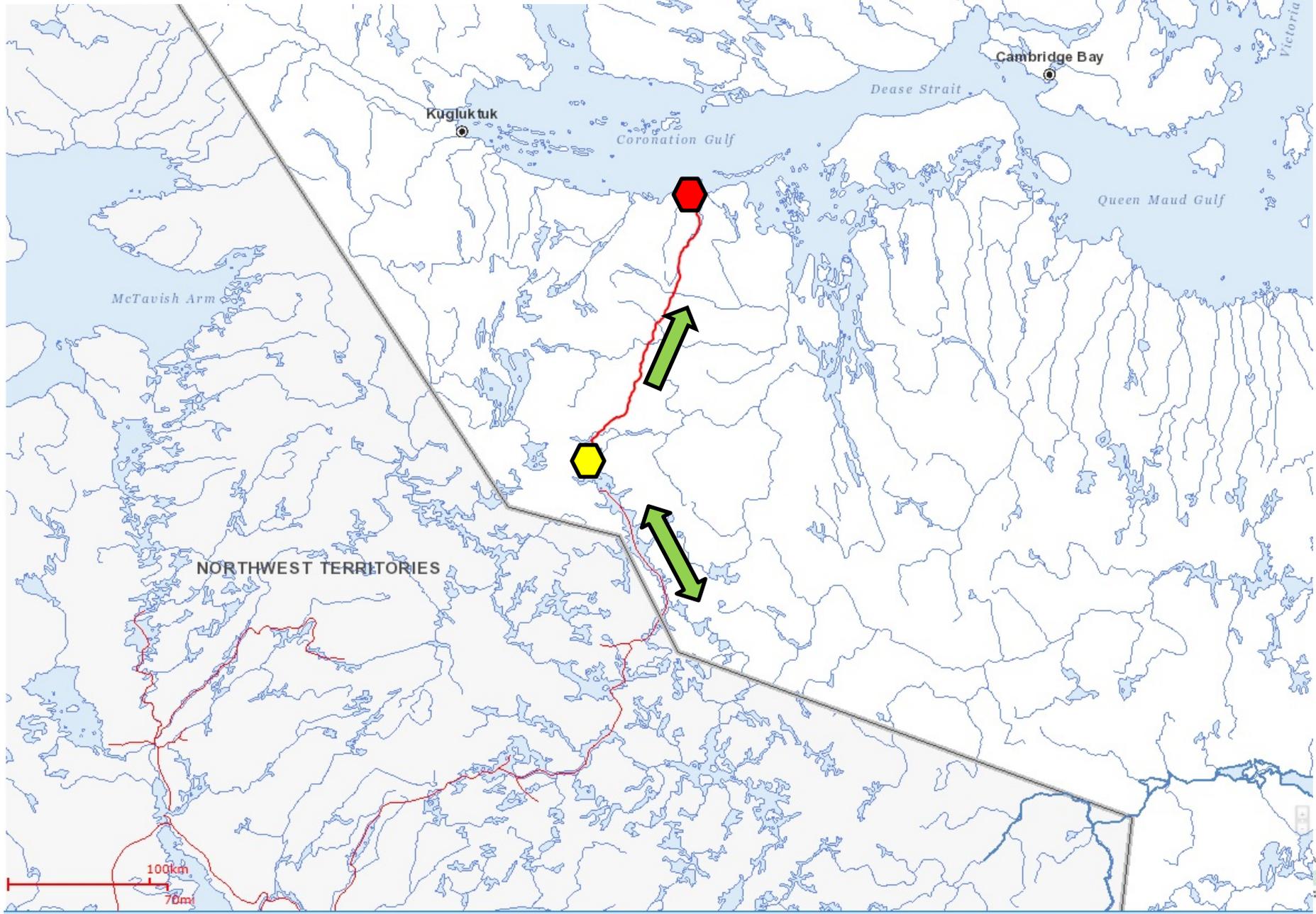
Construction



Operations: Open Water Season



Operations: Winter Transport



Socio-Economic

- Employment
 - Construction Phase: 380
 - Operations: 20-30
- Contracting and Business Opportunities
 - Community resupply?

QUESTIONS?

SCOPING OF THE GRAYS BAY PROJECT

What is Scoping?

- A “**SCOPE**” is a tool that helps us see better
 - For NIRB, a SCOPE is a list of all parts of the project, and the parts of the environment that might be affected by the project
- Scoping also helps us see better what people think about the project, and what parts of the environment are important to you



The NIRB asks the company to explain the Project and those parts of the environment that are important in a lot more detail

Scoping List

- All parts of the Project and activities for the whole time
- Physical and people environments
 - Parts of the environment that are important
- Alternative ways to do the project



Scoping List – Project Components

- All weather road
 - 8.7 to 10 meters wide
 - Up to 230 drainage areas (18 bridges, 50 culverts >1.5 m, many culverts <1.5 m)
- Construction
 - Up to 4 Temporary Camps, each up to 80 personnel/year, moved every 3 months
 - Accommodations, office, maintenance shops, storage, up to 20,000 L diesel, small amounts gas and propane, water, waste/wastewater storage
 - Waste/Wastewater transported back to Grays Bay or Jericho Station

Scoping List – Project Components

- Grays Bay Port
 - Marine shipping July – October
 - 1 wharf for 75,000 dwt vessel, 2nd wharf when demand warrants
 - Small craft harbour for up to 50 vessels
 - Floating docks, launch ramp, 5,000 litre refueling station, tent/refuge area, light vehicle parking, optional breakwater
 - Navigation Aids
 - Laydown and storage areas
 - 20 person accommodations
 - Office and support buildings, maintenance shops, generators, water management, wastewater treatment, landfill, incinerator
 - Helipad
 - 25 million litre diesel storage – expandable to 100 million litres

Scoping List – Project Components

- Grays Bay Port (continued)
 - 1,800 meter runway
 - Air traffic control, up to 90,000 L jet fuel, shelter building, cargo shelter, maintenance garage
 - Annual sealift deliveries

- Construction
 - Dredging for wharf depth
 - 60 person temporary camp
 - Mobilization by 2 ocean freighters and barges, lightering to shore
 - Annual sealift deliveries
 - Temporary staging, laydown, and granular storage areas



Scoping List – Project Components

- Jericho Station
 - 3 person camp, offices, refuelling facilities, refuge station, water, waste and power facilities, vehicle parking area
 - Waste backhauled if incinerator/landfill not built
 - Optional use of Jericho Mine airstrip
 - Tank farm for up to 20 million litres of fuel
 - Staging area to store material in transit southward until winter road established



Scoping List – Project Components

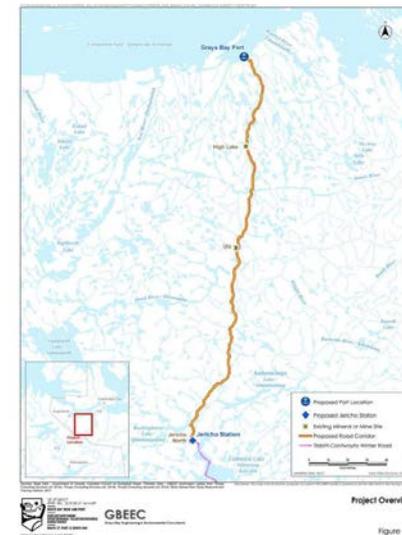
- Winter Road Construction
 - Sections constructed along all-weather route to access mobile camps and quarries
 - Connection to Tibbitt-Contwoyto Winter Road
 - During construction, approximately 1,000 trucks each winter season using T-C Winter Road
- Winter Road Operation
 - Connection to Tibbitt-Contwoyto Winter Road



Scoping List – Project Components

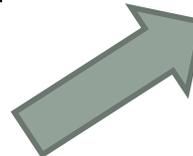
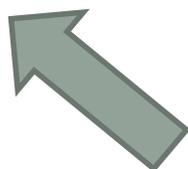
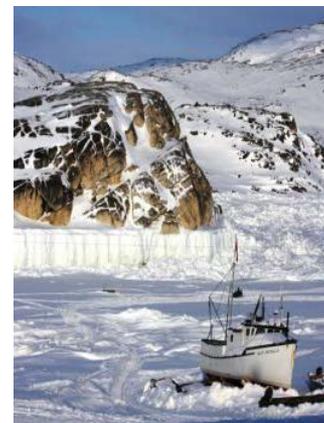
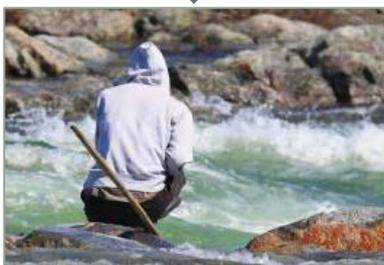
- Up to 40 temporary and permanent quarries
 - Up to 8 million m³ rock used for road and port construction
 - Up to 100,000 m³ used annually for maintenance
 - Quarries approximately every 7 km within 500 meters of road
 - Every 3rd quarry potentially permanent (approx 14)
 - Blasting may be required

- Water use
 - Up to 600 m³ for construction
 - Up to 100 m³ for operations



QUESTIONS?

Ecosystemic Impacts



Ecosystemic Impacts

- Air quality
- Climate and meteorology
- Noise and vibration
- Terrestrial Environment
- Aquatic Environment
- Terrestrial Wildlife and Habitat
- Birds and bird habitat
- Marine environment
- Marine wildlife
- Terrestrial and marine Species at Risk



Scoping List - Ecosystemic Impacts

- Anticipated Effects on the Environment
 - Permafrost
 - Geotechnical hazards including slope movement, differential or thaw settlement, frost heave, and ice scour
 - Subsidence
 - Flooding
 - Unfavorable geological conditions
 - Sea level change



Scoping List - Ecosystemic Impacts

- Anticipated Effects on the Ecosystem
 - Air quality including greenhouse gases
 - Climate and meteorology
 - Noise and vibration
 - Terrestrial environment, including:
 - Terrestrial ecology
 - Landforms and soils
 - Permafrost and ground stability
 - Geological features including discussion of geology and geochemistry
 - Hydrological features and surface water quality
 - Hydrogeology and groundwater
 - Sediment quality

Scoping List - Ecosystemic Impacts

- Freshwater aquatic environment, including:
 - Aquatic ecology
 - Aquatic biota including representative fish as defined in the *Fisheries Act*, aquatic macrophytes, benthic invertebrates and other aquatic organisms
 - Habitat including fish habitat as defined in the *Fisheries Act*
 - Commercial, recreational, and Aboriginal fisheries as defined in the *Fisheries Act*
- Terrestrial vegetation



Scoping List - Ecosystemic Impacts

- Terrestrial wildlife and wildlife habitat, including:
 - Representative terrestrial mammals to include caribou, caribou habitat, migration and behavior, muskoxen, wolverine, grizzly bears, Polar Bears, wolves and less conspicuous species that may be maximally exposed to contaminants, with specific consideration of effects on caribou of the Bathurst and Dolphin and Union herds
- Wildlife migration routes and crossings, with specific consideration of potential effects on migration of the Bathurst caribou herd



Scoping List - Ecosystemic Impacts

- Birds and bird habitat, including:
 - Raptors
 - Migratory birds
 - Seabirds
- Marine environment, including:
 - Marine ecology
 - Marine water and sediment quality
 - Marine biota including fish and benthic flora and fauna
 - Marine habitat
 - Commercial, recreational, and Aboriginal fisheries as defined in the *Fisheries Act*
- Marine wildlife
- Terrestrial and marine Species at Risk, including
 - Species under consideration for listing on the *Species at Risk Act*
 - Species designated “at risk” by the Committee on the Status of Endangered Wildlife in Canada



Socio-Economic Impacts



Socio-Economic Impacts

- Employment
- Education and training
- Business Opportunities
- Population demographics
- Traditional activity & knowledge and community knowledge
- Non-traditional land use and resource use
- Archaeology, Paleontology and Cultural Resources
- Health and well being
- Community infrastructure and public services
- Health and safety including employee and public safety



Scoping List - Socioeconomic Impacts

- Limited availability of labour and capacity
- Limitations on physical infrastructure
- Socio-economic factors, including:
 - Economic development opportunities
 - Employment
 - Education and training
 - Contracting and business opportunities
 - Population demographics
 - Benefits and revenues (tax, royalties, etc.)
- Traditional activity and knowledge and community knowledge including:
 - Land use
 - Food security
 - Language
 - Cultural and commercial harvesting



Scoping List - Socioeconomic Impacts

- Non-traditional land use and resource use
- Heritage resources
 - Archaeology
 - Paleontology
 - Cultural
- Health and well being
 - Individual and community wellness
 - Family and community cohesion
- Community infrastructure and public services
- Health and safety including employee and public safety



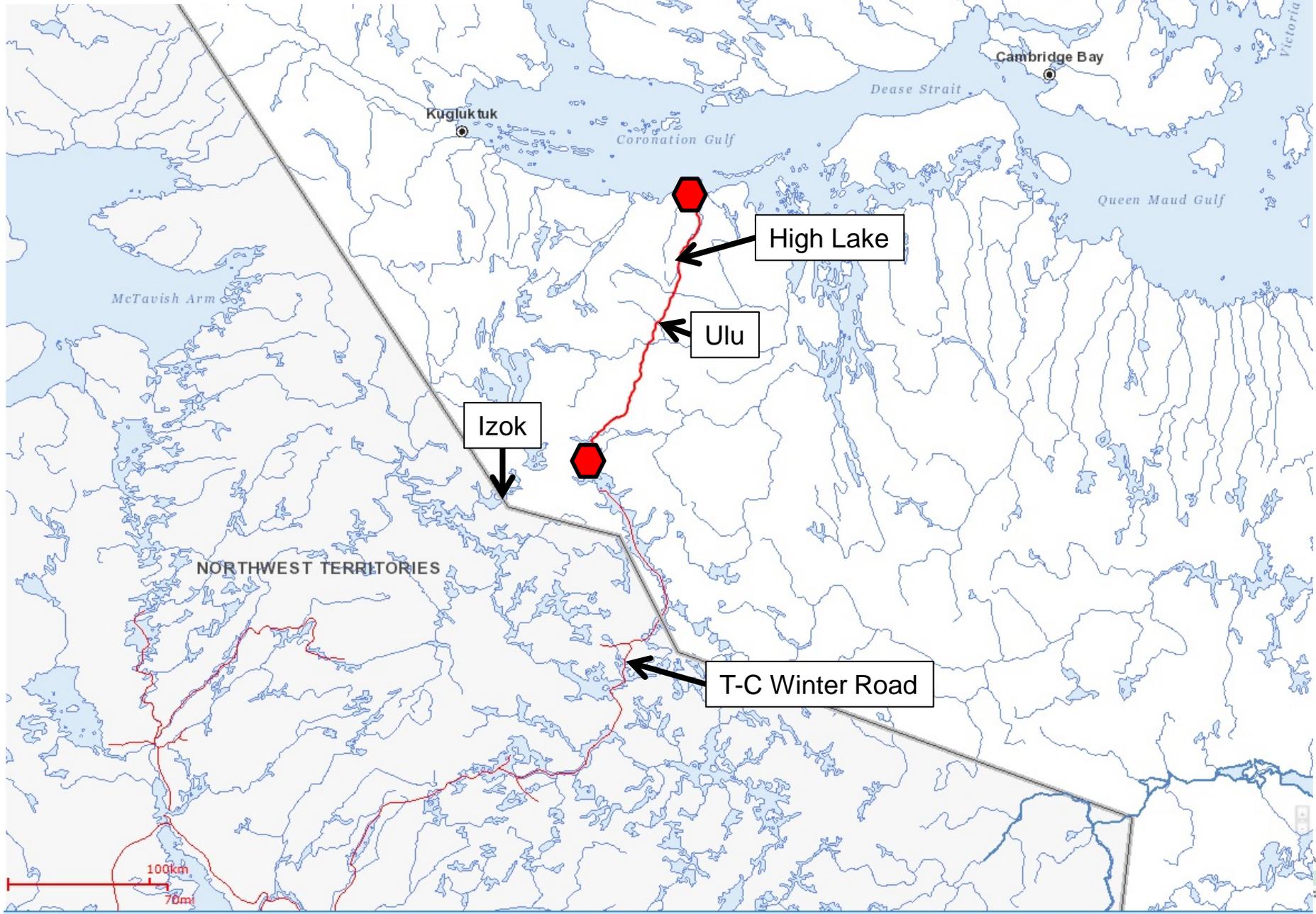
QUESTIONS?

Scoping List – Other Impacts

- Cumulative effects, giving specific consideration to the project in terms of existing, proposed, and reasonably foreseeable future mining and transportation infrastructure projects, with specific consideration of advanced mineral projects such as Izok Lake, Ulu, High Lake, the Tibbetts-Contwoyto Winter Road, and an all-weather road from the Northwest Territories
- Residual effects
- Transboundary effects



Other Potential Projects



QUESTIONS?

DRAFT GUIDELINES FOR THE ENVIRONMENTAL IMPACT STATEMENT OF THE GRAYS BAY PROJECT

EIS Guidelines

- PART I – THE ASSESSMENT
- 1.0 Introduction
- 2.0 Guiding Principles
- 2.1 The NIRB's Impact Review Principles
- 2.2 Public Participation
- 2.3 Inuit Qaujimaningit, Inuit Qaujimajatuqangit, and Traditional and Community Knowledge
- 2.4 Precautionary Principle
- 2.5 Sustainable Development
- 3.0 Scope of the NIRB Assessment
- 4.0 Preparation and Review of the Environmental Impact Statement
- 4.1 Guidance
- 4.2 Study Strategy and Methodology
- 4.3 Use of Existing Information



EIS Guidelines

- PART II – THE ENVIRONMENTAL IMPACT STATEMENT
- 5.0 Guidance on the Content and Presentation of the Environmental Impact Statement
- 5.1 Content
- 5.2 Concordance Table
- 5.3 Presentation
- 5.4 Translation
- 5.5 Main Document of the Environmental Impact Statement
- 5.6 Summaries
 - 5.6.1 Executive Summary
 - 5.6.2 Popular Summary
- 6.0 Introductory Sections of the Environmental Impact Statement
- 6.1 Project Overview
- 6.2 Project Location
 - 6.2.1 Land Tenure
- 6.3 Proponent Information
- 6.4 Regulatory Regime
- 6.5 Regional Context



EIS Guidelines – Project Description

- 7.0 Project Components and Activities
- 7.1 Project Design
- 7.2 Analysis of Need and Purpose
- 7.3 Scope of the Project
- 7.3.1 Detailed Project Proposal Description
- 7.3.2 Project Phases
- 7.3.2.1 Construction
- 7.3.2.2 Operation and Maintenance
- 7.3.2.3 Closure
- 7.4 Future Development
- 7.5 Alternatives
- 7.6 Economic and Employment Information



EIS Guidelines – Collecting and Presenting Info

- 8.0 Impact Assessment Methodology
- 8.1 Scope of the Environmental Assessment
 - 8.1.1 Factors to be considered
 - 8.1.2 Scope of Factors
 - 8.1.2.1 Valued Ecosystem and Socio-economic Components
 - 8.1.2.2 Assessment Boundaries
- 8.2 Public Consultation
- 8.3 Inuit Qaujimaningit, Inuit Qaujimajatuqangit, and Traditional and Community Knowledge
- 8.4 Description of the Environment and Baseline Information
- 8.5 Study Strategy and Methodology
 - 8.5.1 Acquisition Methodology and Documentation
 - 8.5.2 Data Analysis and Presentation
- 8.6 Impact Assessment Approach
 - 8.6.1 Impact Prediction
 - 8.6.2 Impacts of the Environment on the Project
 - 8.6.3 Cumulative Effects Assessment
 - 8.6.4 Transboundary Impacts
 - 8.6.5 Indicators and Criteria
 - 8.6.6 Significance Determination
 - 8.6.7 Certainty



EIS Guidelines

- 9.0 Project Environment and Impact Assessment
- 9.1 Biophysical Environment and Impact Assessment
 - 9.1.1 Air Quality
 - 9.1.1.1 Baseline Information
 - 9.1.1.2 Impact Assessment
 - 9.1.2 Climate and Meteorology, including Climate Change
 - 9.1.3 Noise and Vibration
 - 9.1.4 Terrestrial Environment
 - 9.1.5 Geological Features, Surficial and Bedrock Geology and Geochemistry
 - 9.1.6 Hydrological Features and Hydrogeology
 - 9.1.7 Groundwater and Surface Water Quality
 - 9.1.8 Sediment Quality
 - 9.1.9 Aquatic Environment
 - 9.1.10 Vegetation
 - 9.1.11 Terrestrial Wildlife and Wildlife Habitat
 - 9.1.12 Birds and Bird Habitat

Note: All topics have Baseline Information and Impact Assessment sections

EIS Guidelines

- 9.2 Socio-Economic Environment and Impact Assessment
 - 9.2.1 Economic Development and Opportunities
 - 9.2.2 Employment
 - 9.2.3 Education and Training
 - 9.2.4 Contracting and Business Opportunities
 - 9.2.5 Population Demographics
 - 9.2.6 Traditional Activity and Knowledge
 - 9.2.7 Non-traditional Land and Resource Use
 - 9.2.8 Heritage Resources
 - 9.2.9 Health and Wellbeing
 - 9.2.10 Community Infrastructure and Public Services
 - 9.2.11 Human Health and Safety

Note: All topics have Baseline Information and Impact Assessment sections

EIS Guidelines – Risks

- 9.3 Human Health and Environmental Risk Assessment
- 9.4 Accident and Malfunctions Assessment



EIS Guidelines – Required Plans

- 10.0 Environmental Management Systems
- 10.1 Environmental Management Plan
- 10.2 Environmental Protection Plan
- 10.3 Monitoring and Mitigation Plans
- 10.4 Biophysical Environmental Plans
 - 10.4.1 Risk Management and Emergency Response Plan
 - 10.4.2 Fuel Management Plan
 - 10.4.3 Spill Contingency Plan
 - 10.4.4 Water Management Plan
 - 10.4.5 Waste Management Plan
 - 10.4.6 Hazardous Material Management Plan
 - 10.4.7 Road Management Plan
 - 10.4.8 Port Management Plan
 - 10.4.9 Borrow Pits and Quarry Management Plan
 - 10.4.10 Explosives Management Plan



EIS Guidelines – Required Plans

- 10.4.11 Air Quality Monitoring and Management Plan
- 10.4.12 Noise and Vibration Abatement Plan
- 10.4.13 Aquatic Effects Management Plan
- 10.4.14 Wildlife Mitigation and Monitoring Plan
- 10.4.15 No Net Loss Plan
- 10.5 Socio-Economic Environmental Plans
 - 10.5.1 Business Development Plan
 - 10.5.2 Occupational Health and Safety Plan
 - 10.5.3 Community Involvement Plan
 - 10.5.4 Cultural and Heritage Resources Protection Plan
 - 10.5.5 Human Resources Plan
- 10.6 Closure and Reclamation Plan
 - 10.6.1 Care and Maintenance Plan
- 10.7 Follow-Up and Adaptive Management Plans
- 10.8 Significance of Residual Impacts



EIS Guidelines – Conclusion and References

- 10.8 Significance of Residual Impacts
- 11.0 List of Consultants and Organizations
- 12.0 Conclusion
- Literature Cited



QUESTIONS?

CLOSING REMARKS



NIRB Wants to Hear From You!

- What do you think about the Project?
- Comments, questions or concerns
- What environmental components are important to you?
- What potential effects do you think this Project might have on the land, animals and people?

**Fill out a NIRB
comment form!**

Next Steps in NIRB's Review

- Final Scope List
 - Will include the feedback provided at these meetings to ensure that the assessment considers impacts on what is important to you
- Revised Draft EIS Guidelines
- Final EIS Guidelines



Thank you for sharing your participation with us

Thank you!