May 16, 2016

Section 40(1)

Dear [Redacted]

Re: Your request for access to information under Part II of the Access to Information and Protection of Privacy Act our file #: LAAO/004/2016

On April 4, 2016, Labrador and Aboriginal Affairs (LAA) received your request for access to the following records:

"Any and all records in any medium or format, held within the LAAO Department that pertain to the Strange Lake Road and Port Access Project proposed by Quest Rare Minerals. Information to include, but shall not be limited to, all Notes and Materials (Information/Briefing/Decision/Meeting), all Messages of any nature, all Discussion Papers and/or Reports connected to the proposed project. Information to further include, but shall not be limited to, a Project Description of the proposed project."

The final response document consists of 730 pages in 13 Binders. For your convenience we removed all totally redacted pages including the following:

- Binder 1; pages 1 to 23 using Sections 27(1)(h) and 27(2)(a);
- Binder 1; pages 62 to 63 – as Non-responsive sections;
- Binder 2; pages 2 to 4, 7 to 9, 12 to 15, 17 to 21 and 23 to 26 – as Non-responsive sections;
- Binder 2; pages 28 to 44 using Sections 27(1)(h) and 27(2)(a);
- Binder 3a; pages 1 to 21, using Sections 41(c);
- Binder 6; pages 16 to 19 and 21 – as Non-responsive sections;
- Binder 7; pages 2 to 13 and 24 to 35 using Sections 29(1)(a), 30(1)(a) and 34(1)(a)(i);
- Binder 7; pages 15 and 17 to 19 – as Non-responsive sections;
- Binder 8; pages 1 to 2, 4 to 16, 18 to 31, 33 to 44, 48 and 50 to 63 using Sections 29(1)(a), 30(1)(a) and 34(1)(a)(i);
Binder 9; pages 1, 3 to 15, 17 to 31, 33 to 34, 36 to 43, 45 to 53, 55 to 61, 63 and 65 to 76 using Sections 29(1)(a), 30(1)(a) and 34(1)(a)(i); and,

Binder 10; pages 1 to 3, 5 to 11, 13, 15 to 27, and 29 to 42 using Sections 29(1)(a), 30(1)(a) and 34(1)(a)(i);

Binder 3b consists of a 122 page document submitted to the Nunatsiavut Government, the Department of Environment and Conservation and the Canadian Environmental Assessment Agency by Quest Rare Minerals Ltd titled “Strange Lake Road and Port Access, Northern Labrador - Environmental Assessment Registration and Project Description”. This document actually shows up twice in the response package: at the end of the email on page 31 and 33 of Binder 3a.

In some parts of the Binders complete pages and sections were redacted since information in these sections was not-responsive to wording of the request. Releasing non-responsive information in this package would require consultations with numerous public bodies and/or third parties to ensure protection of pertinent information. Given the large size of this response package, at 730 pages, we felt that conducting consultations numerous public body and third party on non-responsive sections would have delayed releasing the overall package. In this case the redacted non-responsive information is totally unrelated to wording of the request.

Also we received an email from you on May 8, 2016 regarding the numerous draft Decision Notes included in the response package, stating that “...I don’t think it is necessary to have all 12...just the final one would be fine...”. Thus we removed all Decision Notes but one, which is located in Binder 12. We did leave emails in the package that the Decision Notes were attached to provide continuity. These emails are located in the following locations:

- Binder 10: pages 43, and 44
- Binder 12: pages 4, 10, 11, 12 and 13

Please note that two additional Decision Notes and repetitive emails were also removed from Binder 10 and again two at the end of Binder 11.

I am pleased to inform you that a decision has been made by the Deputy Minister for Labrador and Aboriginal Affairs to provide access to some of the requested information. In particular, access is granted to the following records:

- An application from Quest Rare Minerals Ltd (Quest) to the Department of Natural Resources for Exploration and Notice of planned Mineral Exploration Work, dated October 30, 2012;
- Letter from Quest to Intergovernmental and Aboriginal Affairs Secretariat, NL, dated October 4, 2012;
- Meeting Note dated October 30, 2012;
- Extensive and detailed multiple correspondence emails between public body’s staff from: LAA, the Department of Environment and Conservation (ENVC), Intergovernmental
Affairs, and Third Parties including: Canadian Environmental Assessment Agency (CEAA), Quest and the Nunatsiavut Government relating to the wording of the request noted above;

- Information Note, dated February 3, 2015, from the department of Natural Resources ATIPP Release NR-009-2015;
- Presentation “The Environmental Assessment Process in Newfoundland and Labrador” from ENVC, dated February 5, 2015;
- Draft Information Note, dated March 27, 2015 from ENVC;
- Draft Information Note, dated April 15, 2015 from ENVC;
- Draft Information Note, dated April 17, 2015 from ENVC;
- Notes from three meeting (April 1, April 17 and April 24, 2015) including staff from CEAA, ENVC and LAA.
- Draft Information Note, dated May 20, 2015 from ENVC;
- Draft Information Note, dated June 25, 2015 from ENVC;
- Meeting Note dated August 27, 2015;
- A letter from the Premier of Newfoundland and Labrador to Mayor Karen Oldford of Labrador City regarding major files in Labrador West;
- The Strange Lake Road and Port Access, Northern Labrador Environmental Assessment Registration and Project Description – Summary as submitted by Quest;
- Draft ENVC Decision Note, the most recent one that LAA has, titled: “Intergovernmental MOU relative to the tripartite harmonization of Environment Assessment (EA) process for the proposed Strange Lake Road and Port access Project in Northern Labrador” dated February 16, 2016.

Access to the remaining records, and/or information contained within the records, has been refused in accordance with the following exceptions to disclosure, as specified in the Access to Information and Protection of Privacy Act (the Act):

**Cabinet confidences**

27. (1) In this section, "cabinet record" means

(h) a record created during the process of developing or preparing a submission for the Cabinet; and

(2) The head of a public body shall refuse to disclose to an applicant

(a) a cabinet record; or

(b) information in a record other than a cabinet record that would reveal the substance of deliberations of Cabinet.

**Policy advice or recommendations**

29. (1) The head of a public body may refuse to disclose to an applicant information that would
reveal
(a) advice, proposals, recommendations, analyses or policy options developed by or for
a public body or minister;

Legal advice
30. (1) The head of a public body may refuse to disclose to an applicant information
(a) that is subject to solicitor and client privilege or litigation privilege of a public
body;

Disclosure harmful to intergovernmental relations or negotiations
34. (1) The head of a public body may refuse to disclose information to an applicant if the
disclosure could reasonably be expected to
(a) harm the conduct by the government of the province of relations between that
government and the following or their agencies:
   (i) the government of Canada or a province,
   (v) the Nunatsiavut Government; or
(b) reveal information received in confidence from a government, council or
organization listed in paragraph (a) or their agencies.

Disclosure harmful to the financial or economic interests of a public body
35. (1) The head of a public body may refuse to disclose to an applicant information which
could reasonably be expected to disclose
(f) positions, plans, procedures, criteria or instructions developed for the purpose of
contractual or other negotiations by or on behalf of the government of the province or
a public body, or considerations which relate to those negotiations;
(g) information, the disclosure of which could reasonably be expected to prejudice the
financial or economic interest of the government of the province or a public body; or

Disclosure harmful to personal privacy
40. (1) The head of a public body shall refuse to disclose personal information to an applicant
where the disclosure would be an unreasonable invasion of a third party's personal
privacy.

Disclosure of House of Assembly service and statutory office records
41. The Speaker of the House of Assembly, the officer responsible for a statutory office, or the
head of a public body shall refuse to disclose to an applicant information
(c) in the case of a statutory office as defined in the House of Assembly Accountability,
Integrity and Administration Act, records connected with the investigatory functions
of the statutory office.

As required by 8(2) of the Act, we have severed information that is unable to be disclosed and
have provided you with as much information as possible.

In accordance with your request for a copy of the records, the appropriate copies have been
enclosed.

Please be advised that you may appeal this decision and ask the Information and Privacy
Commissioner to review the decision to provide partial access to the requested information, as
set out in section 42 of the Act (a copy of this section of the Act has been enclosed for your
reference). A request to the Commissioner must be made in writing within 15 business days of
the date of this letter or within a longer period that may be allowed by the Commissioner. Your
appeal should identify your concerns with the request and why you are submitting the appeal.

The appeal may be addressed to the Information and Privacy Commissioner as follows:

Office of the Information and Privacy Commissioner
2 Canada Drive
P. O. Box 13004, Stn. A
St. John's, NL A1B 3V8

Telephone: (709) 729-6309
Toll-Free: 1-877-729-6309
Facsimile: (709) 729-6500

You may also appeal directly to the Supreme Court Trial Division within 15 business days after
you receive the decision of the public body, pursuant to section 52 of the Act (a copy of this
section of the Act has been enclosed for your reference).

Please be advised that responsive records will be published following a 72 hour period after the
response is sent electronically to you or five business days in the case where records are mailed
to you. It is the goal to have the responsive records posted to the Office of Public Engagement's
website within one business day following the applicable period of time. Please note that
requests for personal information will not be posted online.
If you have any further questions, please contact me by telephone at (709) 896-1780 or by email at smelindy@gov.nl.ca.

Sincerely,

Shawn Melindy
ATIPP Coordinator

Enclosures
Access or correction complaint

42. (1) A person who makes a request under this Act for access to a record or for correction of personal information may file a complaint with the commissioner respecting a decision, act or failure to act of the head of the public body that relates to the request.

(2) A complaint under subsection (1) shall be filed in writing not later than 15 business days

(a) after the applicant is notified of the decision of the head of the public body, or the date of the act or failure to act; or

(b) after the date the head of the public body is considered to have refused the request under subsection 16(2).

(3) A third party informed under section 19 of a decision of the head of a public body to grant access to a record or part of a record in response to a request may file a complaint with the commissioner respecting that decision.

(4) A complaint under subsection (3) shall be filed in writing not later than 15 business days after the third party is informed of the decision of the head of the public body.

(5) The commissioner may allow a longer time period for the filing of a complaint under this section.

(6) A person or third party who has appealed directly to the Trial Division under subsection 52(1) or 53(1) shall not file a complaint with the commissioner.

(7) The commissioner shall refuse to investigate a complaint where an appeal has been commenced in the Trial Division.

(8) A complaint shall not be filed under this section with respect to

(a) a request that is disregarded under section 21;

(b) a decision respecting an extension of time under section 23;

(c) a variation of a procedure under section 24; or

(d) an estimate of costs or a decision not to waive a cost under section 26.

(9) The commissioner shall provide a copy of the complaint to the head of the public body concerned.

Direct appeal to Trial Division by an applicant

52. (1) Where an applicant has made a request to a public body for access to a record or correction of personal information and has not filed a complaint with the commissioner under section 42, the applicant may appeal the decision, act or failure to act of the head of the public body that relates to the request directly to the Trial Division.

(2) An appeal shall be commenced under subsection (1) not later than 15 business days

(a) after the applicant is notified of the decision of the head of the public body, or the date of the act or failure to act; or

(b) after the date the head of the public body is considered to have refused the request under subsection 16(2).
(3) Where an applicant has filed a complaint with the commissioner under section 42 and the commissioner has refused to investigate the complaint, the applicant may commence an appeal in the Trial Division of the decision, act or failure to act of the head of the public body that relates to the request for access to a record or for correction of personal information.

(4) An appeal shall be commenced under subsection (3) not later than 15 business days after the applicant is notified of the commissioner's refusal under subsection 45(2).
Binder 1
Heather,

I have reviewed Quest Rare Mineral Ltd.'s application E120213 on behalf of the Aboriginal Affairs Branch of Intergovernmental and Aboriginal Affairs Secretariat and offer the following advice on Aboriginal consultation for the application:

1. This application falls within the Claim Area of the Innu Nation. Therefore, the Innu Nation should be consulted on this application.

2. This application falls within the Labrador Inuit Settlement Area and Labrador Inuit Lands. For this reason, Aboriginal Affairs advises that the Nunatsiavut Government should be consulted on the application.

Subject to the above referenced consultation, Aboriginal Affairs has no concerns with this application.

Please note that this is internal policy advice for the Mineral Lands Division only and not to be disclosed to anyone including the applicant.

Speak with you soon,

Gioia Montevecchi
Aboriginal Consultation Specialist - Aboriginal Affairs
Intergovernmental & Aboriginal Affairs Secretariat
Executive Council
Government of Newfoundland and Labrador
(709) 729-4959
Geotechnical Work (24 DDH, 200 Test Pits, Fuel Cache) for Quest Rare Minerals Ltd. on the Strange Lake B-Zone Property, Northern Labrador

Your comments/licence, issuance regarding the above work is requested. If you have any questions or require further information, please give me a call at (709)729-6408.

If we do not receive a reply within two weeks we will proceed on the assumption that you have no issues of concern or comments. If you require additional time to respond please advise with a brief email message.

Heather Rafuse
Exploration Approvals and Land Use Geologist
Mineral Lands Division
Department of Natural Resources
50 Elizabeth Ave.
St. John's, NL A1B 4J6
Ph: 709-729-6408
Fax: 709-729-6782

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Application for Exploration Approval and Notice of Planned Mineral Exploration Work

Pursuant to subsection 5(4) of the Mineral Act, notice is hereby given of our intention to undertake mineral exploration.

<table>
<thead>
<tr>
<th>Company</th>
<th>Quest Rare Minerals Ltd</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>1 Adelaide Street East, Suite 2500, Toronto, Ontario, M5C 2V9</td>
</tr>
<tr>
<td>Project Name</td>
<td>Strange Lake B-Zone Prefeasibility</td>
</tr>
<tr>
<td>License #(#s)</td>
<td>NTS/Location 014D08, REID BROOK</td>
</tr>
<tr>
<td>Starting Date</td>
<td>August 6, 2012</td>
</tr>
<tr>
<td>Completion Date</td>
<td>October 30, 2012</td>
</tr>
</tbody>
</table>

Office: Exploration Manager
Field: Project Manager

The Information contained in this application is a brief summary of the exploration plans for this project:

Date: 24 July 2012

Activities requiring prior EXPLORATION APPROVAL

### Fly Camps
This section should be completed for fly camps only, for periods of occupation up to 90 days.

Has this location been used as a camp site in the past

- [ ] Yes
- [x] No

If yes, please describe previous occupation

For longer term camps, or sites where equipment will be cached for longer than 90 days, application must be made to the Lands Branch, Department of Environment and Conservation, for a Temporary Work Camp (Licence to Occupy).

<table>
<thead>
<tr>
<th>NTS Location</th>
<th>UTM NAD27 Coordinates</th>
<th>E</th>
<th>N</th>
<th>Zone</th>
</tr>
</thead>
</table>

**Type of Structure**

- [ ] Canvas
- [ ] Half Wood - Half Canvas
- [ ] Wood
- [ ] Quonset
- [ ] Trailer
- [ ] Other

**Number**

**Support**

- [ ] Fixed wing aircraft
- [ ] Helicopter
- [ ] Vehicle (Car, Truck)
- [ ] ATV
- [ ] Other

**Number of Occupants**

**Facilities for Sewage and Waste Water**

- [ ] Pit-Privy
- [ ] Portable
- [ ] Septic System
- [ ] Other

**Comments**

---

**Water Use From Any Source**

The use of water in connection with this mineral exploration activity may be subject to Section 14 of the Water Resources Act, SNL 2002 cW-4.01. The information provided in this application will be used to issue a Water Use License. Please include the locations of all sources of water withdrawal on the accompanying location map with this application.

Provide an estimated daily water withdrawal in litres (e.g. 55,000 litres per day) < 10,000 _________ litres per day.
<table>
<thead>
<tr>
<th>Drilling</th>
<th>Yes □ No □</th>
<th>Drilling Contractor</th>
<th>Logan Geotech Inc</th>
<th>Starting Date</th>
<th>August 6, 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td></td>
<td>PO Box 188</td>
<td>Stewiacke, NS Canada B0N 2J0</td>
<td>Completion Date</td>
<td>September 30, 2012</td>
</tr>
<tr>
<td>Contact Person</td>
<td></td>
<td></td>
<td></td>
<td>Planned Footage (m)</td>
<td>240m</td>
</tr>
<tr>
<td>Phone No.</td>
<td></td>
<td></td>
<td></td>
<td>Planned No. of Holes</td>
<td>24 (8 at port, 6 at bridges, 10 rock quarries)</td>
</tr>
<tr>
<td>Fax No.</td>
<td></td>
<td></td>
<td></td>
<td>No. of Drill Rigs</td>
<td>1</td>
</tr>
<tr>
<td>Means of transportation to drill location</td>
<td>Helicopter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of moving equipment from one drill site to the next</td>
<td>Helicopter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticipated sequence of drilling of the holes</td>
<td>To be determined</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of drilling fluids, cement or grout type</td>
<td>Water only - 2000 gallons per day for CME 55 rig, Benonite sealant to be used in piezometers</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When will drill casing be removed</td>
<td>Drill casing to be left in where hydrogeological monitoring undertaken, Not used in rock.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>See Attached Table 1 for sampling program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Trenching</th>
<th>Yes □ No □ □</th>
<th>Trenching Contractor</th>
<th>Alvek Holdings Inc</th>
<th>Starting Date</th>
<th>August 6, 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td></td>
<td>P.O. Box 101</td>
<td>Nain, NL, A0P 1L0</td>
<td>Completion Date</td>
<td>October 30, 2012</td>
</tr>
<tr>
<td>Contact Person</td>
<td></td>
<td></td>
<td></td>
<td>Planned No. of Trenches</td>
<td>max 200</td>
</tr>
<tr>
<td>Phone No.</td>
<td></td>
<td></td>
<td></td>
<td>Length of Trenches</td>
<td>max of 2m x 2m x 2.5m (test pits)</td>
</tr>
<tr>
<td>Fax No.</td>
<td></td>
<td></td>
<td></td>
<td>Type of Trenching Machine</td>
<td>Mini excavator on rubber tracks</td>
</tr>
<tr>
<td>Means of transportation to trench location</td>
<td>Helicopter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Means of moving equipment from one trench to the next</td>
<td>Helicopter</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anticipated sequence of trenching</td>
<td>From Port to Mine Site</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Type of pumping and cleaning equipment</td>
<td>Not applicable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>When will Rehabilitation of the site be completed</td>
<td>Test pits will be backfilled before moving to next pit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td>See Attached Table 1 for sampling program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Bulk Sampling | Yes □ No □ | Bulk Sample Contractor | | Starting Date | |
|---------------|------------|------------------------|--------------|---------------|
| Sample will be taken from | Surface □ Underground □ Drill Core □ | |
| Address        |            |                       | Completion Date | Planned No. of Sites |
| Contact Person |            |                       |                   | Planned Tonnage of Samples(s) |
| Phone No.      |            |                       |                   | Total Volume of Sample (m³) |
| Fax No.        |            |                       |                   | Type of Machinery |
| Means of transportation to bulk sample site | |
| Means of moving equipment from one trench to the next | |
| Anticipated sequence of sample sites | |
| Method of storing bulk sample at or near site | |
| Means of transporting bulk sample from site for testing | |
| When will Rehabilitation of the site be completed | |
| Comments | | |
# Airborne Geophysical Surveys

<table>
<thead>
<tr>
<th>Field</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contractor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contact Person</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fax No.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total line km</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flight line orientations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft Type</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planned Altitude: Aircraft</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Planned Altitude: Sensor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flight line spacing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parameter(s) measured</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Mechanical Heavy Mineral Sampling

<table>
<thead>
<tr>
<th>Field</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of machinery and comments</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Motorized Snow and All-Terrain Vehicle Use

<table>
<thead>
<tr>
<th>Field</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Vehicle</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Three Wheel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muskeg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Argo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snowmobile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Four Wheel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>J-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Describe the nature and extent of the off-road vehicle use</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

# Fuel Storage and Handling

<table>
<thead>
<tr>
<th>Field</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Purpose of Fuel Cache:</td>
<td>Supply Jet Fuel for Helicopter and Diesel for drill</td>
<td></td>
</tr>
<tr>
<td>NTS</td>
<td>014D08, Reid Brook</td>
<td></td>
</tr>
<tr>
<td>UTM</td>
<td>UTM NAD27 Coordinates</td>
<td></td>
</tr>
<tr>
<td>EN</td>
<td>555440.47, E</td>
<td>6253570.92</td>
</tr>
<tr>
<td>N</td>
<td>55</td>
<td>92</td>
</tr>
<tr>
<td>Zone</td>
<td>N</td>
<td>UTM20</td>
</tr>
<tr>
<td>Type of Product</td>
<td>Jet Fuel</td>
<td>Diesel</td>
</tr>
<tr>
<td>No. of Drums of each product</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Date Fuel Cache to be positioned</td>
<td>August 6, 2012</td>
<td></td>
</tr>
<tr>
<td>Duration of storage</td>
<td>3 months</td>
<td></td>
</tr>
<tr>
<td>Method of transport to Fuel Cache Site</td>
<td>Boat or helicopter</td>
<td></td>
</tr>
<tr>
<td>Supplier of Product</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Base of Operations of Supplier</td>
<td>Nain</td>
<td></td>
</tr>
<tr>
<td>How, When and to Where are empty drums to be removed</td>
<td>As they are used and replaced by boat or helicopter</td>
<td></td>
</tr>
</tbody>
</table>
### Prospecting

- **Comments**

### Geology

- **Comments**

### Linecutting

- **Total line km**
- **Baseline Azimuth**
- **Crossline Spacing**
- **UTM Coordinate of Baseline Midpoint**
  - **E**
  - **N**
  - **Contractor**
  - **Address**
  - **Contact Person**
  - **Phone No.**
  - **Fax No.**

### Geochemistry

- **Soils**
- **Streams**
- **Till**
- **Lake Bottom**
- **Ocean Bottom**
- **Water**
- **Biogeochem**
- **Rock**
- **Rock (biogeochem)**
- **Other**

### Ground Geophysics

- **EM-16**
- **VLF-EM**
- **HLEM**
- **VLEM**
- **Turam**
- **Mise-a-Masse**
- **Magnetics**
- **Gravity**
- **IP**
- **Pulse EM**
- **Other**

### Activities Requiring Prior Notification

- **No. of Samples**
- **Contractor**
- **Address**
- **Contact Person**
- **Phone No.**
- **Fax No.**

**Transmitter station(s) to be used and strength**

**Comments**
NOTE

Applicants are directed to the list of other required permits in the Guidelines for Mineral Exploration and other general requirements for companies and contractors operating in the province.

Applications must be typed and any accompanying location maps prepared at a standard scale appropriate for the detail contained. The location of all exploration work sites, water sources, camps, trails, infrastructure and related activities must be identified on an appropriate scale map or aerial photograph as outlined in section 42(1) and 42(2) of the Mineral Regulations. Standard scales employed should be 1:250,000 or 1:100,000 for airborne and reconnaissance surveys; 1:50,000 for preliminary ground surveys; and 1:10,000 for more advanced or detailed ground surveys. It is necessary for applications to be submitted by email as PDF attachments, or through the mail as original copies. Maps and plan accompanying the application must be submitted as PDF files and in a vector file format as per the specifications in the Guidelines for the Form of Reports and Illustrations. Applications should be emailed to the following address:

Exploration Approval@gov.nl.ca

Applications will not be accepted by fax because of the reduced image quality of material sent by fax.

The issuance of an Exploration Approval by the Department of Natural Resources does not relieve the applicant of the responsibility of compliance with legislation and/or regulations of other departments or agencies.

If you have any questions, please contact:

Mineral Lands Division
Department of Natural Resources
Natural Resources Building
50 Elizabeth Avenue
P.O. Box 8700
St. John’s, Newfoundland
A1B 4J6

Telephone: (709) 729-6408
Facsimile: (709) 729-6782

Online Application:
http://www.nr.gov.nl.ca/mines%26en/permits/mineral/ExplApproval.pdf
Table 1 - Summary of samples to be taken

<table>
<thead>
<tr>
<th>Component</th>
<th>Sampling Sites</th>
<th>Samples to be collected</th>
<th>Analyses to be undertaken</th>
</tr>
</thead>
</table>
| Road Corridor              | 3 Bridge Sites: 6 boreholes – 2 at each site                                    | Soil samples to be collected with a standard split spoon sampler in boreholes or with a shovel plus rock coring for a maximum of 5 meters | Rock Assays  
None  

In Situ Geotechnical Tests  
Standard Penetration Tests (SPT) at each 1.5 m at bridge sites 
Vane Shear tests in every soft clayey layer encountered  

Geotechnical Soil Laboratory Tests  
Consolidation tests on boreholes samples  
Rock core uniaxial compression tests  
Unconsolidated Undrained (UU) and Consolidated Drained (CD) triaxial tests  

No monitoring wells to be established |

Groundwater Analyses  
None |

Potential quarry sites  
Rock core samples  

In Situ Tests  
Visual tests only to characterize rock geology  

Rock Laboratory Tests  
No samples to be tested |

Representative sites spaced along road corridor (approx every 2km)  
Potential sand and gravel pits within 3 km of the center of the road corridor being considered  
Test pits in surface material to characterize geotechnical conditions  
Hand top soil samples  

In Situ Geotechnical Tests  
Soil compaction (Proctor) tests  
California Bearing Ratio (CBR) tests  

Geotechnical Soil Laboratory Tests  
Granulometry & sedimentometry  
Water content and Atterberg limits (to distinguish between different types of silts and clays)  

Soil Quality Tests on a small selection of top soil samples, with some of the following parameters:  
Metals, Basic radioactive suite, Basic PCB suite, Rare Earth Elements, Petroleum Hydrocarbons, Mineral oil and grease or NL equivalent, Polycyclic Aromatic Hydrocarbons (PAHs); Monocyclic Aromatic Hydrocarbons (MAHs), Anions and other parameters (Total Alkalinity, Hardness, Bromine, Nitrogen, Nitrate, Nitrite, Sulphate, Total Phenols, Total Cyanides, pH)
<table>
<thead>
<tr>
<th>Component</th>
<th>Sampling Sites</th>
<th>Samples to be collected</th>
<th>Analyses to be undertaken</th>
</tr>
</thead>
</table>
| Port            | 8 boreholes onshore together with 15 test pits. | **Boreholes:** Soil samples to be collected with a standard split spoon sampler. 2 samples per hole (one at surface, one at the water table) + 2 duplicates | **In situ Geotechnical Tests**  
Standard Penetration Tests (SPT) in boreholes at each 1.5 m  
Vane shear tests every 0.5 m in case of presence of fine soil layers.  
**Geotechnical Soil Laboratory Tests**  
Granulometry & sedimentometry  
Water content and Atterberg limits (to distinguish between different types of silts and clays)  
Consolidation tests  
Rock core uniaxial compression tests.  
Unconsolidated Undrained (UU) and Consolidated Drained (CD) triaxial tests. |
| Test pits       | 2 samples per trench (one at surface, one at depth (C horizon or water table) + 3 duplicates | **Soil Quality Tests**  
Metals, Basic radioactive suite, Basic PCB suite, Rare Earth Elements, Petroleum Hydrocarbons,  
Mineral oil and grease or NL equivalent, Polycyclic Aromatic Hydrocarbons (PAHs); Monocyclic Aromatic Hydrocarbons (MAHs), Anions and other parameters (Total Alkalinity, Hardness, Bromine, Nitrogen, Nitrate, Nitrile, Sulphate, Total Phenols, Total Cyanides, pH) |
| Monitoring wells, equipped in the geotechnical boreholes | 2 samples per well (each well nested to two depths) + 2 duplicates + 1 blank | **Field Tests**  
pH, Conductivity, Temperature, Dissolved Oxygen  
Water Level Measurements  
**Groundwater Quality Tests**  
Metals, Basic radioactive suite, Basic PCB suite, Rare Earth Elements, Petroleum Hydrocarbons,  
Mineral oil and grease or NL equivalent, Polycyclic Aromatic Hydrocarbons (PAHs); Monocyclic Aromatic Hydrocarbons (MAHs), Anions and other parameters (Total Alkalinity, Hardness, Bromine, Fluoride, Chlorine, Nitrogen, Nitrate, Nitrile, Sulphate, Total Phenols, Total Cyanides, pH, Bicarbonate, Orthophosphate, Total Suspended Solids) |
Department of Natural Resources
Mines Branch
Mineral Lands Division
Geotechnical Work (24 DDH, 200 Test Pits, Fuel Cache) for Quest Rare Minerals Ltd. on the Strange Lake B-Zone Property, Northern Labrador

GeoReference
UTM NAD 27 Zone 20
1:750,000

Legend
F Fuel Cache
* Water Source
Bridge
Road Corridor
Port
QC/LB Boundary

Comments
LIL
LISA
FMD 24

E120213
Department of Natural Resources
Mines Branch
Mineral Lands Division
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Comments

LIL LISA FMD 24 E120213
Department of Natural Resources
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Bridge
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Comments
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LISA
FMD 24
E120213

Project

GeoReference
UTM NAD 27 Zone 20
1:50,000
0 0.5 1 2 Kilometers
Legend
- Fuel Cache
- Water Source
- Bridge
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- Port
- QC/LB Boundary

Comments
LIL
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FMD 24
E120213

Department of Natural Resources
Mines Branch
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Geotechnical Work (24 DDH, 200 Test Pits, Fuel Cache) for Quest Rare Minerals Ltd. on the Strange Lake B-Zone Property, Northern Labrador
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Comments
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- LISA
- FMD 24
- E120213

GeoReference
UTM NAD 27 Zone 20
1:50,000

Project
Department of Natural Resources
Mines Branch
Mineral Lands Division

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- Bridge

Road Corridor
Port
QC/LB Boundary

Comments
LIL
LISA
FMD 24

E120213

GeoReference
UTM NAD 27 Zone 20
1:50,000

Project
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Comments
LIL
LISA
FMD 24
E120213

GeoReference
UTM NAD 27 Zone 20
1:50,000
0 0.5 1 2 Kilometers

Project
October 4, 2012

Quest Rare Minerals Ltd.

Government of Newfoundland and Labrador
Intergovernmental & Aboriginal Affairs Secretariat
P.O. Box 8700
St. John’s, NL
A1B 4J6

Attention: Brian R.M. Harvey
Director, Policy & Planning – Aboriginal Affairs

Dear Sir:

Re: Strange Lake Project

The purpose of this correspondence is to present to the Intergovernmental & Aboriginal Affairs Secretariat a brief description of the Strange Lake Project, advise of expressions of interest and claims received by Quest Rare Minerals Ltd. ("Quest") on the part of aboriginal groups asserting a claim to the areas of Labrador that may be impacted by this project and to obtain from the Intergovernmental & Aboriginal Affairs Secretariat its consultation expectations regarding Quest’s dealings with interested aboriginal groups.

Quest is a mining exploration company focused on the exploration and discovery of rare earth deposits. Quest intends on developing in the near future the Strange Lake Project located in northeastern Quebec near the Labrador border, approximately 220 kilometers northeast of Schefferville and 125 kilometers west of the Voisey’s Bay Mine. While the Strange Lake Alkaline Deposit ("SLAC") straddles the Quebec and Labrador border, a major portion of it is located within the Quebec boundaries. The Strange Lake Project would comprise the construction and operation of an open-pit mine of rare earth elements on the Quebec side of the border only and the installation of a mill complex at the mine site in Quebec. The construction however also includes a 166 kilometer access road from the mine site in Quebec to a port along the coast of Labrador, as well as the port installations adjacent to the Vale Inco Nickel-Copper Mine at Anaktalak Bay in Labrador. Please find attached a map locating SLAC and the road and port study area.

Ultimately, Quest endeavors to maintain good relations with Aboriginal organizations which Quest considers to be principal stakeholders in relation to the Strange Lake Project. The proposed access road area runs through both Labrador Inuit Settlement Area and the Labrador Inuit Land. Quest has recognized that the Inuit of Labrador, represented by the Nunatsiavut Government, have established land claims to areas of Labrador that may be impacted by the Strange Lake Project and the proposed access road area. The Inuit of Labrador have signed the Labrador Inuit Land Claims Agreement ("LILCA") with the Government of Canada and Government of Newfoundland and Labrador. Quest recognizes the duty to consult with the Inuit of Labrador in accordance with the LILCA and has therefore initiated a communications and consultation process with the Nunatsiavut Government in order to collect information on their
use of the territory and to consider the views of this group whose asserted rights may be impacted by the project. This process could lead to the conclusion of an impact and benefits agreement.

The Innu Nation of Labrador has also asserted a land claim which has been accepted for negotiation by both the Federal Government and the Government of Newfoundland and Labrador (“New Dawn Agreement”). Quest has received notice that the Innu Nation intends to assert that the Strange Lake Project and the access road associated with the project are all located in the shared territory identified in the Overlap Agreement in place between the Inuit of Labrador and the Innu Nation. LILCA references the existence of an Overlap Agreement. The details and geographic extent of the Overlap Agreement are unclear. Quest has been proceeding in good faith with the Nunatsiavut Government on the basis that the Strange Lake Project and the proposed access road area are not located either wholly or partly in the shared territory. At this stage, Quest is undertaking the appropriate due diligence to determine how the Strange Lake Project and the proposed access road area may potentially impact the shared territory. Quest has requested to be provided with all relevant documentation and mapping related to the Innu Nation Claims including a copy of the Overlap Agreement. Quest believes that the disclosure of the aforementioned information related to the shared territory is a necessary step and should be addressed given the existing arrangement between the Inuit of Labrador and the Innu of Labrador.

In addition to the above groups, The Nunatukavut Community Council (“NCC”), formerly known as the Labrador Métis Nation, has been asserting a claim in Labrador since the 1980’s, however neither the federal government nor the provincial government has approved the claim for negotiations.

We also understand that the following Aboriginal groups in Quebec have also asserted claims in Labrador which have not been recognized for negotiation by the Government of Newfoundland and Labrador. The Naskapi Nation of Kawawachikamach has asserted rights to land and resource use activities in Labrador, including hunting, fishing and trapping rights. Their asserted claim in Labrador covers the Strange Lake property located in Labrador as well as the areas of the access road and port study area in Labrador. The Conseil Innu Takuikwan Uashat mak Mani-Utenam (“ITUM”) and the Innu of Matimekush-Lac John have described their land as covering both land in eastern Quebec and western Labrador. To the best of Quest’s knowledge, the portion of the claimed territory in Labrador does not overlap with the access road area in Labrador.

The Government of Newfoundland and Labrador’s Draft Aboriginal Consultation Policy on Land and Resource Development Decisions, dated May 25, 2012 (“Draft Consultation Policy”), is intended to provide a guide to facilitate the efficient consultation with Aboriginal organizations. We understand that this Draft Policy is currently being reviewed and updated. The Draft Consultation Policy states that the consultation duties of the Government of Newfoundland and Labrador are engaged when it “contemplates making land and resource development decisions that have the potential to adversely impact asserted Aboriginal rights or asserted treaty rights”. The Draft Consultation Policy recognizes that asserted Aboriginal rights are site-specific and that “not all Aboriginal organizations asserting Aboriginal rights in Labrador will be consulted on every land and resource development decision in the region.”

The Project-Specific Consultation section of the Draft Consultation Policy states that while retaining the authority to ensure the adequacy of a project proponent’s consultation activities, the Government of Newfoundland and Labrador will not necessarily engage directly in Aboriginal consultation on proposed resource development and “will require project proponents, in accordance with this Policy and applicable Consultation Guidelines, to undertake procedural aspects of consultation and, where applicable, resolve any outstanding issues between the proponent and Aboriginal organization(s).” The Draft Consultation Policy also states that Proponent-led consultation may form part of the record used by the Government of Newfoundland and Labrador to determine whether it has satisfied the Crown’s duty to consult.

In light of the foregoing, we would request to be provided with the Intergovernmental & Aboriginal Affairs Secretariat’s position on the following issues in order to assist Quest in developing a coherent approach in its dealings with interested aboriginal groups:
1) The Draft Policy acknowledges that the Innu Nation has asserted a land claim which has been accepted for negotiation and that the Government of Newfoundland and Labrador will consult with the Innu Nation once a final land claims agreement has been concluded and is in effect. Please provide a description of the asserted land claim area including any map(s) of such land claim.

2) As no final land claims agreement has been concluded with the Innu Nation, does the Government of Newfoundland and Labrador expect Quest to consult with the Innu Nation in relation to the development of the Strange Lake Project? If so, to what extent or degree and at what stages of the project? What is the Government of Newfoundland and Labrador’s assessment of the strength of the land claims of the Innu Nation in the area of the Strange Lake Project in Labrador?

3) The Innu Nation intends to assert that the Strange Lake Project and the access road associated with the project are all located in the shared territory identified in the Overlap Agreement in place between the Inuit of Labrador and the Innu Nation. Is the Government of Newfoundland and Labrador possessed of information related to the Overlap Agreement? If so, please provide a description of the shared land territory including any map(s) of such shared land in the area of the Strange Lake Project and road access area.

4) If the Overlap Agreement is provided and Quest is satisfied that the infrastructure project and access road area are within the shared territory, what is the position of the Government of Newfoundland and Labrador regarding Quest’s obligation to consult with the Innu Nation in relation to the development of the Strange Lake Project?

5) Does the existence of the Overlap Agreement have an impact on the timing of the consultation process with the Innu Nation? Is the Government of Newfoundland and Labrador of the view that it would be premature to engage in the consultation process with the Innu Nation until such a time as a suitable arrangement has been entered into by the Innu Nation and the Nunatsiavut Government?

6) A Memorandum of Agreement Concerning the Voisey’s Bay Project (“MOA”) was entered into by the Government of Newfoundland and Labrador and the Innu Nation in relation to land comprising the Voisey’s Bay Area on June 22, 2002. If the access road and/or port are ultimately located in the Voisey’s Bay Area, what is the position of the Government of Newfoundland and Labrador regarding Quest’s obligation to consult with the Innu Nation in relation to the development of the Strange Lake Project?

7) The Draft Policy applies to consultations with Aboriginal organizations asserting land claims in Labrador which have not been accepted for negotiation by the Government of Newfoundland and Labrador, “namely the Nunatukavut Community Council, Naskapi Nation of Kawawachikamach, and the Innu communities of Matimekush-Lac John, Uashat mak Mani-utenam, Ekuanitshit, Nutakuan, Unamen Shipu and Pakua Shipu.” If any of the aforementioned Aboriginal organizations express an interest with respect to the Strange Lake Project in Labrador, does the Government of Newfoundland and Labrador expect Quest to consult with these Aboriginal organization(s)? If so, to what extent or degree? What is the Government of Newfoundland and Labrador’s assessment of the strength of the land claims of each of the groups mentioned above in the area of the Strange Lake Project in Labrador? If the Government of Newfoundland and Labrador is of the view that any of the aforementioned Aboriginal Organizations should be consulted, please provide a description of the land claims or aboriginal rights asserted by the Aboriginal Organization(s), including any map of such land claim(s), in the area of the Strange Lake Project and road access area.

8) In addition to the above, is the Government of Newfoundland and Labrador aware of any other aboriginal groups which it expects to be consulted in relation to the development of the Strange Lake Project? If so, please advise of the aboriginal group(s) and please provide a description of the land claims or aboriginal rights asserted by the aboriginal group(s), including any map of such land claim(s), in the area of the Strange Lake Project and road access area.
9) Where applicable, please advise as to the status and the degree of progress of discussions or negotiations between the Government of Newfoundland and Labrador and the aforementioned groups mentioned above regarding their land claims and their impact on the Strange Lake Project, as well as a description of the territory that is or was the object of the discussions or negotiations.

10) Is the Government of Newfoundland and Labrador aware of any litigation between an aboriginal group and the Government of Newfoundland and Labrador or another third party which may impact the area of the Strange Lake Project?

Quest's representatives would also like to have the opportunity to meet in order to present the Strange Lake project to the Intergovernmental & Aboriginal Affairs Secretariat and to discuss the position that the company intends to take regarding various expressions of interests and claims on the part of aboriginal groups. Quest believes that it is important to take into consideration the Government of Newfoundland and Labrador's views in regards to these interests and claims in the area. Quest's environmental and legal consultants would also attend the meeting.

We thank you in advance for your collaboration. The requested information and open communications between Quest and the Government of Newfoundland and Labrador on these issues will prove to be invaluable to the successful development of the Strange Lake Project.

We trust this is satisfactory and look forward to your early reply.

Yours very truly,

Peter Cashin, President and CEO

Encl.
Communiés concernées par le projet de Strange Lake
Communities Concerned by the Strange Lake Project
Août 2012 / August 2012
CARTE 1 / MAP 1

Légende / Legend
Communauté / Community
Québec
• Innu
• Inuit
• Naskapi
Labrador
• Innu
• Inuit
Localité / Center

Projection : NAD 83 UTM Zone 20N
Ruby what do you think about the confidentiality of the overlap agreement?

-----Original Message-----
From: Dutton, Sean
Sent: Tuesday, October 30, 2012 11:00 PM
To: Gover, Aubrey; Harvey, Brian; Kennedy, Julian; Bugden, Mark
Subject: Quest

Just looking over the Cashin letter again.

Quest is saying Innu Nation intends to assert that the Strange Lake Project and access road are on shared territory associated with Overlap Agreement.

The Overlap Agreement was disclosed to NL even though we are not a party. Are there any restrictions on us sharing contents with 3rd Parties?

I have a map of the Ashuanipi claim area produced by Mark but don’t we have an original given to us in Schefferville in August 2010 depicting the beaver lots, etc.? Could I get a copy of that? It may be filed with the notes from the August 2010 meeting.

I would like a copy of the map sent to ENVC.

Sean
Melindy, Shawn D.

<table>
<thead>
<tr>
<th>From:</th>
<th>Kennedy, Julian</th>
</tr>
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<tbody>
<tr>
<td>Sent:</td>
<td>Thursday, November 01, 2012 9:57 AM</td>
</tr>
<tr>
<td>To:</td>
<td>Carter, Ruby</td>
</tr>
<tr>
<td>Subject:</td>
<td>Meeting Note - Speaking Notes for Minister Collins meeting with Quest Rare Minerals October 2012.DOC</td>
</tr>
<tr>
<td>Attachments:</td>
<td>Meeting Note - Speaking Notes for Minister Collins meeting with Quest Rare Minerals October 2012.DOC.doc</td>
</tr>
</tbody>
</table>

As requested,

JK
Meeting Note
Intergovernmental and Aboriginal Affairs Secretariat (IGAA)

Meeting with Quest Rare Minerals
Wednesday, October 31, 2012 at 3:45 pm
Intergovernmental and Aboriginal Affairs
6th floor boardroom, Confederation Building East Block

Attendees:
Quest Rare Minerals
Peter Cashin, CEO & President (Bio attached)
Colin Lindsay – VP Operations (Bio attached)
Vanessa Gronowski – Communications

Pilot Communications
Mr. Paul Snow, Chief Strategy Officer

Newfoundland and Labrador
The Honourable Felix Collins, Minister for Intergovernmental and Aboriginal Affairs
Mr. Sean Dutton, Deputy Minister, IGAA
Mr. Brian Harvey, Director, Policy & Planning – Aboriginal Affairs, IGAA
Ms. Anita Hynes, Executive Assistant to Minister Collins

Purpose of the Meeting:
• Peter Cashin, President & CEO of Quest Rare Minerals has proposed to meet with Minister Collins to discuss the Strange Lake Project. Quest has provided a note detailing the Project (attached).

Issues:
• Quest Rare Minerals plans to develop an open-cut rare earth element mine in QC, close to the NL border, with a mill complex at the site in QC and a 166km access road across Labrador to Anaktalak Bay, adjacent to the Voisey’s Bay development.
• Quest wrote to IGAA on October 4, 2012 seeking clarification on the province’s expectations regarding Aboriginal consultation in relation to the Strange Lake Project. As the Project is not yet formally registered, JUS has advised that providing Quest with any specific advice on Aboriginal consultation could be premature and may raise legal risk, owing to the potential for negligent misrepresentation.
• That said, IGAA has made a preliminary assessment of asserted Aboriginal claims that may impact this proposed development:
  o **Innu Nation**: Although the Agreement in Principle (AIP) would indicate no need for Quest to consult with the Innu, this agreement is not legally binding and the asserted Innu land claim remains unresolved until final settlement. The Strange Lake development would fall within the broader asserted Innu claim area, and current NL policy is to consult on the basis of that assertion.
  o **Nunatsiavut Government**: Quest has a clear need to consult with the NG in regard to the proposed development at the Labrador coast on the basis of the Labrador Inuit Land Claims Agreement (LILCA). Schedule 2-A of the LILCA also indicates that the Labrador Inuit have not provided release of their claims in QC, including in the area of the proposed mine.

Section 29(1)(a)
Potential Speaking Points:

- As Quest’s project has yet to be registered for environmental assessment, it is difficult to provide definitive answers to all the questions raised in your October 4 correspondence with Brian Harvey (attached). The Crown’s duty to consult is only triggered when Government is contemplating a decision.

- Regarding Innu consultation, the statement in the draft ACP was intended to emphasize that the Province will consult with the Innu in accordance with the Final Agreement, once that Agreement has been concluded, and not to suggest that the Province has no duty to consult with the Innu up until that point. The Government of NL has consulted Innu Nation on developments in their claim area since 1992, and pending a final land claim agreement with Innu Nation, continues to do so.

- Quest should be mindful of Schedule 2-A of the Labrador Inuit Land Claims Agreement, which raises Labrador Inuit release of claims in the area of the mine in Quebec as a consideration.

- The Province will delegate to proponents the procedural aspects of consultation wherever a project potentially impacts upon an asserted or proven right. We do not make consultation decisions in advance of the registration of a project for environmental assessment. However, we encourage proponents to actively engage Aboriginal groups at the early stages of their project planning. Proponents should seek their own legal advice regarding consultation obligations.

- NL is not party to the Innu / Inuit Overlap Agreement and it is not binding on third parties. Neither the Overlap Agreement nor the non-binding Innu Land Claim AIP have any legal effect today. You may wish to ask the NG and the Innu for their views. As previously stated, NL advises Quest to engage with Aboriginal groups, regardless of the content of any overlap agreements, in an effort to ascertain potential adverse impacts on specific asserted rights.

- If the project contemplated will include undertaking work in the Voisey’s Bay Area, the 2005 LILCA (section 8.6) specifies a Crown obligation for consultation with the Nunatsiavut Government on “any other work or activity in the Voisey’s Bay Area”. The 2002 NL - Innu MOA contains similar provisions in section 7. The Province will adhere to the terms of these agreements.
• Quest will be expected to consult with those Aboriginal organizations which have asserted rights in the proposed development area. Once a need for consultation has been identified, the Province maintains that it is always in the proponent's best interests to engage in meaningful consultation efforts as soon as possible.

• The status of negotiations between the Province and Aboriginal groups is confidential.

• We are not aware of any relevant litigation but Quest should contact Aboriginal groups directly concerning any ongoing or pending litigation that may impact upon Quest's project.

• One point to note in regard to the map attached to your October 4, 2012 letter is that the Province takes exception to maps which do not accurately depict the Labrador boundary. The matter was definitively resolved in 1927 by the Judicial Committee of the Privy Council and incorporated into the Constitution of Canada through the Terms of Union between Canada and Newfoundland. Quebec has recognized this legal boundary in all administrative and taxation-related matters since that time; Quest should endeavor to depict the boundary accurately in future.

Prepared by / Reviewed by: J. Kennedy, in consultation with JUS / B. Harvey / A. Gover
Approved by: S. Dutton
Date: October 30, 2012
Biographies:

Peter J. Cashin, MSc., P. Geo., President & CEO, Quest Rare Minerals

Over 30 years of experience in all facets of the mines and minerals industry. Peter graduated from McGill University with a Masters of Science degree in 1985. Mr. Cashin has worked for Major and Junior mining exploration companies in Québec, Ontario, the Maritimes, the United States and overseas. Peter also worked for a period with the Ontario Ministry of Northern Development and Mines in the area of mineral resource promotion and marketing.

Colin Lindsay, VP Operations, Quest Rare Minerals

Colin Lindsay spent 20 years in a number of metallurgical operations covering copper, lead, zinc, nickel and uranium. He has experience in mineral processing, hydrometallurgy and pyrometallurgy. For the last 20 years he has worked on the development, construction and commissioning of different mining projects, including Owners Area Manager for the Collahuasi project in Chile and Engineering Manager for Xstrata’s Kabanga Nickel project in Tanzania. He is experienced in project management and particularly the implementation of project management control processes.
Hi:

Here is the table attached for your review and comment. I have added sections on the following:

1. Inuit Building Sustainable Communities Initiative and the associated NG request for funding;
2. Quest Minerals
3. Adoption
4. Foster care
5. Joint Cabinet Meeting

I would suggest deleting the following:

1. Torngat Fish Producers Load Guarantee

I would also suggest that the note be re-organized so the CYFS related issues such as adoption, foster care, etc. be moved upfront.

A few other things:

Is there an update on the NG request for funding for the TCC?

I am not sure what, if any, specific issues President Leo raised with the Premier on adoption and foster care. Also, these sections could be made shorter as I am not that familiar with the issues so tried to cover everything off.

That is it for now.
Quest Rare Minerals plans to develop mine in QC will require a 166 km access road across Labrador to Anaktalak Bay, adjacent to the Voisey's Bay development. This proposed road will cross the Labrador Inuit Settlement Area and Labrador Inuit Lands, and therefore Quest Minerals must adhere to various requirements in the Labrador Inuit Land Claims Agreement. NL has advised Quest to consult the NG on the project.
Binder 2
Hi Sean and Aubrey -

Here is the revised Inuit Table, which now incorporates the Voisey's Bay resource revenue sharing issue as well as the Air Services issue Jamie flagged earlier.

Best,
Brian

---< HP TRIM Record Information >---

Record Number : BN-2012-0249
Title : Information Note - Table - Inuit and North Coast Hot Issues - CYFS MOU Signing Ceremony
| Quest Rare Minerals | QRM plans to develop a mine in QC, but access markets via a 166 km access road across Labrador to Anaktalak Bay, adjacent to the Voisey's Bay development. This proposed road will cross the Labrador Inuit Settlement Area and Labrador Inuit Lands, and therefore Quest Minerals must adhere to various requirements in the Labrador Inuit Land Claims Agreement. NL has advised Quest to consult the NG on the project, along with other Aboriginal organisations with asserted Aboriginal rights in the area, such as the Labrador Innu. |
Hi Sean and Aubrey -

Attached for your review, please find a revised Note, with changes tracked, reflecting your review's and TW's recent advice.

Best,
Brian

---------- HP TRIM Record Information ----------

Record Number : BN-2012-0249
Title : Information Note - Table - Inuit and North Coast Hot Issues - CYFS MOU Signing Ceremony
| Quest Rare Minerals | QRM plans to develop a mine in QC, but access markets via a 166 km access road across Labrador to Anaktalak Bay, adjacent to the Voisey’s Bay development. This proposed road will cross the Labrador Inuit Settlement Area and Labrador Inuit Lands, and therefore Quest Minerals must adhere to various requirements in the Labrador Inuit Land Claims Agreement. NL has advised Quest to consult the NG on the project, along with other Aboriginal organisations with asserted Aboriginal rights in the area, such as the Labrador Innu. |
FYI

Many thanks for all your work on this, guys. Greatly appreciated, and a job very well done by all.

Brian RM. Harvey

Director, Policy & Planning - Aboriginal Affairs

Intergovernmental & Aboriginal Affairs Secretariat

Government of Newfoundland and Labrador

(709) 729-1487 (w)
(709) 693-1612 (c)

Lisa, please see attached the IGAA pre-budget consultation issues.
- Quest Minerals proposes to develop its rare earth minerals properties in Quebec with a road to the Voisey's Bay port.
Melindy, Shawn D.

From: Downey, Claudia  
Sent: Monday, April 04, 2016 2:28 PM  
To: Melindy, Shawn D.  
Cc: Appleby, Christopher; Carter, Ruby  
Subject: FW: Inuit and North Coast Hot Issues - CYFS Section  
Attachments: Inuit and North Coast Hot Issues.docx

Strange Lake section at the bottom

Claudia Downey  
tel: (709) 729-0510  
email: claudiadowney@gov.nl.ca

From: Downey, Claudia  
Sent: Thursday, May 02, 2013 12:59  
To: Harvey, Brian  
Subject: Inuit and North Coast Hot Issues - CYFS Section

Updated note CYFS Section
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
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<tbody>
<tr>
<td>Quest Rare Minerals</td>
<td>QRM plans to develop a mine in QC, but access markets via a 166 km access road across Labrador to Anaktalak Bay, adjacent to the Voisey's Bay development. This proposed road will cross the Labrador Inuit Settlement Area and Labrador Inuit Lands, and therefore Quest Minerals must adhere to various requirements in the Labrador Inuit Land Claims Agreement. NL has advised Quest to consult the NG on the project, along with other Aboriginal organisations with asserted Aboriginal rights in the area, such as the Labrador Innu.</td>
</tr>
</tbody>
</table>
Binder 3
What is your schedule like tomorrow?

Sent from my BlackBerry.

Brian RM. Harvey
Director - Aboriginal Affairs
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

---

Good morning Brian,
There is a meeting scheduled tomorrow between various CEEA folks, the NG and the EA Division concerning the EA process to review the Strange Lake proposal. Draft is attached. The project essentially has three components; the mine and processing facility will be in Quebec and the road/port component through northern Labrador-on UL I understand.

Some documents are attached. The meeting tomorrow is in advance of a face to face to happen sometime in early February-likely in St. John’s. It may be useful to have LAAO present at tomorrow’s meeting. I don’t know yet the details re timing or agenda. I believe there will be various CEEA folks attending via teleconference (both Halifax and Ottawa). Please call if you’d like to discuss.

Ivy

---

Hi,
Wednesday is fine for me this week as well. WRT the face-to-face in February, I would vote for St. John’s. Thanks.

Ivy
From: Cleary, Bas  
Sent: Monday, January 19, 2015 1:50 PM  
To: 'Andrea Hoyt'; Keeping, Brent  
Cc: Stone, Ivy; 'Ouellet,Sylvain [CEAA]'  
Subject: RE: NG Environmental Protection Act and timelines

I am ok with either day this week. We have now assigned Ms. Ivy Stone to this project due to work commitments of Brent. I have copied Ivy on this email.

Bas

From: Andrea Hoyt [mailto:andrea_hoyt@nunatsiavut.com]  
Sent: Monday, January 19, 2015 1:31 PM  
To: Cleary, Bas; Keeping, Brent  
Subject: Re: NG Environmental Protection Act and timelines

Good morning Bas and Brent,

We had a helpful discussion with CEAA on Friday afternoon, and it sounds like everyone is willing to work together to create a productive and efficient environmental review process for the Strange Lake development, whether through formal agreement or more informally coordinating processes.

It would be helpful to start planning a face-to-face meeting and we are looking at February 5-6. How does that look for you? We could meet in Nain, Happy Valley-Goose Bay, or St. John's; CEAA is flexible, and we are as well, so perhaps you could let us know what will work for you.

To prepare for that face-to-face, would you be available to have a teleconference this week, either on Wednesday or Thursday? I will forward an agenda before we talk, but the goal will be to put together a list of action items for each group, to prepare for the face-to-face, to ensure our time is spent as productively as possible.

One thing you could do before our teleconference this week or definitely before we get together in person, would be to add the Provincial process to the excel spreadsheet we forwarded last week. This would give a starting point for the timelines part of the discussion.

I will send a very loose agenda for this week's teleconference, once we have a day and time that works for everyone.

Thanks much,

Andrea

Andrea Hoyt  
Environmental Assessment Manager  
Nunatsiavut Government, Department of Lands and Natural Resources
On 15 January 2015 at 15:33, Andrea Hoyt <andrea.hoyt@nunatsiavut.com> wrote:
Here is the flowchart for discussion purposes.

Andrea Hoyt
Environmental Assessment Manager
Nunatsiavut Government, Department of Lands and Natural Resources
Box 92, Makkovik, NL, A0P 1J0
Phone: (709) 923-2006
Fax: (709) 923-2366
E-mail: andrea.hoyt@nunatsiavut.com

On 14 January 2015 at 15:51, Andrea Hoyt <andrea.hoyt@nunatsiavut.com> wrote:
Good afternoon,

Here is the pdf portfolio that from our shop put together for developers and partners. It has all the relevant legislation linked, along with the timelines for detailed review under the Nunatsiavut Environmental Protection Act.

Cheers,
Andrea

[Section 40(1)]
Notes:

Timelines

520 days of prescribed timelines. In addition three are a number decision point and internal steps with unspecified timelines.

Harmonization

Pre - NOC – NG has approx. 95 days to make a decision or that a Detailed Review is required, thus harmonization of this decision could be only be aligned with the NOC if the proponent delays submission of the report.

Guidelines - It may be possible to harmonize the federal EA process with NG for the production of guidelines although Agency current policy is for standalone federal guidelines.

EIS – Public comment period on the EIS could be harmonised if the proponent submits their EIS once the NG adequacy is completed and NL component studies are completed. Federal departments could commit.

Public Participation

There are a minimum of four public comment periods, on the registration, the EIS guidelines and the EIS adequacy and EIS technical review.

Funding may be provided for public participation.

EA Report

There is an EA report at the end of the technical analysis that must be provided to the Assembly within 120 days.

Harmonisation

Timelines for the NG process are not consistent with the CEAA 2012.

Projects are likely to always trigger the EA regimes of other jurisdictions, e.g. NL, QC, therefore substitution is unlikely.

Minister can enter into agreements in relation to environmental assessments and can establish process under that agreement. Agreements will also likely need to include NL.

Discussing cooperative short term arrangements may be the best approach to minimise duplication, e.g. one EIS, joint comment periods where possible, and proponent cooperation in terms of filing their EIS to

Aboriginal Consultation

NG is an Aboriginal government conducting their own EA. The outcomes of their process are to determine impacts on Inuit, Inuit land and resources and their rights.
Registration to the Agency. It would not be possible to harmonize early entries review the EIS during the NG adequacy review.

ensure one comment period during the technical review.
Melindy, Shawn D.

From: Cleary, Bas
Sent: Monday, January 19, 2015 10:39 AM
To: Stone, Ivy
Subject: FW: Quest Rare Minerals - Strange Lake rare earth project - Project Description Road and Port
Attachments: Quest SL Road-Port DRAFT REV C EIA Reg-PD Dec 22 2014.pdf

FYI

From: Andrea Hoyt [mailto:andrea_hoyt@nunatsiavut.com]
Sent: Tuesday, January 13, 2015 10:23 AM
To: Cleary, Bas; Goebel, Martin
Cc: Tom Sheldon; Rodd Laing
Subject: Fwd: Quest Rare Minerals - Strange Lake rare earth project - Project Description Road and Port

Good morning Mr. Cleary and Mr. Goebel;

I just received the draft EIS from Quest for the Strange Lake project, and wondered whether it would be possible to set up a short teleconference with you and our Environment team to discuss harmonisation of our environmental review processes? Just back from the Christmas break, I know everyone is busy. We have a window this Thursday, January 15, at 3:00 pm AST (3:30 Newfoundland time) or any time on Monday, January 19. Would you be available either Thursday afternoon or Monday?

Thank you very much. Looking forward to speaking with you,

Andrea

Andrea Hoyt
Environmental Assessment Manager
Nunatsiavut Government, Department of Lands and Natural Resources
Box 92, Makkovik, NL, A0P 1JO
Phone: (709) 923-2006
Fax: (709) 923-2366
E-mail: andrea_hoyt@nunatsiavut.com

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--------- Forwarded message ---------
From: Tom Sheldon <tom_seldon@nunatsiavut.com>
Date: 13 January 2015 at 08:04
Subject: Fwd: Quest Rare Minerals - Strange Lake rare earth project - Project Description Road and Port
To: Andrea Hoyt <andrea_hoyt@nunatsiavut.com>
Cc: Rodd Laing <rodd_laing@nunatsiavut.com>
Dear all,

Attached the draft environmental assessment registration and project description for the “Strange Lake Road and Port Access” in Labrador, Canada as proposed by Quest Rare Minerals Ltd.

The entire project consists of three components as presented in three separate project descriptions: the rare earth mineral mine development at Strange Lake in Northern Quebec, the road and port construction project in Labrador, and the industrial processing of rare earth in Southern Quebec at Becancour industrial park.

As explained previously we are presenting the draft documents with the intention to follow up early in the new year and asking for additional comments and recommendations. It is our intention to file the final Project Descriptions in February 2015 and wish to incorporate the results of these consultations.

The document can also be downloaded from the following link until December 30.

[Quest SL Road-Port DRAFT REV C EIA Reg-PD Dec 22 2014.pdf](#) Newfoundland & Labrador 15 247KB

Happy Holidays and a successful New Year

Best regards
Dirk Naumann
Executive Vice President Development
Quest Rare Minerals Ltd.

10 King Street East, # 900
Toronto Ontario
M5C 2V9 Canada

647 393 6783

Tom Sheldon
Director of Environment
Nunatsiavut Government
P.O. Box 70
Nain, NL A0P 1L0
Tel: (709) 922-2588 or (709) 922-2380
Fax: (709) 922-1040
Melindy, Shawn D.

From: Cleary, Bas
Sent: Monday, January 19, 2015 10:38 AM
To: Stone, Ivy
Subject: FW: Strange Lake Project - Email 3 of 3

FYI

From: Ouellet, Sylvain [CEAA] [mailto:Sylvain.Ouellet@ceaa-acee.gc.ca]
Sent: Friday, January 16, 2015 8:24 PM
To: Goebel, Martin; Cleary, Bas; tom_sheldon@nunatsiavut.com; andrea_hoyt@nunatsiavut.com; rodd_laing@nunatsiavut.com
Cc: Chevrier, Andree [CEAA]; Kirstein, Friederike [CEAA]; Cougle, Betty Ann [CEAA]; Chabot, Raymond [CEAA]; Croteau, Jean-Philippe [CEAA]; Boulanger, Francois [CEAA]
Subject: RE: Strange Lake Project - Email 3 of 3

Hi folks,
I'm afraid this particular PO is too big for your respective email system. The document is 15MB. As you might already have seen this one, perhaps you don't need it from me. If you do, please send an email to Andrée Chevrier who will find a way to get the document to you. Thank you.

Sylvain
Tel. 613-948-2663

From: Ouellet, Sylvain [CEAA]
Sent: January 16, 2015 6:51 PM
To: 'mgoebel@gov.nl.ca'; 'clearyb@gov.nl.ca'; 'tom_sheldon@nunatsiavut.com'; 'andrea_hoyt@nunatsiavut.com'; 'rodd_laing@nunatsiavut.com'
Cc: Chevrier, Andree [CEAA]; Kirstein, Friederike [CEAA]; Cougle, Betty Ann [CEAA]; Chabot, Raymond [CEAA]; Croteau, Jean-Philippe [CEAA]; Boulanger, Francois [CEAA]
Subject: Strange Lake Project - Email 3 of 3

Lastly, here is the draft PO for the road and port portion of the project. Have a great weekend all.

Sylvain
Tel. 613-948-2663

From: Ouellet, Sylvain [CEAA]
Sent: January 16, 2015 6:49 PM
To: 'mgoebel@gov.nl.ca'; 'clearyb@gov.nl.ca'; 'tom_sheldon@nunatsiavut.com'; 'andrea_hoyt@nunatsiavut.com'; 'rodd_laing@nunatsiavut.com'
Cc: Chevrier, Andree [CEAA]; Kirstein, Friederike [CEAA]; Cougle, Betty Ann [CEAA]; Chabot, Raymond [CEAA]; Croteau, Jean-Philippe [CEAA]; Boulanger, Francois [CEAA]
Subject: Strange Lake Project - Email 2 of 3

Here is the draft PO for the processing plant for the project.

Sylvain
Tel. 613-948-2663
Hi All,

Thank you for taking the time for bilateral discussions this week to discuss the Strange Lake project. Both Bas and Tom expressed an interest in seeing the three draft project descriptions that the Agency received to understand what is proposed by the proponent. Given the size of the documents, I will send them in three separate emails. Attached is the PD for the mine portion of the project. I would ask you to keep in mind that the documents are draft and will need to be modified to meet federal requirements as set out in the regulations.

Earlier today, Tom suggested a trilateral call would be useful to further discuss and plan for a face to face meeting in February where we could map out things going forward. I look forward to working with you on this and to meeting you in person. Regards.

Sylvain Ouellet
DG, Regional Operations / Opérations régionales
Canadian Environmental Assessment Agency / Agence canadienne d’évaluation environnementale
Tel.: 613-948-2663
Brian RM. Harvey
Director - Aboriginal Affairs
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

From: Appleby, Christopher
Sent: Tuesday, January 20, 2015 1:25 PM
To: Harvey, Brian
Subject: RE: NG Environmental Protection Act and timelines

I assume you want me to go to this.

I've looked at the document provided...

Thoughts?

Chris

From: Harvey, Brian
Sent: Tuesday, January 20, 2015 9:36 AM
To: Appleby, Christopher
Subject: Fw: NG Environmental Protection Act and timelines

What is your schedule like tomorrow?

Sent from my BlackBerry.

Brian RM. Harvey
Director - Aboriginal Affairs
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)
Good morning Brian,

There is a meeting scheduled tomorrow between various CEEA folks, the NG and the EA Division concerning the EA process to review the Strange Lake proposal. Draft is attached. The project essentially has three components; the mine and processing facility will be in Quebec and the road/port component through northern Labrador-on LIL I understand.

Some documents are attached. The meeting tomorrow is in advance of a face to face to happen sometime in early February-likely in St. John's. It may be useful to have LAAO present at tomorrow's meeting. I don't know yet the details re timing or agenda. I believe there will be various CEAA folks attending via teleconference (both Halifax and Ottawa). Please call if you'd like to discuss.

Ivy

---

Hi,

Wednesday is fine for me this week as well. WRT the face-to-face in February, I would vote for St. John's. Thanks.

Ivy

---

I am ok with either day this week. We have now assigned Ms. Ivy Stone to this project due to work commitments of Brent. I have copied Ivy on this email.

Bas

---

Good morning Bas and Brent,

We had a helpful discussion with CEAA on Friday afternoon, and it sounds like everyone is willing to work together to create a productive and efficient environmental review process for the Strange Lake development, whether through formal agreement or more informally coordinating processes.

It would be helpful to start planning a face-to-face meeting and we are looking at February 5-6. How does that look for you? We could meet in Nain, Happy Valley-Goose Bay, or St. John's; CEAA is flexible, and we are as well, so perhaps you could let us know what will work for you.
To prepare for that face-to-face, would you be available to have a teleconference this week, either on Wednesday or Thursday? I will forward an agenda before we talk, but the goal will be to put together a list of action items for each group, to prepare for the face-to-face, to ensure our time is spent as productively as possible.

One thing you could do before our teleconference this week or definitely before we get together in person, would be to add the Provincial process to the excel spreadsheet we forwarded last week. This would give a starting point for the timelines part of the discussion.

I will send a very loose agenda for this week's teleconference, once we have a day and time that works for everyone.

Thanks much,

Andrea

Andrea Hoyt
Environmental Assessment Manager
Nunatsiavut Government, Department of Lands and Natural Resources
Box 92, Makkovik, NL, A0P 1J0
Phone: (709) 923-2006
Fax: (709) 923-2366
E-mail: andrea_hoyt@nunatsiavut.com

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On 15 January 2015 at 15:33, Andrea Hoyt <andrea_hoyt@nunatsiavut.com> wrote:

Here is the flowchart for discussion purposes.

Andrea Hoyt

Environmental Assessment Manager
Nunatsiavut Government, Department of Lands and Natural Resources
Box 92, Makkovik, NL, A0P 1J0
Phone: (709) 923-2006
Fax: (709) 923-2366
E-mail: andrea_hoyt@nunatsiavut.com
On 14 January 2015 at 15:51, Andrea Hoyt <andrea_hoyt@nunatsiavut.com> wrote:

Good afternoon,

Here is the pdf portfolio that [REDACTED] from our shop put together for developers and partners. It has all the relevant legislation linked, along with the timelines for detailed review under the Nunatsiavut Environmental Protection Act.

Cheers,

Andrea
This is fine, bar #5. Instead, invite them to elaborate as per points 1-4. If they have IBAs/MOUs, they will tell us.

Brian RM. Harvey
Director - Aboriginal Affairs
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

Hi Brian,

I’ve reviewed Quest Rare Minerals draft registration document. Under Aboriginal Consultation they have noted:

“Every Aboriginal group concerned by the Project has a particular background, each with a unique history of interactions with other Project proponents and governments. Each group will need to be considered separately through a specific communication and consultation strategy taking into account their particular institutions, land claim agreements, and experience in the EIA or Impact and Benefits Agreement (IBA) processes.”

And

“Though Quest initiated meetings with some northern Aboriginal representatives as early as 2008, a series of presentations were rolled out in 2011-2013 to provide all key groups with similar levels of information and a comparable opportunity to ask questions and comment. For each key aboriginal community, at least one presentation was made to the main communities affected and at least two meetings were held with its leadership.”

Ivy suggested that we request additional information to be added to the draft and that this could be added to the meeting agenda.

For the draft, I find the Aboriginal consultation section a little sparse and think they should include:

1. What Aboriginal organizations have they engaged and who have they engaged (at what level)?

2. How have they engaged the Aboriginal organizations? i.e. face-to-face meetings; community presentations etc.
3. How often have they engaged the Aboriginal organizations?

4. What concerns were raised by the Aboriginal organizations and how Quest plans to mitigate/accommodate?

5. Are there any MOUs or IBAs been drafted or signed?

Thoughts??

Chris

Christopher Appleby
Senior Policy Analyst
Labrador and Aboriginal Affairs
6th Floor, East Block
Confederation Complex
St. John's, NL
A1B 4J6

Telephone 709 729-1773
Fax: 709 729-4900

From: Harvey, Brian
Sent: Tuesday, January 20, 2015 9:36 AM
To: Appleby, Christopher
Subject: Fw: NG Environmental Protection Act and timelines

What is your schedule like tomorrow?

Sent from my BlackBerry.

Brian RM. Harvey
Director - Aboriginal Affairs
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

From: Stone, Ivy <IvyStone@gov.nl.ca>
Sent: Tuesday, January 20, 2015 09:15
To: Harvey, Brian
Cc: Cleary, Bas
Subject: FW: NG Environmental Protection Act and timelines

Good morning Brian,

There is a meeting scheduled tomorrow between various CEEA folks, the NG and the EA Division concerning the EA process to review the Strange Lake proposal. Draft is attached. The project essentially has three components; the mine and processing facility will be in Quebec and the road/port component through northern Labrador-on LIL I understand.

Some documents are attached. The meeting tomorrow is in advance of a face to face to happen sometime in early February-likely in St. John’s. It may be useful to have LAAO present at tomorrow’s meeting. I don’t know yet the details
I believe there will be various CEAA folks attending via teleconference (both Halifax and Ottawa). Please call if you’d like to discuss.

Ivy

From: Stone, Ivy
Sent: Monday, January 19, 2015 3:03 PM
To: Cleary, Bas; 'Andrea Hoyt'
Subject: RE: NG Environmental Protection Act and timelines

Hi,

Wednesday is fine for me this week as well. WRT the face-to-face in February, I would vote for St. John’s. Thanks.

Ivy

From: Cleary, Bas
Sent: Monday, January 19, 2015 1:50 PM
To: 'Andrea Hoyt'; Keeping, Brent
Cc: Stone, Ivy; 'Ouellet,Sylvain [CEAA]'
Subject: RE: NG Environmental Protection Act and timelines

I am ok with either day this week. We have now assigned Ms. Ivy Stone to this project due to work commitments of Brent. I have copied Ivy on this email.

Bas

From: Andrea Hoyt [mailto:andrea.hoyt@nunatsiavut.com]
Sent: Monday, January 19, 2015 1:31 PM
To: Cleary, Bas; Keeping, Brent
Subject: Re: NG Environmental Protection Act and timelines

Good morning Bas and Brent,

We had a helpful discussion with CEAA on Friday afternoon, and it sounds like everyone is willing to work together to create a productive and efficient environmental review process for the Strange Lake development, whether through formal agreement or more informally coordinating processes.

It would be helpful to start planning a face-to-face meeting and we are looking at February 5-6. How does that look for you? We could meet in Nain, Happy Valley-Goose Bay, or St. John’s; CEAA is flexible, and we are as well, so perhaps you could let us know what will work for you.

To prepare for that face-to-face, would you be available to have a teleconference this week, either on Wednesday or Thursday? I will forward an agenda before we talk, but the goal will be to put together a list of action items for each group, to prepare for the face-to-face, to ensure our time is spent as productively as possible.

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Thanks much,

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Environmental Assessment Manager
Nunatsiavut Government, Department of Lands and Natural Resources
Box 92, Makkovik, NL, AOP 1J0
Phone: (709) 923-2006
Fax: (709) 923-2366
E-mail: andrea_hoyt@nunatsiavut.com

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No,
Monday is with regulators, CEAA and NG. Thursday is with the proponent

So I assume Monday is now moved to Thursday?

Hi Chris,
We had contact from the proponent and they have requested a meeting next week. Potentially on Thursday at 2. We can address your questions then likely. I'll send you an invite when the time and date is confirmed.

Ivy

Hi Ivy,
Can you please give me a call regarding this draft registration

For the draft, I find the Aboriginal consultation section a little sparse and think the proponent should include the following into the registration document:

1. What Aboriginal organizations have they engaged and who have they engaged (at what level)?

2. How have they engaged the Aboriginal organizations? i.e. - face-to-face meetings; community presentations etc.
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Your thoughts?

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Christopher Appleby
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To: Cleary, Bas; Keeping, Brent
Subject: Re: NG Environmental Protection Act and timelines

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I will send a very loose agenda for this week's teleconference, once we have a day and time that works for everyone.

Thanks much,

Andrea

---

On 15 January 2015 at 15:33, Andrea Hoyt <andrea.hoyt@nunatsiavut.com> wrote:

Here is the flowchart for discussion purposes.

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On 14 January 2015 at 15:51, Andrea Hoyt <andrea.hoyt@nunatsiavut.com> wrote:

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From: Stone, Ivy
Sent: Monday, January 26, 2015 1:30 PM
To: Appleby, Christopher
Subject: FW: NG Environmental Protection Act and timelines
Attachments: NL_CEAA - NG EA Process (2).xlsx
Categories: Quest / Strange Lake

Please see attached

From: Stone, Ivy
Sent: Monday, January 26, 2015 1:46 PM
To: 'Andrea Hoyt'; Ouellet, Sylvain [CEAA]
Cc: Cleary, Bas; Chevrier, Andree [CEAA]; Croteau, Jean-Philippe [CEAA]
Subject: RE: NG Environmental Protection Act and timelines

Hi Andrea,

Please see attached. It has the key elements of our EA process incorporated on the bottom. This may be helpful for our discussion this afternoon. Thanks.

Regards,

Ivy Stone, M.Sc.
Environmental Scientist
Environmental Assessment Division
Department of Environment and Conservation
4th Floor, West Block, Confederation Building
St. John's, NL, A1B 4J6
Phone: (709)729-0090
Fax: (709)729-5518
E-Mail: ivystone@gov.nl.ca

From: Andrea Hoyt [mailto:andrea_hoyt@nunatsiavut.com]
Sent: Wednesday, January 21, 2015 9:33 AM
To: Ouellet, Sylvain [CEAA]
Cc: Cleary, Bas; Keeping, Brent; Chevrier, Andree [CEAA]; Croteau, Jean-Philippe [CEAA]; Stone, Ivy
Subject: Re: NG Environmental Protection Act and timelines

Salut Sylvain,

We were going to try for Monday - how is your schedule for Monday, January 24?

Andrea
On 20 January 2015 at 18:35, Ouellet, Sylvain [CEAA] <Sylvain.Ouellet@ceaa-acee.gc.ca> wrote:
Hi All,
Have we set up a date for our call this week? I am in British Columbia and could not find anything on my berry. If not, could we aim for Thursday as my agenda for tomorrow has filled up? Thx.

Sylvain

From: Cleary, Bas [mailto:clearyb@gov.nl.ca]
Sent: Monday, January 19, 2015 12:19 PM
To: 'Andrea Hoyt' <andrea_hoyt@nunatsiavut.com>; Keeping, Brent <BrentKeeping2@gov.nl.ca>
Cc: Stone, Ivy <IvyStone@gov.nl.ca>; Ouellet, Sylvain [CEAA]
Subject: RE: NG Environmental Protection Act and timelines

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Andrea Hoyt

Environmental Assessment Manager
Nunatsiavut Government, Department of Lands and Natural Resources
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Phone: (709) 923-2006
Fax: (709) 923-2366
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Phone: (709) 923-2006
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E-mail: andrea_hoyt@nunatsiavut.com

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5 business days
60 days
30 business days
Undefined
40-70 days
Undefined
100 days
step may be repeated
45 days
Undefined
30 days

520 days of time (not including four unspecified time periods)

5 business days

Registration filed
Public & Aboriginal Review
Government Review
36 day public &
government review
period

Public & Aboriginal
Review begins at
registration

Minister’s Decision
Following
public/aboriginal review
of the Registration
Document the Minister
has 10 days to make a
decision

45 days

EIS Committee appointed
Committee works to
draft EIS Guidelines

Draft EIS Guidelines
40 day public &
aboriginal review

Finalize EIS Guidelines
Committee & Chair
meet to finalize

Final Guidelines announced &
issued to Proponent:
Issue of EIS Guidelines by the
Minister

Component Studies Prepared
and Submitted
Required by
Guidelines

Component
Studies Prepared
and Submitted
Proponent submits EIS

Component
Studies
Completed
EIS

Minister’s Decision on
Component Studies
CS complies with GLs or
CS is deficient

EIS Prepared and
Submitted
Proponent submits EIS

Public & Aboriginal Review of
Component Studies

Public & Aboriginal
Review of Component
Studies

Minister’s Decision on
Component Studies

45 days

120 days

10 days

Undefined

35 days

15 days

Undefined

332 days (not including undefined time periods)
Public Consultation on the EIS
- Must be more than 60 days and less than 120 days.

EA committee prepare a final report for the Assembly and for reporting to federal and provincial authorities
- This occurs following closure of the process.

Consultations with federal and provincial authorities on the Report
- The report must be released to the public, but comments are not solicited.

EA Decision Proposed
- Decision must consider, after taking into account any mitigation measures, the extent to which the project is likely to cause significant adverse environmental effects, and in a case where significant adverse environmental effects are likely, whether the effects are justified in the circumstances. The decision should include any conditions that must be met by the proponent.

MOE Decision Statement Issued
- Issuer decides and statement is proposed and posted online. Decision statement must include any conditions that are established and that must be complied with by the proponent.

EA Report Finalized
- After taking into account any comments received from the public, the Agency must finalize the EA Report.

30 days

45 days

60 Days

Draft EA Report
- Comment Period
- Post Draft EA Report de the Internet site and provide opportunity for public and Aboriginal groups to comment on presentations and omissions. If not, by Agency in the Report.
Quest Rare Minerals Ltd.
Strange Lake Road and Port Access, Northern Labrador
Environmental Assessment Registration and Project Description

For submission to:

Nunatsiavut Government
Minister of Lands and Natural Resources

and

Government of Newfoundland and Labrador
Department of Environment and Conservation

and

Canadian Environmental Assessment Agency

Revision C - Preliminary Version for Discussion with Applicable Government Jurisdictions

60290419

December 2014

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List of Appendices

Appendix 1 List of Permits and Approvals
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List of Acronyms and Abbreviations

ASTM: American Society of Testing and Materials
CAD: Canadian Dollars
CEAA: Canadian Environmental Assessment Agency
CO: Carbon monoxide
DFO: Fisheries and Ocean Canada
DWT: Dead weight tons (shipping)
DWCC: Dead weight cargo capacity (shipping)
EA: Environmental Assessment
EcoRA: Ecological risk assessment
ERA: Environmental risk assessment
ERAP: Emergency response assistance plan
EIA: Environmental Impact Assessment
EISA: Environmental and Social Impact Assessment
FEL: Frequent Effect Level
FS: Feasibility Study
HHRA: Human health risk assessment
Mt: metric tons
PK: kilometer point
MAH: Monocyclic Aromatic Hydrocarbons
MDDELCC: Ministère du Développement durable, de l’Environnement et de la Lutte contre les changements climatiques (Quebec Minister of Environment)
MMER: Metal Mining Effluent Regulations (under Federal Fisheries Act)
NORM: Naturally Occurring Radioactive Material
NOx: nitrogen oxides
OEL: Occasional Effect Level
OHS: Occupational Health and Safety
PAH: Polycyclic Aromatic Hydrocarbon
PEA: Preliminary Economic Assessment
PFS: Pre-feasibility Study
PM: Particulate Matter
PM2.5: Particulate Matter less than 2.5 micrometers in diameter
PM10: Particulate Matter less than 10 micrometers in diameter
QRM: Quest Rare Minerals Ltd.
REE: Rare earth element
REL: Rare effect level
RSF: Residue Storage Facility
SOx: sulfur oxides
SPIPB: Société du parc industriel et portuaire de Bécancour
TEL: Threshold effect level
TPM: Total Particulate Matter
VOC: Volatile Organic Compounds

(...To be further developed...)

60290419 – December 2014
1 Introduction

1.1 Name of the Undertaking or Project

The name of the undertaking is “Strange Lake Road and Port Access”.

1.2 The Proponent

The proponent is Quest Rare Minerals Ltd (“Quest”), a Canadian exploration and development company focused on the development of its important B-Zone REE (Rare Earth Element) deposit in northeastern Québec. This deposit is found within a geological formation, called the Strange Lake Alkali Complex, which straddles territory in both Quebec and Labrador. Quest is also developing other new REE deposit opportunities, and a potential processing facility in southern Québec.

Name of the proponent: Quest Rare Minerals Ltd
Address (Head Office): 1155 University Street, Suite 906
Montreal, Quebec H3B 3A7

Chief Executive Officer:
Name: Peter J. Cashin, MSc., P. Geo.,
Official Title: President & CEO
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Telephone number: 1 (416) 916-0777
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Email Address: peter.cashin@questrareminerals.com

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Official Title: Executive Vice President Development
Quest Rare Minerals Ltd.
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Toronto, Ontario M5C 1C3
Telephone number: 1 (647) 393 6783
Fax number: 1 (416) 916-0779
Email Address: dirk.naumann@questrareminerals.com
1.3 Environmental Assessment and Approvals

The project is located entirely in Labrador and involves the following key components: an access road (the "Road") and additional infrastructure for an existing port (the "Port"). Consequently, an environmental assessment and approvals from multiple jurisdictions will be required.

This application is prepared to be submitted as the registration document to the Nunatsiavut Government, to the Government of Newfoundland and Labrador, and to the Canadian Environmental Assessment Agency to initiate the process.

1.3.1 Environmental Assessment Triggers

1.3.1.1 Nunatsiavut

According to Section 4.5.4 of the Nunatsiavut Environmental Protection Act, "the commencement of a summary assessment under federal or provincial law", constitutes a trigger to proceed to a review under the Nunatsiavut Environmental Protection Act.

Also, in Schedule D of the Regulations Regarding Environmental Reviews of Initiatives on Labrador Inuit Lands, there is a list of projects requiring a detailed review that includes the following: "mines, mills and facilities, including roads and rights of way, related to the mining, production, concentration, milling, transportation, shipment, smelting or refining of Subsurface Resources".

1.3.1.2 Newfoundland and Labrador

Part III of the Environmental Assessment Regulations, 2003 lists designated undertakings (projects) that must be registered with the Department of Environment and Conservation, according to the Newfoundland and Labrador Environmental Protection Act, SNL 2002 (EPA). This list includes "construction projects other than buildings that involve the construction of roads … where a portion of the road will be more than 500 metres from an existing right of way" (paragraph 35 (1)(b)).

1.3.1.3 Federal

Considering the preferred road and port option that is entirely within the limits of the Province of Newfoundland and Labrador, which assumes sharing of an existing marine terminal and that the road will be private, there are no federal designated physical activities that would trigger an Environmental Assessment according to the Schedule of the Regulations Designating Physical Activities, under the Canadian Environmental Assessment Act, 2012.

1.3.2 Permits and Authorizations

In addition to approvals to be obtained under the environmental assessment processes referred to in the previous sub-sections, environmental permits and authorizations will be required for the project. The table included in Appendix 1 provides a preliminary list of permits, licences, approvals and other forms of authorizations that might be required for the Strange Lake Road and Port Access Project with the names of the authorities responsible.

1.4 Purpose of the Registration

This document has been prepared for Project Registration with the Nunatsiavut Government (Ministry of Lands and Resources) and with the Government of Newfoundland and Labrador (Department of Environment and Conservation).

This document is also provided for informational purposes as a Project Description to the federal CEAA.
This document has been organized to provide all the information required for the registration from both provincial authorities. Appendix 2 includes a Table of Concordance listing the requirements of the Nunatsiavut Government (Nunatsiavut Government, 2010) and of the Government of Newfoundland and Labrador (Government of Newfoundland and Labrador, 2012) and the corresponding sections of this document where the required information is provided.

1.5 Quest's Corporate Environmental Policy

The Environmental Policy of Quest Rare Minerals Ltd. is publicly available on its website (http://www.questrareminerals.com/), with the aim of protecting the natural, human and social environments; it is based on the application of the following principles:

- Minimize the company's environmental impact and risk by using the most efficient technologies and techniques.
- Develop and implement emergency action plans to manage unexpected events.
- Adhere to laws and regulations of the jurisdictions in which the company conducts its projects.
- Encourage conservation and minimize consumption of natural resources and consumable goods.
- Inform employees and members of the Management Advisory Board of the company's environmental management plans, policies, and procedures.
- Provide training and assessment to ensure that employees have the knowledge and skills required for their functions.
- Ensure that subcontractors and suppliers of goods and services adhere to the company's environmental management plans, policies, and procedures.
2 Project Description

2.1 Introduction to the Strange Lake Road and Port Access Project

Quest is developing private road and port access from the Labrador Coast to the Strange Lake Alkali Complex and potentially other mineral deposits near the Quebec-Labrador border, above the 55th parallel, roughly 235 km northeast of Schefferville, Québec.

The company’s Strange Lake exploration program, 100% owned by Quest, was comprised of 30 mineral claims totaling 750 ha in Labrador and 211 mineral claims covering a total area of 9,367 hectares in Québec. The mineral claims in Québec cover the B-Zone. The mineral claims in Labrador are on the periphery of the Main Zone, a high potential area explored in the 1980s that is currently categorized as Exempt Mineral Lands.

Quest is developing the Strange Lake B-Zone (SLBZ) REE mining project in parallel to the road and port project (see Figure 2-1). Current plans are to request environmental approvals for a 30-year mining scenario, with subsequent phases potentially exceeding 100 years in total mine life, when considering only the B-Zone. Other nearby mineral deposits may also be considered as later phases, once road access to the coast has been established.

To fully exploit this mining potential, road and port access are required. The closest distance to the sea is east from the mine site to the Labrador coast, about 150km away in a straight line. In fact, the project is at about the same latitude as the Voisey’s Bay nickel mine project, about 30km southwest of Nain. Subject to agreement with Vale Newfoundland and Labrador Limited (Vale), the Project’s preferred option is to construct a concentrate storage shed and truck unloading facility, and one (1) additional bulk fuel holding tank at the existing Vale port at Edward’s Cove (part of Anaktalak Bay). Additional conveyors would tie into Vale’s existing infrastructure for loading marine vessels with Quest’s REE concentrate.

To link this port facility to the Strange Lake area, a private all-season road is proposed over a 170km distance of both flat and hilly segments – with maximum grade slopes of 11%. Though 276 potential water crossings have been identified in Labrador, of which about 50% are seasonally intermittent, the preferred road trace will involve only three (3) major water crossings requiring bridges or arch culverts. Pipe culverts are planned for the remaining water crossings.

The preliminary road design is for the following characteristics: adequate crushed rock or gravel surface to sustain high traffic volumes and to limit the effect of thaw-freeze cycles in an area of discontinuous permafrost; 8-meter width; avoiding cuts in permafrost areas; balancing the cut and fill as much as possible; minimizing stream crossings and keeping protection buffers near key water courses; tight horizontal curves only where necessary to reduce construction cost, and provide a maximum grade of 11% (see the Overall Project Map, Appendix 3). The road design would consider over 60 years of continuous activity to allow for multiple phases of developing the Strange Lake Alkali complex and/or other mineral development in the vicinity.

The mineral concentrate would be shipped to one or several processing facilities. Quest currently has plans to develop such a facility in Southern Québec (see Figure 2.1).
2.1.1 Purpose of the Project

The primary objective of the Strange Lake Road and Port Access Project is to allow for transportation of the next 30 years of REE concentrate from the Strange Lake B-Zone mineral deposit to processing facilities and ultimately to international markets. The short and mid-term importance of this deposit can be explained as follows:

- The Strange Lake project will produce 15 different rare earth metals as mixed rare earth oxides. Rare earth metals are critical materials used in permanent magnets for electric motors and in phosphors for fluorescent and LED lights. Rare earth metals also have a number of smaller applications including lasers, PET (Positron emission tomography) scanners and specialty ceramics. Permanent magnets in wind turbines and electric vehicles allow the electric motor to be smaller, lighter, more reliable and more efficient than alternative technologies. This improves the overall economic and market attractiveness of both wind turbines and electric vehicles. Phosphors are critical required materials in energy efficient fluorescent and LED lights that emit light and light of different colours.

- Growth in the technological development of wind turbines and electric vehicles is dependent on the availability of permanent magnets and their rare earth metals. Currently over ninety percent (90%) of rare earth metals used in permanent magnets and in phosphors come from China. The dominance of China in the supply of rare earth metals is a concern for customers and users of rare earth metals outside of China. These customers see rising demand for rare earth metals but question where the supply to meet this demand will come from (particularly as China itself is forecast to need to import some of the critical heavy rare earth metals by the end of the decade). Quest is ideally positioned to meet this customer demand and facilitate the growth of permanent magnet wind turbines and electric vehicles.

The secondary objectives of the Strange Lake Road and Port Access Project is to allow for subsequent phases of the B-Zone and to allow for development of other REE deposits in the Strange Lake Alkali Complex, as well as potentially promote other types of mineral deposits along the road corridor.
2.1.2 Components of the Project to be Registered

As described in Section 1.4, the components of the Project in Labrador to be registered are the proposed road and port access allowing the transportation of the rare earth ore concentrate between the mine located in Strange Lake, Québec and the port facilities located in Edward’s Cove.

The expected length of the new road in Labrador is approximately 144 kilometers. To the west, this will be connected to 18 km of new road in Quebec to reach the mine site. To the east, this will be connected to 8 km of road already built and used by Vale to allow access between its marine terminal and the mine with other infrastructure.

In addition to project-related port activities within Vale’s existing marine terminal infrastructure, there are plans to build a REE concentrate shed and associated infrastructure.

2.2 Alternatives to the Project

2.2.1 Overall Project

Given the remote location of the Strange Lake Area, a means of access needed to be developed both to facilitate construction and operation of the Mine and its associated facilities, as well as any future developments in the area. The location of the Mine, over 150 km straight line distance from the Labrador coast, requires port and road access linking the coast with the Mine site (Appendix 3).

In terms of REE mineral deposit alternatives, Quest considers that developing the Strange Lake Area is a relatively unique opportunity. In particular, the Strange Lake Alkali Complex contains deposits with significant proportions of Heavy REEs, which generally have greater value in today’s markets compared with Light REEs. There are even fewer examples of such deposits in relatively stable geopolitical regions and countries. There is therefore no alternative currently considered by Quest for rapid development of a new supply chain for world markets. If this project is not developed (null alternative), supply may remain critical in North America: the only active REE mine on the continent, as of 2014, is Molyco’s Mountain Pass Mine in California and its deposit has a lesser proportion of Heavy REEs; its processing also occurs largely overseas. It is within context that Quest developed the road and port alternatives described below.

2.2.2 Road

The most viable port entry for a road was first established as Edward’s Cove/Anaktalak Bay in the vicinity of Vale’s Voisey’s Bay Mine, about 30 km SW of Nain on the Labrador Coast. Alternative routes (to Schefferville, to Natashish, and even to Northern Quebec) also presented serious constraints in terms of distance, barriers, cost or technical feasibility. Route access alternatives were then studied after discarding rail and pipeline based on technical, economic and environmental criteria.

The preferred alignment for the access road between the Quebec border and Edward’s Cove was the result of a trade-off study of five options. Option 1 was the first alignment developed and defined as the "base case". In addition to Option 1 and the three (3) alignments that were developed between PK 91 and PK 140, a fifth option (identified as Option 1A) was also developed. The Option 1A was designed to avoid crossing provincial boundaries between PK 0 and PK 20.

The four options were evaluated against the base case (Option 1). Criteria under three (3) main categories: technical, economic and environmental, were selected and organized in a decision-matrix (PUGH matrix). According to the trade-off study, Option 4 was determined to be the preferred alignment for the Project. Option 4 has the following advantages:

- it represents the shortest route;
• it provides the fastest travel time for a roundtrip between the Port site and the Mine site; and,
• it traverses less difficult topography resulting in fewer constructability challenges.

The preferred road access alignment (Option 4) is shown in the Appendix 3.

2.2.3 Port

A systematic analysis of various options for the location and design of a wharf for a new marine terminal located in Edward’s Cove was conducted during the initial phases of Prefeasibility Study. The alternatives included the installation of a floating wharf that could be dismantled during the ice season.

Discussions between Quest and Vale has resulted in Quest’s alternative proposal, now the preferred option, to use the existing terminal located in Vale’s Voisey’s Bay port (east part of Edward’s Cove). In this scenario, Quest would need to build its own concentrator shed with associated truck dumping facilities. An additional bulk fuel storage tanks would also be required – with a truck fueling station and tanker truck loading facility. This option to develop synergies with Vale within its existing infrastructure represents many advantages:

• lower environmental effects;
• reduced cumulative effects;
• shared services (emergency response, health and safety);
• shared infrastructures (road, ship loading equipment, airstrip); and,
• lower capital and operation costs.

2.3 Project Location

The Project is divided between two areas, these are:

1. The marine terminal (“Port”) at Edward’s Cove, Newfoundland and Labrador.
2. The access road (“Road”) of about 144 km up to the Quebec border.

Details are given in the subsequent sections for each of these components located in Labrador.

2.3.1 Port

The following description of the project’s preferred alternative assumes sharing of Vale’s existing port installation at Edward’s Cove (Anaktalak Bay) - subject to agreement between the two companies.

It is planned to add supplementary infrastructures to Vale’s existing port installation to meet additional requirements related to the Quest operation. Quest installations at the Port can be operated by the same company as the one hired by Vale. The sharing of human resources will facilitate coordination and common application of health and safety procedures.

The mineral concentrate will be transferred from the Strange Lake Mine to Vale’s port by truck. The concentrate will then be dumped into a conveyor system leading to a new concentrate storage building. Additional conveyors and equipment will be added to connect the storage building to the existing shiploading conveyor and shiploader.

In Appendix 4, an air photo map entitled “Vale Port Installations” shows the global layout of the Port including Quest additions to the existing Vale port installation as well as the related road connecting to the Quest access Road leading to the Mine.
Figure 2-3 shows greater detail on the proposed added infrastructure (in orange) relative to Vale’s existing port infrastructure.

Specifically in the Port area, the following components will be added to the existing Vale installations to complete the set-up required by Quest:

- a truck unloading station;
- a concentrate storage building;
- an aboveground bulk fuel holding tank;
- a truck re-fuelling station; and,
- a laydown area (100 m x 40 m).

Where possible, temporary infrastructure required during construction phase will be retained for use during operations.

2.3.2 Road

The new Quest Mine access road will be connected to Vale’s road network by a section of road that includes a bridge to cross Reid Brook within the Vale Surface Lease (Appendices 3 and 4).

The link between the existing Vale road and the Strange Lake Mine will be an 8-m wide all-weather access road, constructed over a distance of about 144km in Labrador up to the Quebec border.

The preferred alignment represents the shortest route; provides the fastest travel time for a roundtrip between the Port and the Mine site; and traverses less difficult topography than other routes considered in the study.

The proposed route crosses three major water courses where bridges or large arch culverts may be required: represented as P1, P2 and P3 in the Overall Project Map, respectively at kilometer points PK43, PK81 and PK143.5 (counted eastward from the Quebec border).

There are a total of 276 smaller water crossings in Labrador for the preferred road trace, of which approximately half are suspected of being intermittent tributaries based on air photo interpretation and fieldwork.
### 2.4 Physical Features

#### 2.4.1 Road

##### 2.4.1.1 Road Design

The access road will have an operating width of 8 m, as shown in Figure 2-4. The dimensions of the road are as follows: one (1) lane of 7 m with two (2) shoulders of 0.5 m. This width can accommodate one-way traffic but will provide sufficient passing clearance between two (2) tractors semi-trailers. The cut sections of the access road are lined with open ditches to channel surface water.

![Typical Road Cross-Section](image)

The design of the access road is based on the following general guidelines:

- Design an all-weather access road
- Avoid cut in permafrost area to prevent unwanted thaw and consequently settling of the infrastructure
- Balance the cut and fill to minimize the recourse of main aggregate potential deposits and rock quarries.
- Minimize stream crossings.
- Maximum grade (11%) is used only in specific locations where important earthwork is required.

The alignment of the access road has been divided into two (2) segments as follows:

- a flat segment from PK 0 to PK 112 which corresponds to the plateau region; and
- a segment from PK 112 to PK 152 which corresponds to the steep-sided valleys.

In the flat segment, the design speed was fixed at 80km/h. It is assumed that the overall vertical profile will allow a loaded tractor semi-trailer to circulate at an average speed of 70km/h.

In the second valley segment, the design speed has been set at 60 km/h in taking in account the horizontal geometry and the vertical profile of this segment. It is assumed that the overall vertical profile will allow a loaded vehicle to circulate at an average speed of 50km/h for this second segment.

At the current design stage, it is assumed that the base course will be composed of rock and/or materials from borrow pits along the proposed route, such as sand or gravel. The surface course is assumed to be composed of crushed rock or gravel which should provide a proper running surface to sustain high traffic.

##### 2.4.1.2 Bridge (PK 43)

The crossing at PK 43 was selected based on two characteristics: first, it is the narrowest section of the alignment which allows for the construction of a small span bridge requiring no alteration to the natural stream flow and will pose fewer problems for construction and construction schedule; and, second this location has rock outcrops at
both abutments which is an adequate material to set the bridge's foundations. The proposed structure is a single span bridge. The deck will be composed of wooden surface deck supported by six (6) steel beams. The abutments will be wooden boxes filled with rock. The main characteristics of the bridge are:

- superstructure;
  - deck composed of 307 mm thick wood supported on six steel beams that are 1.550m depth;
  - beam spacing of 1.345 m between the web axes
- span length is 29 m; and
- width of deck is 7.812 m.

2.4.1.3 Arch Culvert (PK 81)

The 2nd major stream crossings (PK 81) will require a multi-plate arch culvert. The preliminary span will be about 16m.

2.4.1.4 Arch Culvert (PK 143.5)

Based on preliminary design, it is currently assumed that the type of crossing structure at PK143.5 will be a multi-plate arch culvert. From air photo interpretation, the river bed width at high water is estimated at 18 m. The bank slopes are relatively gentle (4-10%) with coarse texture over rocky outcrops or till at river level.

2.4.1.5 Safety Shelters on the Access Road

One shelter will be provided at midpoint of the access road to allow safety accommodation. It will be a modified container (12.2m x 2.4m x 2.4m), with application for emergency road shelter, including one (1) bedroom, a chemical toilet and a shower with electrical boiler and all integrated furniture, integrated electrical lighting and heating/ventilation with a minimum of 10 °C on stand-by position. Shelter insulation assumed to be a minimum of R25 (unit #1). A generator with diesel tank will complete the installation.

2.4.1.6 Culverts

To cross other streams or other natural drainage paths, steel culverts will be used. Preliminary design of the crossing structure is based on the dimension and size of the culvert required to span the watercourse. Preliminary calculations of the peak design flows of the watersheds along the access Road were done in using the rational method referenced in the Newfoundland and Labrador Government Environmental Guidelines for Culverts (WRMD, 1992).1

2.4.1.7 Caribou Crossings

As described in section 4.2.3, the George River Caribou Herd represents a key issue in this region, given the value of this animal for native and non-native peoples of Québec and Labrador and the herd’s recent severe decline in population. Based on information gathered on migration routes used by caribou, it is expected that caribou will cross the road corridor twice annually (once in the fall and once in the spring).

In order to facilitate this road crossing, the road profile will sloped gently over intermittent 50-meter long road segments to facilitate the passage of caribou in spring and autumn periods within the main caribou migration corridor. This has been determined to be between PK24 to PK80 – based upon where the greatest animal density during the migration period has been observed from telemetry data over the past 25 years approximately. Finer rock sizes will also be used for these ramped road sections to facilitate caribou movement.

1 Refer to http://www.env.gov.nl.ca/env/waterres/regulations/appforms/chapter5.pdf The rational method is described in detail in other government sources such as Chapter 3 of the Le Ministère des Transports du Québec (MTQ)'s Culvert Design Manual (MTQ 2004).
At this stage, it is estimated that 100 caribou crossings of 50 meters length will have to be built. Where the road surface is less than 1.5 m above the surrounding topography, a caribou crossing would not be considered necessary.

2.4.1.8 Natural Hazards

In undertaking geomorphological mapping of the road corridor, potential natural hazards such as massive erosion risks were considered for the road section expected to pass in Ikadlivik valley. No issues were identified to warrant any significant changes to road design. However, this will be assessed in greater detail during feasibility engineering.

The presence of discontinuous permafrost throughout the region was considered in road design, especially on the plateau before descending into the valley. While we are not in the continuous (90-100%) permafrost found 100+km north of the Strange Lake Area, according to general NRCAN mapping, there is the potential for extensive discontinuous permafrost (50 - 90%) along the road on the plateau and sporadic discontinuous permafrost (10 - 50 %) in the valley and near the coast.

2.4.2 Port

2.4.2.1 General

The preferred port arrangement for the project is the shared use of existing facilities at the Vale (Voisey’s Bay) port in Edward’s Cove on Anaktalak Bay.

The existing Voisey’s Bay materials handling equipment consists of an unloading station for side-tipping bulk trucks, an enclosed storage shed, conveyor systems and a shiploader. Some of these facilities will be fully utilised by Vale and Quest is required to provide its own additional facilities (e.g. storage building), however the intention is increase the utilisation of existing infrastructure according to the business needs of both Vale and Quest.

2.4.2.2 Truck Unloading Station

A new concentrate truck unloading station is required for this project. Shared use of the existing unloading station is not possible due to both Vale’s and Quest’s need to deliver material to the storage concurrently, and due to the potential for operational conflicts related to cross-contamination.

The new truck unloading station will be used only for Quest operations. The dump station will be fully enclosed with automatic doors at the entrance and exit, and a dust collection system to prevent escape of dust from the building. Inside the building, the ore concentrate will be discharged into a below-ground hopper and conveyed to the nearby concentrate storage building.

2.4.2.3 Concentrate Storage Building

A new storage building is required for this project. Shared use of the existing building is not possible as the capacity of the existing building is not sufficient to support both Quest’s needs and Vale’s current (and future) storage needs.

The concentrate storage building will be an enclosed bulk storage building similar to the existing building used by Vale. The concentrate coming from the truck unloading facility will be conveyed to a tripper discharge point travelling inside the apex of the shed above the storage piles. The building will have a dust collection system to prevent escape of dust from the building. Automatic doors will be provided at entrance and exit, and an integrated front end loader parking bay will be located within the building enclosure to avoid travelling with this...
equipment outside of the building. The maximum concentrate storage capacity of the building will be approximately 65,000 tonnes.

During shiploading, the concentrate will be reclaimed from the stockpile(s) via front end loader, discharging into mobile hoppers which travel over a conveyor along one side of the shed (similar to the existing Vale building). That conveyor will feed a series of conveyors as required by the site geometry to discharge into the existing shiploading conveyor used by Vale.

2.4.2.4 Shiploader

The existing shiploading conveyor, shiploader and wharf would be used with minimal modification for Quest’s operation. A duplication of the dust collection system may be optional, if required for contamination reasons, to separate the products in the dust collection system (baghouse), however, this is subject to further investigation.

2.4.2.5 Fuel Handling and Storage

A new bulk aboveground fuel (diesel) holding tank is required for this project. The existing three (3) bulk fuel tanks, located together in a tank farm, are fully utilized for Vale’s current and future fuel requirements and are not available for Quest’s use.

The existing fuel unloading system from the wharf to the tank farm is currently underutilized and would be shared between Vale and Quest.

The new bulk storage tank for Quest’s operation will be installed close to the existing Vale tank farm. The new aboveground holding tank will have a capacity of 5,000 m³ of artic diesel. A containment structure will also be provided, similar to the existing tank farm, and in accordance with current regulations.

This holding tank is not the primary fuel storage for Quest, but is used to manage the logistics of fuel deliveries. The fuel in this holding tank will be transported to the Strange Lake mine by tanker truck between fuel ship visits.

Delivery vessels for arctic diesel to Voisey’s Bay could vary and may consist of a combination of the following scenarios:

- Dedicated fuel tanker barges, or tanker vessels;
- The concentrate ore vessel (T class) could be carrying a surplus of fuel in the tanks for discharge at Voisey’s Bay;
- Fednav Ice Breaker class vessels (e.g. Umiak) returning empty to Voisey’s Bay could be carrying fuel in either their wing tanks or in surplus amongst its fuel tanks.

The first two scenarios would provide the base-load fuel supply for Quest’s operation, with fuel deliveries occurring within the summer shipping season. The third scenario would be available only as an emergency particularly in winter and subject to Vale’s operating requirements.

2.4.2.6 Truck Re-fueling and Tanker Truck Loading Station

To avoid any delays to Vale’s fuel transfer operations, a new truck filling and tanker truck loading station is planned for Quest’s operations.

The new truck re-fueling will be used only for Quest’s vehicles. This includes the tanker trucks transferring fuel from the holding tank to the mine site, and includes the concentrate haulage trucks operating in summer to bring the concentrate from the mine to the port.
It will be similar in design to the existing one used by Vale. The station will be built on a concrete pad including an oil-water separator to collect any leakage and to prevent discharge in the environment. This station will include a volume measurement system.

A loading rack arrangement with a retractable platform and flexible piping will be installed for loading tanker trucks going to the mine site.

2.4.2.7 Laydown Area

Quest’s operational laydown area, for other consumables being unloaded at the port after construction – including containers - will be situated beside the new fuel tank and the new fueling station, on the opposite side of the road. It is planned to be 100m x 40 m.

2.4.2.8 Waste Management Facilities

Given the project’s remote location, no waste disposal facilities are available surrounding either the mine site or the port site. As a result, wastes will be managed at the project sites as follows:

- Non-hazardous and non-recyclable solid waste generated will be incinerated at the port site;
- Hazardous waste other than used oils will be stored in sealed shipping containers within containment areas and will be shipped to an authorized off-site treatment/disposal facility;
- It is assumed that used oil will be burned on site in a dedicated furnace to produce heat;
- Mixed non-hazardous wastes that are not recoverable and that cannot be incinerated due to their size or other characteristics - including concrete, glass and granular debris - will be disposed of in an inert materials landfill. This may be the same site used for dry construction waste disposal.

Landfill

A landfill to accommodate non-hazardous solid waste will be built along the access road near the port, possibly at PK142 west of Reid Brook, in an area with suitable site conditions. It will be accessible by a service road designed for level of use.

Incinerator

There will be one incinerator at the port site with capacity for one (1) tonne per day. Enclosed in a building, the incinerator will be located near the landfill along the access road.

This incinerator will receive kitchen organic waste and other non-recyclable and non-hazardous domestic wastes from both port and mine sites. Included in the incinerator capacity is a buffer for peak periods and flexibility, for instance, to accommodate recyclables if no market to ship off site. The incinerator will be batch-type, with dual-chamber controlled air incineration system (2nd chamber: >1,000°C, minimum 1 second residence time). There should be a maximum of 24h/batch including cool-down and ash cleaning time. The incinerator must be equipped with a control panel, monitoring/data acquisition and remote diagnostic capability.

An ash bin should be used to receive the ashes produced by each batch. Ash must be tested for leachable metals prior to transferring to a landfill; if the ashes are considered hazardous because of their leaching characteristics, they will have to be temporarily stored before being shipped to an authorized disposal facility.

Contaminated Soil Pad

A contaminated soil and snow pad will be constructed near the landfill and incinerator for soil remediation. A pad of 2,500 m2 will be established to receive and treat or store any contaminated soils coming from accidental spills.
(or snow during winter). Whenever possible, soil contaminated with hydrocarbons that can be bio-remediated will be treated on site by land-farming. Contaminated soils that cannot be treated on-site will be stored and shipped in the same manner as hazardous wastes.

2.5 Construction Phase

2.5.1 Road

The access road length required successive construction periods. For each period the same road construction methods will be applied. The corresponding logistic is explained in the subsequent sections.

2.5.1.1 Construction Methods

Standard and relatively routine road construction methods will be used in its construction. Any materials needed for the Road bed will be obtained from borrow pits along the proposed route, such as sand or gravel. Where the distances to sand and gravel pits are too long, which is the case for several road sections along the plateau, rock quarries have been identified for use with mobile crushers.

The access road corridor site preparation will occur over two years. It will include partial clearing of trees, shrubs, vegetation and road bed establishment, including also the removal of unsuitable underlying material.

Limits of clearing will be marked prior to commencement, and only designated areas will be cleared. Trees and shrubs will be cleared using chain saws and other hand-held equipment. Mechanical clearing methods may be employed in areas where disturbance will not result in sedimentation of water bodies. Topsoil and organic matter that will be removed will also be reused as much as possible. This work will include the installation of all necessary sedimentation and erosion control measures, including drainage infrastructure. Any merchantable timber will be salvaged and made available to interested parties; in Labrador Inuit Land, timber will be bucked, sorted and piled to facilitate use of the wood by Nunatsiavut beneficiaries.

An Environmental Protection and Monitoring Plan will be developed and implemented. This plan will also be compliant with environmental permits, regulations and applicable standards. Quest plans to have in place, before beginning of construction, procedures for the storage, transport and use of fuel and hazardous material, the storage and removal of waste and hazardous waste, and emergency response plans facilities. These plans are also applicable to construction activities. These procedures and plans and materials handling facilities will be relevant to and available for the Project and will be amended and expanded as needed.

2.5.1.2 Construction Periods

Construction would start as soon as the project is released from the applicable environmental assessment processes and all applicable environment permits are obtained. On this basis, the earliest construction start date would be in the spring of 2017, assuming that staging and other preparation had already commenced at this time. Additional time requirements for the environmental approvals process could delay the start date several months to a year, which would negatively affect the project’s ability to secure market share for its production. A complete schedule summary is provided in section 2.5.3.

The construction period and the amount of workers needed are described in Table 2-1 to support construction of:

• building the supplementary Port infrastructures at Vale’s port area;
• building the Access Road between Vale’s port installation and Strange Lake.

There will be two groups of 170 workers at the Port that will spend 5 months each time; followed by a crew of 160 workers assigned to build the Access Road over 25 months; and construction workers at Strange Lake to build the structures at the Mine site for the last seventeen months of the project.
### Table 2-1 Construction Schedule

| Project Components | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| Port               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Access Road        |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Mine               |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

Total Construction Period: 29 months

The following section offers a brief description of activities in this period.

### Access Road

A temporary camp able to accommodate up to 200 beds will be established near the road construction site in the Voisey's Bay area. Catering (room and board) will be supplied by sub-contract under the responsibility of the road civil contractor. A smaller trailer camp (100 beds) could be combined with a floating barge hotel anchored offshore in proximity to the existing barge landing (temporary dock) during the summer periods.

As construction of the road advances towards Strange Lake, temporary staging areas will be established at discrete intervals along the road. These staging areas will include the mobile camp(s) for construction workers, mobile offices and amenities, mobile workshops and fuel storage facilities. The staging area equipment gets relocated to the next staging area as construction of the road advances.

It is anticipated that fuel management at the Port and between the temporary staging areas along the road will be handled with tanker trucks.

### 2.5.1.3 Workforce Rotation

The workload to be implemented during the construction works will be based on a 3:1 work rotation schedule: 3 weeks on, and 1 week off.

The construction workforce would first utilize charter flights using the existing airstrip at Voisey's Bay. For initial site preparation, a temporary airstrip is available and functional for Twin Otter traffic. Once the new airstrip was established at Strange Lake, the charter flights for the workforce on construction of the mine facilities would utilize the Strange Lake airstrip, with the option of using planes with greater capacity.

### 2.5.2 Port

#### 2.5.2.1 Overview

During the first year of construction, work would be focused on site preparation, civil works and most pouring of concrete for the construction camp, services related to the construction camp, fuel holding tank area preparation, ore concentrate storage area and handling area. After the construction camp is established, all equipment and mobile accommodation related to the construction of the access road will be brought on site to start road penetration.

During the second year, equipment and mobile accommodation related to the access road will support road construction. The fuel holding tank will be erected as well as related piping, fuel pump, permanent refueling/tanker loading station. The ore concentrate storage building will be erected. The related dust collection system and mechanical equipment will be installed also in preparation for the first ore concentrate delivery to arrive in the next year. All ore concentrate handling equipment and truck unloading station will also be installed for the same reason.
During the third year of construction, a low level of activity is planned – with focus on completing the access road.

2.5.2.2 Camp Establishment

The first construction activity at the port during the first year will be site preparation for the temporary construction camp, prior to building an appropriate crossing over Reid Brook (PK143.5). Site preparation will involve tree removal, earthworks and civil work. This will be converted into a laydown area, once the permanent construction base camp is established across Reid Brook or at another suitable location.

After site preparation, most of the components will be carried at the port by module to reduce time for construction camp erection during the short period of time available. Modules will be used for bedroom, kitchen, and multi-function areas.

Maintenance of construction vehicles and equipment will be carried out at the base construction camp.

2.5.2.3 Camp Services

Drinking water will be produced using a modular treatment system. Water sources will be identified based on the final location of the construction camp. Since the potable water source has to be validated, the water treatment system will be designed to treat both potential sources of water: surface water and ground water. The water treatment system will be shop-mounted on skids and delivered to the site in containers. Water will be stored in a tank with a capacity adequate for worker needs and for fire protection. A pumping station will ensure water distribution.

Waste water will be treated using a modular unit. The treatment system will be designed to reduce in the effluent the total suspended solids (TSS) and BOD5 concentration at a level lower than 15mg/L. The sewage treatment plant (STP) for the port site will have the following treatment stages:

- septic holding tanks;
- equalization tank with raw water pumps;
- membrane bio-reactor system (MBR);
- aeration system;
- activated sludge treatment process; and,
- ultra-filtration with membranes.

The sludge that will be produced in the septic tank must be cleaned out once a year. After being removed from the septic tank, the sludge will be dewatered and transferred to the landfill. Sludge dewatering can be done on sand drying beds. A freeze-thaw cycle is excellent to separate water from solids in sludge.

An area will be prepared to provide waste management services be used for the Construction camp. Those services will remain after construction for the permanent camp. The Waste Management Area (WEA) will provide the following services: Incinerator, Contaminated soil pad and Landfill.

Power generators will produce electricity required for the needs of the accommodation complex. Diesel will be used in a heater to produce heat before distribution in the accommodation complex. A fuel tank will be installed close to the power generator, but far enough from the accommodation to avoid odor, noise and danger. The camp power generator, heater and fuel tank will be installed on a covered concrete pad and protected by fences and gate.

2.5.2.4 Truck Unloading Station

This building would be erected in the second year of construction.
2.5.2.5 Concentrate Storage Building

During the first year of construction, the site for the concentrate storage building will be prepared by removing vegetation and preparing civil works (excavation, compaction, concrete foundation).

The erection of this building, mainly steel structure including cladding, will be done during the second year of construction. Mechanical equipment comprised of the conveyor and dust collection system could be installed during the third year of construction.

2.5.2.6 Fuel Holding Tank and Truck Filling Facility

During the first year of construction, a site for the fuel holding tank will be prepared by removing vegetation and preparing civil works (excavation, compaction, concrete foundation). During the second year, the 5,000 cubic metre aboveground storage tank will then be field-erected by specialized welders. The approximate dimension of the tank will be 22 m in diameter and more than 10 m high. A containment structure will also be prepared to contain spills in accordance with current applicable regulations. The connection to the wharf for fuel reception, and other piping, will be installed during the second year.

The refueling station will be constructed at the same time as the corresponding pumping system at the wharf and at the refueling station. The refueling station will be comprised also of a system to fill fuel trucks moving fuel to the mine site.

Until these permanent infrastructures are completed, temporary fuel storage will be located in a central location away from risks and will be collision-protected by concrete blocks or boulders. If required over an extended period, a temporary refueling pad can be excavated and lined with an impermeable geotextile to prevent soil contamination from dripping nozzles and overfills. The same principle would apply as mobile tanks get moved up the access road.

2.5.3 Schedule for Project Development

Quest has set out the following milestones and dates for the development schedule for the Strange Lake Project. It can be seen that, within the overall project development schedule the start of Construction in June, 2017 is driven by the following chain of activities:

- Pilot testing;
- Prefeasibility Study;
- Feasibility Study for the Northern Area;
- Submission of documentation relating to the EIA for Northern Area;
- The receipt of approval of the Environmental Impact Assessment (EIA) for Northern Area; and,
- Environmental construction permits for Port and access road.

The Table 2-1 gives the key milestone dates

<table>
<thead>
<tr>
<th>Key Milestone</th>
<th>Planned Dates</th>
</tr>
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<tbody>
<tr>
<td>Start Final Phase of Pre-feasibility Study (PFS)</td>
<td>February 2015</td>
</tr>
<tr>
<td>Submission of EIA project description</td>
<td>March 2015</td>
</tr>
<tr>
<td>Submission of EIA Report</td>
<td>December 2015</td>
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Table: Project Milestones

<table>
<thead>
<tr>
<th>Event Description</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Feasibility study completed</td>
<td>September 2016</td>
</tr>
<tr>
<td>Start detailed engineering</td>
<td>October 2016</td>
</tr>
<tr>
<td>Issuance of (EIA) Approval Permit</td>
<td>April 2017</td>
</tr>
<tr>
<td>Delivery of construction permits - Early works</td>
<td>June 2017</td>
</tr>
<tr>
<td>Start of construction – Port site &amp; Penetration Road</td>
<td>June 2017</td>
</tr>
<tr>
<td>End of construction - Access Road</td>
<td>January 2019</td>
</tr>
<tr>
<td>Start of construction – Mine site</td>
<td>July 2018</td>
</tr>
<tr>
<td>First ore extract and delivery</td>
<td>September 2019</td>
</tr>
</tbody>
</table>

2.5.4 Environmental Discharges

2.5.4.1 Air

During the construction period for the Road and Port facilities, sources of air pollutants, dust and greenhouse gases will include emissions from vehicles, heavy machineries, equipment, blasting operations and generators.

2.5.4.2 Liquid Effluent

At the construction camp sites, an appropriate modular wastewater treatment system will be installed, as described in section 2.5.2.3 – Camp Services. Once on-site, these modules will be connected to the main treatment lines.

Appropriate holding tanks will be installed for the mobile construction camp, along the Road as construction progresses, and will be emptied periodically by vacuum truck and brought to septic system at main construction camp closer to the Port.

2.5.4.3 Waste

Solid waste generated at construction camp sites along the road will be transported to the WMA near the base construction camp for incineration or for to be disposed in an inert waste dump.

2.5.5 Potential Resource Conflicts

No potential resource conflicts are anticipated - given that the road is being designed to avoid or minimize impacts on any sites of particular value for local communities and aboriginal groups, and considering also that most of the construction will happen outside of the winter season (December to April) when the most intense and expansive use of the environment within the study area takes places.

Nevertheless, during construction, a supervision and environmental monitoring program will be implemented. The objective of this program is to verify environmental and social impacts predicted in the EIA, to ensure that mitigation measures recommended to be implemented during the works are adequately put in place, and to monitor the performance of these measures. This monitoring program will also provide an early indication in the case where any of the environmental control measures or practices are not effective enough to reduce adverse impacts. It will then be possible to take corrective actions before the end of construction.
An environmental emergency prevention program will also be developed and put in place to ensure that activities related to Road construction will be conducted in a manner that minimizes risks of accidents with potential impacts on the environment.

2.6 Operations Phase

2.6.1 Road

2.6.1.1 Ore Concentrate Haulage

The haul trucks carrying ore concentrate will transit over 170 km between Strange Lake and Voisey’s Bay. They will operate over a six (6) month period. Since the shipping season lasts only five (5) months, starting from July 1st to December 1st each year, hauling ore concentrate by trucks will have to start up to one month ahead of the first ship arriving at Voisey’s Bay. Table 2-3 describes the logistics for ore concentrate haulage.

### Table 2-3 Ore Concentrate Haulage

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haulage Quantity by Trucks</td>
<td>397 300 tonnes (with 10% moisture content)</td>
</tr>
<tr>
<td>Operational Period</td>
<td>6 months</td>
</tr>
<tr>
<td>Operational Period (with delays)</td>
<td>145 days</td>
</tr>
<tr>
<td>Trailer capacity</td>
<td>90 tonnes</td>
</tr>
<tr>
<td>Load per day</td>
<td>31</td>
</tr>
<tr>
<td>Daily Haulage Quantity</td>
<td>2 778 tonnes / day</td>
</tr>
<tr>
<td>Daily Truck Output, per truck</td>
<td>270 tonnes / day</td>
</tr>
<tr>
<td>Number of Trucks in a Fleet + 10%</td>
<td>12</td>
</tr>
<tr>
<td>Number of Drivers assigned per Truck</td>
<td>2</td>
</tr>
<tr>
<td>Number of Drivers in a Fleet + 10%</td>
<td>24</td>
</tr>
</tbody>
</table>

2.6.1.2 Fuel Haulage

Fuel imports for Quest’s operations coming to Voisey’s Bay port will be primarily composed of arctic diesel. Table 2-4 describes the logistics for fuel haulage.

### Table 2-4 Fuel Haulage

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haulage Quantity</td>
<td>27,000,000 litres/year</td>
</tr>
<tr>
<td>Operational Period (limited by marine season)</td>
<td>5 months</td>
</tr>
<tr>
<td>Operational Period (with delays)</td>
<td>119 days</td>
</tr>
<tr>
<td>Daily Haulage Quantity</td>
<td>226 900 litres/day</td>
</tr>
<tr>
<td>Tanker Trailer Capacity</td>
<td>57 000 litres</td>
</tr>
<tr>
<td>Number of Tanker Trailers per day</td>
<td>4</td>
</tr>
<tr>
<td>Number of Drivers</td>
<td>2</td>
</tr>
</tbody>
</table>

Key assumptions are as follows:

- The period of fuel haulage is one month less than the trucking period since it is dependent on the shipping season of five (5) months.
• A standard liquid tanker operating between Strange Lake and Voisey’s Bay will carry 57,000 litres.

2.6.1.3 Other Loads

Secondary haulage activities on the road will consist of supplying dry, fresh and refrigerated foods for the camps and various materials and equipment for the daily operations of the Mine.

2.6.1.4 Road Maintenance

The Road will degrade due to weather and traffic. It will need continuous maintenance. The maintenance will include grading, resurfacing and plowing-scarring-flying-sanding in order to improve road trafficability and maintain a low rolling resistance. Rehabilitation, geometric improvement and structural strength will also be required throughout some segments of the Road. Snow removal will occur during the winter time. To control the dust, a reagent, such as calcium chloride or water, will be sprayed on the running surface. The dust-control substance will be in conformity with the environmental requirements.

Road maintenance will be accomplished by two (2) fleets, one at the Mine site, and another at the port site – with potential for cost-saving synergies in combination with Vale’s road maintenance program. The fleets will cover the access road as well as the port and mine facilities, camps and airport. Both fleets will consist of motor graders, sand/snow plow trucks, snow blowers, 10-wheeler trucks, small front-end loaders, excavators, and soil compactors.

2.6.1.5 Potential Resource Conflicts

The study area represents a rich and diverse region in terms of wildlife biodiversity, which are important for the Aboriginal groups who occupy and use this area. Road traffic and maintenance of the access road could interfere with aboriginal travel routes and land use activities, notably during winter months (December to April) when the most intense and expansive use of the environment within the study area takes places.

Caribou hunting and char fishing are, among other harvesting activities, two of the most important activities that can be disturbed by the presence of the road, the traffic and the maintenance of this infrastructure. There is also number of key locations or sites (cabin, harvesting areas) within the study area that are important for the Nunatsiavut Inuit for one or many seasons (examples: Ikadlivik Brook, Kamarsuk). As an example, some arctic char winter fishing sites are located close to the future port site and right next to the proposed road (less than 1 km and sometimes just a few meters), such as in Little Reid Brook, Reid Falls and Ikadlivik Brook. Furthermore, the proposed road crosses winter caribou hunting areas. Access to those locations or sites by snowmobile may be more difficult because of the road, as this new structure might be elevated from the actual ground, causing an interruption of the circulation on existing trails, not to mention safety issues for land users who will cross the road. Winter activities include arctic fox trapping.

For the Innu people, one of the main concerns is related to the effect of the road on caribou migration. In fact, they fear the new structure will stop caribou preventing it migrating to the south, where they usually hunt. The closest caribou hunting area visited by Labrador Innu is Mistasitin Lake, which is located around 70 km from the proposed road. Springtime waterfowl hunting activities also occurs in Anaktalak Bay and Voisey’s Bay and in surrounding streams such as Reid and Konrad brooks (All located within a few km from the proposed road and close to the proposed port site). The same areas are also visited in fall for arctic char fishing.

2.6.2 Port

Quest operations through Vale’s Edward’s Cove Port would occur mainly during the summer shipping season of five (5) months duration, between July 1st and December 15th, with the possibility of extending the shipping season in certain years, depending on sea ice conditions, to include the periods of May 15th to July 1st and December 1st to December 15th.
A small amount of containerized cargo could be delivered for Quest during the winter months onboard the vessels already servicing Vale's operations such as the Umiak.

The stevedoring workforce for Quest could be provided by the same aboriginal Company that is already providing similar services at Vale's Voisey's Bay operations. Port operations would typically include:

- Receiving haul trucks loaded with ore from Strange Lake;
- The handling of ore materials at the port's storage facility;
- Reclaiming ore materials between the storage facility and the existing wharf installation;
- Loading ships with ore;
- Receiving liquid bulk (arctic diesel), discharging to the fuel farm tank; and
- Line Handlers, fuel farm attendant and buildings maintenance.

Following discussions with Fednav, the proposed vessels for concentrate shipping are T-Class vessels which have the ability to sail in some sea ice conditions, but are not permitted to break ice. These vessels would carry approximately 43,000 tonnes of concentrate considering the draft limitations of the existing channel. The number of visits to Vale's wharf would be approximately ten (10) vessels during the five (5) month shipping season. Each vessel will spend approximately 18 hours per port call at the Edward's Cove port. Details of the loading operations are described in Table 2-4.

<table>
<thead>
<tr>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Concentrate Haulage Quantity</td>
<td>397 300 tonnes per year</td>
</tr>
<tr>
<td>Operational Period (limited by marine season)</td>
<td>5 months</td>
</tr>
<tr>
<td>Operational Period (with delays)</td>
<td>119 days</td>
</tr>
<tr>
<td>Ships payload</td>
<td>43 000 tonnes</td>
</tr>
<tr>
<td>Stevedores Shift</td>
<td>24 hours</td>
</tr>
<tr>
<td>Loading Period</td>
<td>14.5 hours</td>
</tr>
<tr>
<td>Ships Alongside</td>
<td>18 hours</td>
</tr>
</tbody>
</table>

### 2.6.3 Environmental Discharges

#### 2.6.3.1 Air

The main activities during the operations phase for the Road and the Port project are the transportation of the ore concentrate, fuel, materials and goods required for the Mine operation at Strange Lake. Also, road maintenance activities (grading, resurfacing, snow removal, etc.) will require the use of heavy equipment. Sources of air pollutants are:

- exhaust from vehicles (NOx, SO2, particulate matter and hydrocarbons);
- fugitive dust emissions from the road; traffic and,
- exhaust of generators (road safety shelter and port site camp).

Greenhouse gas emissions sources for the operations phase consist of the combustion of fuel used for transportation and production of energy (generators).

#### 2.6.3.2 Liquid Effluent

There is no liquid effluent associated with activities on the Road.
At the Port site, the drainage water of the area where the ore concentrate will be handled will be collected by ditches then discharged into a sedimentation pond. The impounded water in the sedimentation pond will be treated for removal of suspended matter, and tested as required to see if further treatment is required, before being discharged to the environment.

Clean water flows, defined as rain falling outside the Project activity areas, will be collected in ditches and diverted around and away from the work areas, then discharged back into the environment.

### 2.6.3.3 Waste

A limited quantity of waste will be produced at the Port site from Quest’s activities. The kitchen organic waste and other non-recyclable and non-hazardous domestic wastes will be sent to the incinerator.

From the Mine site (Strange Lake), recoverable materials will be compacted on site, transported to the port site and then shipped to a sorting facility. Kitchen/organic waste and other non-recyclable and non-hazardous domestic wastes will also be stored temporarily at Strange Lake and then sent to the port site where they will be taken to the incinerator. The location of the incinerator may be changed depending on the quantity and type of garbage being burned.

Mixed non-hazardous wastes that are not recoverable and that cannot be incinerated due to their size or other characteristics, any concrete, glass and granular debris will be disposed of in the inert waste dump – either at the mine site or at the port.

Hazardous waste other than used oils will be stored in sealed shipping containers within adequate containment areas and will be shipped to an authorized off-site treatment/disposal facility. Given the remote location, it is currently assumed that used oil will be burned on site in a dedicated furnace to produce heat, subject to appropriate approvals and conditions.

### 2.6.4 Potential Resource Conflicts

No potential conflict is anticipated at the port, but any issue will be managed in a manner aligned with Vale’s current agreements with government and other stakeholders. Though aboriginal and non-aboriginal people are already physically restricted from the Port site area, many from the local communities also derive employment from Vale’s operations and understand the reason for this limitation in terms of limiting Health and Safety risks. Nevertheless, some individuals see this restriction as having an effect on free circulation in the area and on local harvesting activities, and even on their “spiritual or cultural connection” to this area; these concerns will be addressed on a case-by-case basis, in coordination with Vale.

### 2.7 Decommissioning and Rehabilitation

A conceptual closure plan was prepared for project components associated with the road and port access infrastructure, considering relevant requirements in Newfoundland and Labrador to satisfactorily restore the sites.

In general, the conceptual closure plan assumes that future land use is wildlife habitat and that disturbed areas will be returned to the pre-project state so that traditional activities can resume. It requires progressive dismantling of project infrastructure, remediating and monitoring residual impacts on soil or water quality, and restoring wildlife habitat. It will be refined at the subsequent feasibility stage when more information is available regarding stakeholder expectations. In anticipation of potential future development of the region it is assumed the access road will be used beyond the mine life of 30 years for a total operational life of 60 years.

A closure risk register summarizing proposed conceptual closure plan treatments and associated residual risks has been developed. Total closure costs were estimated to be $27M - including post closure monitoring and indirect costs, the vast majority of which will be incurred after year 60 of the project.
The following sections describe the conceptual closure plan for the project’s components in Newfoundland and Labrador.

2.7.1 Road

The access Road between Mine site and port will be completely decommissioned with the land returned to original contour at the appropriate time during the closure execution period. Bridges, culverts and pipes will be removed. Road demolition debris will be decontaminated and disposed or shipped for recycling or off-site disposal.

2.7.2 Port

The port facilities will be available for use until the end of the closure execution period. They are owned by Vale and formal closure of the port is assumed to be done by them, although Project specific aspects are included in the conceptual closure plan: the REE concentrate shed, REE content will be shipped for processing elsewhere; buildings, materials handling and fueling facilities, foundations and equipment will be prepared, decontaminated, dismantled and shipped for recycling/off-site disposal.

Hazardous materials, such as those unacceptable for local landfills – including contaminated soil, if a local bioremediation pile is unavailable, will be shipped to a licensed disposal facility.
3 Physical Environment

Chapter 3 presents a description of the physical environment for the road and the port, including the climate, ambient air quality, noise, geomorphology, surficial geology and permafrost, hydrology, fluvial geomorphology, general limnology, surface water quality, soil quality, freshwater sediment quality and physical marine environment.

3.1 Road

3.1.1 Climate

Located within the Taiga Shield Ecozone, the project site experiences a subarctic climate with long, cold winters and short, cool summers. Daily average temperatures above freezing are restricted to the months of May to September. Temperatures can reach as low as -45°C in the winter months. Precipitation is low to moderate, averaging approximately 250 to 500mm per year; however precipitation increases towards the Labrador coast and reaches 800 to 1,000mm per year. Snow and freshwater ice cover persist for six to eight months of the year (Wilken et al., 1996). Evapotranspiration rates are very low resulting in water-logged terrain in many areas during the summer months. Discontinuous permafrost at varying depth is expected in many areas. Discontinuous permafrost at varying depth is expected in many areas.

There is no weather station along the proposed Road corridor or in it’s the vicinity. The nearest weather stations are located at the Schefferville airport in Quebec (235km southwest, but in a similar physiographic context than for the western part of the Road) and at the Nain airport in Labrador (150km to the east of the Mine site, tempered by being next to the Atlantic Ocean). A weather station installed at the mine site in September 2011 also records instantaneous values of temperature, barometric pressure, humidity, solar radiation, wind speed, wind direction, snow depth and rainfall. General data from the Schefferville and Nain airports weather station are presented below.

For the period between 1970 and 1993 the minimum, average and maximum mean annual temperatures were, respectively, -10°C, -5.3°C, -0.5°C at Schefferville, and -7.3°C, -3.1°C and 1.3°C at Nain. At Schefferville, mean daily minimum and maximum temperature are observed in January (-24.1°C) and July (12.4°C), and at Nain in January (-18.5°C) and August (10.7°C). Over the same period, extreme minimum and maximum historical temperatures measured at these two stations were, respectively, - 50.6°C (January 1950) and 35.3°C (June 1989) at Schefferville, and -42.5°C (February 1995) and 33.3°C (June 1999) at Nain (Environment Canada, 2012).

Total annual average precipitation at Schefferville over the same period was 822.9 mm composed of 408.1 mm of rain and 440.5 cm of snow. At Nain, average annual precipitation amounts to 892.7 mm composed of 400.4 mm of rain and 492.2 cm of snow. Snow cover is normally present at Schefferville from October to the end of May. The mean snow cover thickness observed at Schefferville is 70 cm between February and March and 104 cm at Nain in March. At the Schefferville weather station, the yearly average wind speed is 16.5km/h.

3.1.2 Ambient Air Quality

Potential project effects on air quality along the Road corridor are not expected to be significant enough to require a specific characterization of baseline conditions – with the exception of road dust from truck traffic for which baseline conditions are currently nil due to there being no road in the area.
However, in situ data was collected at the Mine site since the nearest ambient air monitoring station of the National Air Pollution Surveillance (NAPS) network is located in Goose Bay and only measures ozone\(^2\). The selection of parameters for the ambient air quality baseline survey was based on those pollutants that will be emitted by the project, as the site is located in an area receiving very little pollution from anthropogenic sources and currently has no particular pollutant of concern. The following pollutants were retained for the baseline survey to characterize the air quality in the Mine study area: Particulate Matter (PM\(_{2.5}\), PM\(_{10}\), TSP), Metals with selected REEs (as particulate), SO\(_2\), NO\(_x\), VOC, asbestos, and radon. Air quality results were typical of those seen in remote and undeveloped areas. No anomalies were noted (see AECOM 2012h for further details).

Key findings of the Fall 2011 baseline ambient air quality monitoring survey completed at the Mine site in Fall 2011 can be summarized as follows:

- PM concentrations were very low. The twelve 24-hour samplings conducted at two selected sites from September 21 to October 7, 2011 had average concentrations of 1.9 \(\mu g/m^3\), 2.4 \(\mu g/m^3\) and 2.5 \(\mu g/m^3\) for PM\(_{2.5}\), PM\(_{10}\) and TSP respectively, with limited daily variation (no daily results exceeding 8 \(\mu g/m^3\)).
- Analyses of particulate metals and REEs on the sample filters indicated very low concentrations, most of them being limited to method uncertainty values. No particular air quality concerns were identified when comparing the metal analysis results with available air quality standards. No significant concentrations of REEs were detected.
- The NO\(_2\) and SO\(_2\) ambient air concentrations measured on site by passive sampling over two months are well below the 1-year Québec air quality standard (NO\(_2\) < 0.19 \(\mu g/m^3\) (limit of 52 \(\mu g/m^3\)) and SO\(_2\) < 0.26 \(\mu g/m^3\) (limit of 103 \(\mu g/m^3\))).
- VOC analysis results were all below reportable detection limit except for toluene found to be at levels above average urban concentrations for both sampling locations. Though not a concern in terms of air pollution limits, the possible toluene source was investigated and determined to be most likely fresh spray paint used to mark posts holding the VOC sample cartridge.
- The asbestos monitoring survey did not reveal the presence of asbestos fibres in ambient air at the forescreen mining site. Fibre concentrations obtained on all samples were less than 0.0053 fibres/cm\(^3\), below the Ontario Air Quality Standard for Asbestos of 0.04 fibre/cm\(^3\).
- The average radon concentrations, obtained from analysis of the passive detectors installed in ten locations in the study area, ranged from 19 and 22 Bq/m\(^3\), with the highest near the B-zone. This is slightly above the outdoor annual average outdoor in Canada of 10 Bq/m\(^3\) but close to the expected range for this geology type. Other sources consider 1-20 Bq/m\(^3\) to be the typical range of average outdoor radon concentrations, due to regional variations across North America.

### 3.1.3 Noise

In 2011, 24 hours of baseline sound pressure (noise) was evaluated at the Mine site, at a distance sufficiently away (> 1 km) from any active drilling in the area to minimize sound interference. The noise levels obtained for the Mine site can be representative of the baseline noise levels along most of the Road corridor, and at least on the plateau. The baseline noise levels were not otherwise evaluated along the proposed Road.

At the Mine site, the maximum hourly sound levels (LAeq 1h) measured at the monitored site was 37.7dBA during the day and 31.5dBA during the night. Both levels were more than 8dBA below the most stringent sound level criteria applicable to single family homes, schools and hospitals (45dBA during the day and 40dBA during the night). The least stringent noise criteria are applicable to industrial or agricultural zoning, which is 70dBA for both day and night.

The hourly minimum sound pressure level was 30.8 dBA for the day period and 28.0 dBA for the night period. The per minute LAeq sound pressure level exceeded 40 dBA only nine times during the monitoring period and always

\(^2\) The closest air monitoring station in Quebec is much further south in Mingan, on the north shore of the Gulf of St-Lawrence and east of Havre St-Pierre.
during the day period (7:00 to 19:00). During the night period (19:00 to 7:00), the per minute $L_{eq}$ sound pressure level stayed below 35 dBA all but three times. Finally, the variation of the per minute $L_{eq}$ sound pressure levels was small during the night period; it generally stayed between 27.5 and 32.5 dBA. During the day period, higher variations were observed. Stronger winds arising during the day (average of 15.5 km/h) compared to the night (about 10 km/h), during the sampling period, could explain this sound level difference between night and day. (see AECOM 2012i for further details)

3.1.4 Geomorphology, Surficial Geology and Permafrost

3.1.4.1 Geomorphology

Regional geomorphology along the road corridor to the port area is described based on the Ecological Land Regions and Districts classification, extracted from JWEL (1997). Description of the study area geomorphology is done through relief, topography, geomorphologic features and bedrock geology.

Western Plateau Land Region and Districts

The Western Plateau Land Region dominates the western part of the study area. Elevations range from approximately 350 m above sea level (asl) along its eastern boundary, rising to 550 m asl to the west. Mountain summits are no higher than 650 m asl. Topography is streamlined and corrugated, characterized by a low relief and elongated ridges and valleys. The main geomorphologic landform types are: crag and tail, drumlin, esker, outwash plain, erosion channel.

The boundaries of the Western Plateau Region correspond closely to the boundaries of the Southeastern Churchill structural province (Lopoukhine et al. 1978). Bedrock geology is predominantly metamorphic rocks, dominated by gneisses of the Archean and Proterozoic mountain building events and date to approximately 1.9 billion years before present (Ryan 1990).

Three Land Districts were identified by JWEL (1997) and differentiated on the basis of the landform alignment: Western Plateau North, Western Plateau Central and Western Plateau East Districts. Of the three Districts, the Strange Lake road corridor impinges on the Western Plateau Central District alone. This Land District is located between Anaktalak Brook to the northeast and Konrad Brook to the south. It is characterized by a WSW-ENE alignment of lakes and landforms resulting from glacial ice advances from the WSW direction.

Physiographic units identified in this Western Plateau Ecological Region include the following:

- Several streamlined moraine-derived plateaus are present. The plateaus are formed by crag-and-tail, drumlins and other tapered mounds of till. These plateaus are significantly elevated compared to the surrounding land and are mostly oriented SW-NE, the direction of the ice flow during the last glaciation.
- Streamlined Moraine Lowlands are till plains that are generally water-logged.
- Undulated Moraine Lowland exhibit an alternating low ridge and basin topography, similar to sand ripples on a beach but at a larger scale.
- Glaciofluvial Complex includes two sub-complexes: a deposit complex and an erosion complex. The deposit complex is characterized by the presence of an esker. The erosion complex is characterized by glaciofluvial erosional features such as channels, scarp, boulders fields, and exposed bedrock outcrops.
- Dead-Ice Moraine Complex created by the accumulation of ablation deposits produced during ice melting.
- Moraine Blanket Hills are characterized by low hills made of a thick layer of till.
- Mixed Moraine Terrain unit is a plateau of till exhibiting a mixed topography. This unit appears to be a transitional area between the Streamlined Moraine Lowlands (SML) and the Moraine Blanket Plateau (MBP).
Central Ranges Land Region and Districts

The Central Ranges Land Region is composed of a sequence of rounded mountains accentuated by cliffs that form the border with the Fraser River Land Region.

The Central Ranges Land Region dominates the central part of the study area. The landscape has a dissected and modified topography composed of rounded topography and broad ridges separated by numerous valleys and depressions mostly occupied by lakes and streams. Valleys have steep to moderate slopes. Elevations range from approximately 600 m to 1400 m asl in the southern areas of the Central Region, to 1,000 m to 1800 m asl in the north. Peaks in the north can exceed 2,200 m asl. Bedrock outcrops, frost-shattered colluvium (loose heterogeneous soil and rock at the base of slopes) and glacial erratics (isolated boulders) are the dominant landforms. Vegetation cover is minimal and is characterized by a lichen cover.

Bedrock geology of the Central Ranges Land Region consists of intrusive igneous rocks of the Nain plutonic suite. The region is dominated by the Makhavinekh Lake batholith and members of the Susie Brook and Bird Lake massifs.

Three Land Districts within the Central Ranges Land Region were delineated on the basis of the severity of valley dissection: Central Ranges East, Central Ranges West and Central Ranges South.

The Central Ranges West Land District represents a transitional landscape between Central Ranges East district and the Western Plateau. Elevations range from approximately 300 m to 550 m asl. This district is penetrated by steep-sided glaciated valleys.

The Central Ranges East Land District is located further east and is closer to the ocean. It is also the most severely valley-dissected of all the Central Ranges Land Districts and has the greatest local relief. Elevations range from approximately 200 m to 700 m asl. The eastern margin of this Land District is abrupt and marked by a relatively steep escarpment. This district is also penetrated by steep-sided glaciated valleys.

Physiographic units identified in the Central Ranges Region are the followings:

- Rounded Rocky Mountains physiographic unit is part of the Central Ranges Land Region. It is composed of a sequence of rounded mountains, accentuated by the cliffs that form the limit with the Ikadlivik River Valley.
- Moraine Blanket Plateau similar to the Moraine Blanket Hills, is made of a thick layer of till but its topography is flat.
- Rocky Plateau physiographic unit lies in the Central Ranges West ecological region. This rocky plateau area is deeply notched by the Ikadlivik River. Its topography is mostly rippled and cut by valleys and linear ridges associated with the various structural features of the bedrock such as faults, shear zones, foliation, etc. Despite these topographical irregularities, this area is considered a plateau because the peaks are rather flat and typically at the same approximate elevation.

Fraser River Land Region and Districts

The Fraser River Land Region is characterized by three distinct physiographic types: a narrow low-lying band of land along the coast, sheltered river valleys, and rolling bedrock-controlled hills in the south. The valleys have developed as a result of glacial scouring and glaciofluvial deposits on valley floors have been reworked by streams. Colluvial aprons of moraine-derived material occur along the edges of valley floors and talus cones occur among the upper bedrock slopes. Marine deposits are found at various locations along the coast. Elevations range from sea level to approximately 400 m asl.

Bedrock in the Fraser River Land Region is varied and belongs to both the Nain and Churchill structural provinces.
Two Land Districts differentiated by various physiographic criteria have been delineated within the Fraser River Land Region: the Fraser River Valleys Land District and the Fraser River Lowlands Land District.

The Fraser River Valleys Land District is generally flat lying or terraced and includes the narrow, steep-sided glacial troughs that penetrate the Central Ranges and Western Plateau Land Regions. The floors of the troughs are mantled with glaciofluvial and moraine-derived sediments which have been incised by subsequent fluvial activity. The lower slopes of the troughs are edged with colluvium and upper steep slopes are predominantly bedrock. The eastern boundary of Fraser River Valleys Land District occurs where the troughs open onto broad fluvial and coastal lowlands of the Fraser River Lowlands Land District. Valley elevations increase gradually from east to west from approximately 300 m asl to approximately 500 m asl.

The Fraser River Lowlands Land District includes the broader river valleys and coastal lowlands east of Fraser River Valleys Land. The broad river valleys are mantled with glaciofluvial deposits that have been reworked by fluvial activity. Colluvial aprons and moraine-derived material are present along the lower slopes. River valleys below the marine limit (approximately 90 m - 100 m asl) also contain glaciofluvial deposits consisting of sand, silt and clay. Coastal lowlands contain moraine-derived material and colluvium below the marine limit. They are dominated by re-worked moraine-derived sediments and marine-washed bedrock, glaciomarine deposits and raised beaches. Elevations range from sea level to approximately 300 m asl.

Physiographic units identified in the Fraser River Land Region are the followings:

- Kogaluk River and Ikadlivik Brook Valleys each correspond to a glacial trough.
- Reid Brook and Little Reid Brook Lowlands form a 1 to 2 km wide strip oriented NNE within the Central Ranges Region.

### 3.1.4.2 Surficial Geology

The entire study area was covered by the Laurentide Ice Sheet during the later phase of the Wisconsinan glaciations (Batterson, 1989), and numerous remnant glacial features are present on the landscape. The western half of the study area is dominated by a thick till blanket with a hummocky surface expression composed of lodgement and overlying ablation till. This area is characterized by numerous glacial features including roche moutonées, drumlins, crag and tail formations, and undulating till ridges (Rogen moraines), oriented east-northeast / west-southwest, parallel to ice flow direction. Much of the till blanket is overlain by an organic veneer and is characterized by poor drainage, particularly in lower-lying areas between the drumlinoid ridges. Towards the east, the till becomes thinner, poorly drained areas are less common, and higher relief rocky outcrops are more prevalent. The eastern extent of the study area is characterized predominantly by bedrock with a thin layer of drift cover. Glaciofluvial outwash sediments occupy the main drainage channels throughout the study area; kame and kettle topography and long, sinuous esker ridges are characteristic of these areas. Several creeks particularly in the eastern portion of the study area are situated in bedrock.

Identification and mapping of surficial materials was completed along the Road corridor.

### 3.1.4.3 Permafrost

Permafrost is defined as a layer of soil or rock in which the temperature remains at or below 0°C for at least two consecutive years, regardless of the lithology, texture or ice content of the ground affected. In milder climate conditions, the development and distribution of permafrost is dependent on local conditions and discontinuous permafrost may result.

The western two-thirds of the proposed Road from the Mine to the Port site are located in an area of widespread discontinuous permafrost where > 50 % of the land surface contains permafrost. The eastern third of the Road corridor approaching the Labrador coast is situated in an area of scattered discontinuous permafrost where <
50% of the land surface contains permafrost. Visual evidence of discontinuous permafrost manifests as: a) various periglacial features extending across the subarctic landscape; and b) relict frozen strata within subsurface overburden and bedrock extending to significant depth.

The lack of overt evidence of permafrost at or near the ground surface in any given location does not indicate that frozen ground is necessarily absent, but rather that it may exist at greater depths. Permafrost may only be presumed absent where average annual air temperatures and snow accumulations inhibit sufficient heat loss to offset seasonal heat gain in overburden and bedrock for extended time periods. Within discontinuous permafrost zones such as the study site, prior investigations have established a direct correlation between increasing snow depth and declining permafrost (Nicholson and Granberg, 1973).

Different periglacial landforms reflect the relative state of permafrost throughout the project area: patterned ground, string bogs, frost hummocks, palsas (including minerogenic forms), frost boils, thermokarst pools and ponds, and solifluction lobes and terraces comprise readily evident permafrost-related features noted during this study.

Patterned ground of micro-topography, the principal indication of near-surface permafrost and/or significant active freeze-thaw layer in the study site, was easily visible from both the air and on the ground. In some areas, large fields of frost boils (also known as “mud boils”) patterned sections of the moraine blanket. Elsewhere, small polygons created by a network of near-surface ice wedges, formed a distinctive mosaic pattern. Other landforms resulting from the presence of permafrost, or a seasonally active layer included cryogenic mounds and thermokarst lakes.

Apart from the readily observable near-surface permafrost manifesting as the periglacial landforms noted above, permafrost also exists at depth within overburden deposits and bedrock strata throughout the project area.

Permafrost within the subsurface is also discontinuous, reflecting dynamic environmental conditions similar to those present at grade. Signs of subsurface permafrost are taliks surrounded by permafrost aquitards. Due to a susceptibility to ground heat flux, permafrost aquitards surrounding taliks can over time erode or otherwise destabilize overlying frozen ground. In this setting, marked ice-water phase changes in near-surface frozen earth materials can result in liquefaction whereby saturated and unconsolidated earth materials transform into substances that act similarly to liquids. This phenomenon undermines soil stability and poses difficult structural design challenges for roadways.

Based on the aerial photographic record and field observations, the above noted periglacial features display evidence of permafrost degradation in various areas of the study site. Active layer depths in early August 2012 ranged from 45cm in palsas and frost hummocks to more than 1.1 m in peat bogs. Active layer depth measurements are admittedly biased by the probe’s 1.1 m length and the fact that it could not penetrate the elasic overburden present outside of peatland areas.

The ground thermal regime within the project area is dynamic and sensitive to changes in earth material properties, surface cover (including seasonal snow), climate and hydrogeology.

Under such conditions, modifications of the existing conditions within the project area pose a potential of adversely altering the near surface thermodynamics resulting in unpredictable consequences. In the discontinuous permafrost zone, transitions between frozen and unfrozen ground conditions are transient given the sensitive near-surface and subsurface thermal regimes.

3.1.5 Hydrology

Surface water features make up a high proportion of the landscape in northern Labrador and are present in the form of lakes, marshes, and dense tributary networks that drain the area. Many lakes and ponds, small stream channels, and poorly drained, swampy areas characterize the western half of the study area. Irregularly shaped ponds occupy hollows eroded into the bedrock and water occupies larger basins which are dammed by glacial
and fluvial deposits. Low-lying, saturated areas are typically found between drumlin ridges, the orientations of which influence drainage patterns. The eastern half of the study area exhibits a slightly better defined drainage network with numerous small tributaries draining into five main rivers that flow easterly in Labrador: the Kogaluk River, Kogluktokoluk Brook, Ikadlivik Brook, Reid Brook and Little Reid Brook. Ikadlivik Brook is a tributary of Kogluktokoluk Brook, which empties into the head of Voisey’s Bay. Reid Brook’s mouth essentially empties at the same location as the Kogluktokoluk River and is normally considered as an extended tributary of the Kogluktokoluk-Ikadlivik River system. Reid Brook flows into Voisey’s Bay while Little Reid Brook flows into Anaktalak Bay.

Ikadlivik Brook is a large, fairly fast flowing river, approximately 75 km long, varying from a few centimeters to 1 to 2 m in depth for much of its length, with no apparent obstacles blocking fish passage except for waterfalls located approximately 70 km upstream, near the origin of the river. Large pools are situated half way along the Ikadlivik’s length, 20 to 30 m deep, 0.5 km at their widest point and about 4.5 km long. Reid Brook and Little Reid Brook on the other hand are highly meandering, relatively slow flowing rivers (Vale Inco, 1997).

Along the final alignment in Labrador, Little Reid Brook is crossed four times while Reid Brook watershed encompasses 11 water crossings. Ikadlivik Brook’s main stem is not crossed by the proposed Road, but 146 water crossings drains into Ikadlivik Brook, and are perhaps tributaries of Ikadlivik Brook.

In all, the proposed road corridor will potentially encompass 268 water crossings located in Labrador, including three (3) that will require a crossing infrastructure (bridge or multi-plate arch culverts), more than half of the watercourses have a drainage area that is smaller than 2 km²; they are considered likely to be intermittent and therefore either dry up in summer or freeze in winter.

### 3.1.6 Fluvial Geomorphology

The morphology of a watercourse is a result of the interaction of numerous variables that define channel form. These variables are typically defined as controlling factors (i.e., geology, climate, physiography), or modifying influences (i.e., vegetation, human activity). When the modifying and controlling variables are constant, the channel becomes adjusted or balanced leading to a stable configuration, referred to as quasi-equilibrium. When a change to flow regime or flow hydraulics occurs, a watercourse may adjust one or more of its variables (e.g., width, depth) to maintain the quasi-equilibrium form. If a change occurs that is greater than the channel’s ability to adjust within this form, the channel will begin to erode and redistribute sediments within the watercourse.

The proposed all-weather Road has the potential to cross 268 watercourses in Labrador and will require the construction of three major crossing infrastructures (bridge or multi-plate arch culverts) and installation of several culverts, which have the potential to adversely affect channel stability and to interfere with fish passage and aquatic habitat. Similarly, improperly designed and/or installed culverts have the potential undermine the culvert/road embankment by channel processes such as erosion. The sensitivity of a watercourse and thus risk of instability due to bridges or culverts is in part determined by characteristics of the watercourse such as the watershed physiography, flow regime, streambed composition, etc.

Given the large number of watercourses in the study area, a desktop characterization was completed to define the dominant controlling and modifying influences of channel form and function. The intent of the characterization was to enable grouping of the watercourses into categories that would define general channel form and function and thus enable an approximation of channel sensitivity to water crossings. Existing conditions at each potential watercourse crossing were assessed using helicopter and/or ground reconnaissance. In Labrador, a total of 49 ground aquatic surveys were made in the summer of 2012 along the road corridor. Fluvial geomorphological field data was collected along with the aquatic surveys. At each water crossing, field personnel made observations of the form and function of the watercourse along a 100 m long reach extending approximately 50 m upstream and downstream of the crossing site. In general, three sets of observations were collected: one from the crossing location itself, one from the upstream reach, and one from the downstream reach. Besides the flow type (intermittent, permanent), data collected useful to geomorphic assessment included the bankfull dimensions.
(channel width, channel depth, bank angle), the entrenchment ratio, the substrate, the bed morphology, the bank erosion, the riparian vegetation, and thaw position.

Several statistical analyses were also carried out. Results from analyses provided the following insight:

- Drainage area analysis suggests that the majority of sites will require only small crossings.
- Although the majority of crossings have drainage areas less than 2 km², these sites were not investigated during the field program. This represents a gap that should be addressed in future stages of study.
- Results from linear regressions models indicate that channel width is correlated with easily erodible material.
- Erodibility classification of the surficial materials identified alluvial deposits, organic veneer, and outwash deposits as having the highest erosion potential. Ice contact deposits have moderate to high erosion potential.
- Erodibility of boundary materials was considered to be high for less than ten sites (highly erosion sensitive) and moderate to high for less than 60 crossings (high to moderate erosion sensitivities). These numbers may be higher, depending on the organic veneer sub classification. At a minimum, approximately 30% of the sites may require additional consideration to mitigate impacts to erosion and sedimentation. Construction will have a potential impact on aquatic habitat at these crossings. None of the three major water crossings of the current Road alignment appear to present significant design or cost constraints.
- Linear regression was used to evaluate the relation between channel width and surficial geology. Channel width appears to be a function of surficial geology. Results indicate that there is a correlation between channel width and erodible materials.

### 3.1.7 General Limnology

The central and eastern portions of the road follow the Ikadlivik Brook Valley, which shows a high ecological value due to its habitat abundance and diversity for marine, estuarine and freshwater species. The freshwater habitat in northern Labrador consists of a few large lakes, numerous small ponds and streams and rivers that flow to the Labrador Sea. The aquatic ecosystems have low nutrient availability, intermittent seasonal low flows and steep gradients typically limiting fish habitat and productivity in the upper ponds and streams due to low energy inputs, and few food resources (Vale Inco, 1997).

At water crossing points of the proposed Road corridor, the majority of aquatic features were likely representative of nil to intermittent flow type (66.5%) based on the drainage basin upstream of the crossing point (<2 km²). On the proposed Road corridor, there will be three major water crossings (including Reid Brook) of streams with permanent flow, tributaries connected to the Ikadlivik Brook in the eastern portion of the Road corridor (see Map in Appendix 3). Thus, relatively higher productivity is found in the larger streams that contain deep glaciofluvial deposits of sands, gravels and cobble. This is the case of tributaries that flow through the vegetated valleys as energy and nutrients are picked up and transported downstream, to the dominant valley: the Ikadlivik Brook, which is flowing to Voisey’s Bay (Vale Inco, 1997).

#### 3.1.7.1 Major Water Crossings

At the three proposed major water crossings locations, the substrate type was composed of coarse particles. Each major water crossings location was characterized by the presence of a natural obstacle to fish passage. Photos of each proposed water crossings are presented below (Figure 3-1 to 3-6). Habitat characteristics are presented at Table 3-1. It is noteworthy that the proposed bridge #2 is located within the Ikadlivik River, whereas the proposed bridge #3 is located in Reid Brook, at Reid Falls (downstream of Reid Pond), which are important aquatic components for the Arctic char.
Figure 3-1  Major water crossing #1 (downstream)
Figure 3-2  Major water crossing #1 (upstream)
Figure 3-3  Major water crossing #2 (downstream)
Figure 3-4  Major water crossing #2 (upstream)
Table 3-1 Habitat Assessment at the Proposed Major Water Crossings along the Road Corridor (2012)

<table>
<thead>
<tr>
<th>Water Crossing</th>
<th>Obstacles (Y/N), type</th>
<th>Mean Wetted Width (m)</th>
<th>Flow Type</th>
<th>Substrate Cover (%)</th>
<th>Dominant Substrate Type</th>
<th>Mean Depth (m)</th>
<th>Mean Flow (m/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1 - Upstream</td>
<td>y, vertical drop</td>
<td>200</td>
<td>Cascade, chute and run</td>
<td>48Be, 15SB, 10Ru, 10Co, 8LB, 5Pe, 5Gr</td>
<td>Coarse</td>
<td>0.85</td>
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</tr>
<tr>
<td>#1 - Downstream</td>
<td>y, vertical drop</td>
<td>10</td>
<td>riffle</td>
<td>60SB, 20Ru, 10LB, 10Co</td>
<td>Coarse</td>
<td>0.48</td>
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<td>#2 - Upstream</td>
<td>n</td>
<td>8</td>
<td>Run</td>
<td>30Be, 30LB, 30SB, 5Ru, 5Co</td>
<td>Coarse</td>
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<td>0.83</td>
</tr>
<tr>
<td>#2 - Downstream</td>
<td>y, vertical drop</td>
<td>50</td>
<td>riffle</td>
<td>30SB, 30Ru, 20LB, 10Co, 5Pe, 5Gr</td>
<td>Coarse</td>
<td>0.43</td>
<td>0.63</td>
</tr>
<tr>
<td>#3 - Upstream</td>
<td>y, vertical drop</td>
<td>40</td>
<td>Rapids, riffle and falls</td>
<td>30Ru, 25SB, 25Be, 6Co, 5LB, 4Pe, 1Gr, 1Sa</td>
<td>Coarse</td>
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<td>1.38</td>
</tr>
<tr>
<td>#3 - Downstream</td>
<td>y, vertical drop</td>
<td>21</td>
<td>riffle</td>
<td>50Ru, 25SB, 18Co, 5Pe, 2Gr</td>
<td>Coarse</td>
<td>0.31</td>
<td>0.44</td>
</tr>
</tbody>
</table>

A: Be: Bedrock (>1 m diameter); LB: Large Boulders (>1 m diameter); SB: small Boulders (25 cm – 1 m); Ru: Rubble (14-25 cm); Co: Cobble (6-13 cm); Pe: Pebble (3-5 cm); Gr: Gravel (20 mm – 3 cm); Sa: Sand (0.06 – 20 mm); SMC: Silt, Mud (0.004 – 0.05 mm), and Clay (0.004 – 0.05 mm) (from Sooley et al., 1998)

3.1.8 Surface Water Quality

During the ground survey conducted from July 23 to August 14, 2012 (AECOM, 2013c), measurements of in situ surface water parameters (conductivity, turbidity, pH, water temperature, and dissolved oxygen) were made for 49 streams which are crossing the preferred Road option corridor. The aquatic habitat represented along the
proposed Road corridor was characterized by low pH, conductivity, alkalinity (or buffering capacity), and high dissolved oxygen concentration levels (Table 3-2). Also, total suspended solids concentration was measured where large culverts (>2 m of diameter) are planned; low concentrations of total suspended solids (TSS < 2 mg/L) were measured in these streams.

Table 3-2  *In situ* Parameters Measured at the Water Crossings (49 streams in Labrador) (AECOM, 2013a)

<table>
<thead>
<tr>
<th>Water Crossing</th>
<th>Water Temperature (°C)</th>
<th>DO (mg/L)</th>
<th>Conductivity (µS/cm)</th>
<th>pH</th>
<th>Mean Turbidity (NTU)</th>
<th>Total suspended solids (TSS) (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Water Crossings (No Fish Habitat)</strong></td>
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<td></td>
<td></td>
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<td>na</td>
<td>8.38</td>
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<td>6.43</td>
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<tr>
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<td></td>
<td></td>
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<tr>
<td><strong>Water Crossings (Fish Presence)</strong></td>
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<td>0.27</td>
<td>1.0</td>
</tr>
<tr>
<td>268</td>
<td>13.9</td>
<td>10.39</td>
<td>16.1</td>
<td>6.99</td>
<td>0.42</td>
<td>1.0</td>
</tr>
<tr>
<td>271</td>
<td>21.4</td>
<td>8.22</td>
<td>25.5</td>
<td>6.96</td>
<td>0.4</td>
<td>1.0</td>
</tr>
<tr>
<td>280</td>
<td>17.6</td>
<td>8.37</td>
<td>22.5</td>
<td>6.6</td>
<td>1.04</td>
<td>1.0</td>
</tr>
<tr>
<td>282</td>
<td>17</td>
<td>8.86</td>
<td>21.4</td>
<td>6.63</td>
<td>0.96</td>
<td>1.0</td>
</tr>
<tr>
<td>301</td>
<td>12.3</td>
<td>10.82</td>
<td>15.6</td>
<td>6.92</td>
<td>0.32</td>
<td>1.0</td>
</tr>
<tr>
<td>304</td>
<td>13.3</td>
<td>10.02</td>
<td>18.4</td>
<td>7</td>
<td>0.27</td>
<td>1.0</td>
</tr>
<tr>
<td>325</td>
<td>16.2</td>
<td>9.81</td>
<td>11.9</td>
<td>7.15</td>
<td>0.44</td>
<td>&lt;2.0</td>
</tr>
</tbody>
</table>
Three Proposed Major Water Crossings

<table>
<thead>
<tr>
<th>ID</th>
<th>Water Temperature (°C)</th>
<th>DO (mg/L)</th>
<th>Conductivity (μS/cm)</th>
<th>pH</th>
<th>Mean Turbidity (NTU)</th>
<th>Total suspended solids (TSS) (mg/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>380</td>
<td>14.9</td>
<td>9.1</td>
<td>18.9</td>
<td>6.81</td>
<td>0.35</td>
<td></td>
</tr>
<tr>
<td>399</td>
<td>15.7</td>
<td>9.35</td>
<td>11.4</td>
<td>6.75</td>
<td>0.36</td>
<td></td>
</tr>
<tr>
<td>469</td>
<td>7.7</td>
<td>12.15</td>
<td>50.1</td>
<td>6.86</td>
<td>1.02</td>
<td></td>
</tr>
</tbody>
</table>

3.1.8.1 Major Water Crossings

The three proposed major water crossings (at water crossings #116, 177, 509) were visited on three occasions in 2012. At each visit, in situ surface water parameters were measured (conductivity, turbidity, pH, water temperature, and dissolved oxygen). Surface water sampling occurred during the summer aquatic ground surveys (August 2012), and in the fall season (October 2012).

- **Physico-Chemistry, Nutrients and Trophic Status Indicators**

Overall, the conductivity (10-16 μS/cm) and turbidity (0.24-1.85 NTU) were low and representative of the Northern Labrador. The pH values were close to neutral (7.2<pH>6.76) and dissolved oxygen concentrations were high (11.35 to 13.04 mg/L).

Assessment of ecosystem trophic status (total phosphorus, nitrates, nitrites, nitrogen, ammonia and dissolved organic carbon) indicated low concentration of nutrients with low organic production as they were either slightly above detection for dissolved organic carbon (1.9 to 2.3 mg/L), or were not detected at their reported detection limits (RDL). These indicators of low nutrient inputs when considered in addition to low alkalinity, low mineral content (conductivity), low hardness reflecting low concentrations of calcium (Ca) and magnesium (Mg), high dissolved oxygen concentrations, low turbidity, and low total dissolved solids all indicate oligotrophic conditions.

- **Metals, Rare Earth Elements and Hydrocarbons**

In terms of trace metals in surface water, none was reported in exceedance of the guidelines of the CCME recommendations for the protection of aquatic life (CCME, 2012) at any of the proposed major water crossings. At each of the proposed major water crossings locations, concentrations of rare earth elements (REEs) in surface water were below the reported detection limit (RDL). Hydrocarbons (PAH, MAH/BTEX, phenols and C10-C50) were not detected at their respective RDLs.

3.1.9 Soil Quality

Soil quality along the Road corridor was not investigated during the prefeasibility study. However, as recommended, any further geotechnical soil samples taken should be analyzed for their chemical constituents on the basis of initial screening for geochemistry and the HHERA.

3.1.10 Freshwater Sediment Quality

Sediments comprise an important component of aquatic ecosystems, providing habitat for a wide range of organisms such as macroinvertebrate communities. As for surface water sampling, sediments were sampled at each proposed major water crossings sites both in summer and in the fall season in 2012 (AECOM, 2013e).
3.1.10.1 Physical-Chemistry, Nutrients and Trophic Status Indicators

In terms of parameters linked to the level of nutrients and trophic status indicators, all values are indicative of oligotrophic conditions. Ammonia, nitrates, nitrites, and total nitrogen Kjeldahl concentrations were below the reported detection limit (RDL). Higher sulfate, total organic carbon, potassium (K), total sulphur (S), total phosphorus concentrations were measured at proposed major water crossing #1 site as compared to proposed bridges 2 and 3.

Table 3-3 Sediment Quality Parameters at the three Proposed Major Water Crossings (2012) Nutrients and Organic Carbon, Physico-chemistry and Major Ions

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>RDL</th>
<th>Proposed Major Water Crossings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>#1 (116)</td>
</tr>
<tr>
<td><strong>Nutrients and Organic Carbon</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonia</td>
<td>mg/kg - N</td>
<td>40 &lt;40</td>
<td>&lt;40</td>
</tr>
<tr>
<td>Nitrites (NO3-)</td>
<td>mg/kg</td>
<td>20 &lt;20</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Nitrites (NO2-)</td>
<td>mg/kg</td>
<td>20 &lt;20</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Phosphorus (tot)</td>
<td>mg/kg - P</td>
<td>100 280</td>
<td>260</td>
</tr>
<tr>
<td>Total Kjeldahl nitrogen</td>
<td>mg/kg - N</td>
<td>1000 &lt;1000</td>
<td>&lt;1000</td>
</tr>
<tr>
<td>Total organic carbon</td>
<td>%</td>
<td>0.3 1.8</td>
<td>&lt;0.3</td>
</tr>
<tr>
<td><strong>Physical-chemistry</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>pH NA</td>
<td></td>
<td>6.20</td>
</tr>
<tr>
<td>Conductivity</td>
<td>mS/cm</td>
<td>0.01 0.25</td>
<td>0.07</td>
</tr>
<tr>
<td>Redox Potential</td>
<td>mV</td>
<td>5 327</td>
<td>311.00</td>
</tr>
<tr>
<td>Buffer Capacity</td>
<td>% EEC (dry</td>
<td>5 &lt;5</td>
<td>&lt;5</td>
</tr>
<tr>
<td><strong>Major Ions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bromide available</td>
<td>mg/kg</td>
<td>1 &lt;1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Chloride available</td>
<td>mg/kg</td>
<td>1 5</td>
<td>2</td>
</tr>
<tr>
<td>Total Cyanides</td>
<td>mg/kg</td>
<td>0.5 &lt;0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>Fluoride available</td>
<td>mg/kg</td>
<td>10 &lt;50</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Sulfates (SO4)</td>
<td>mg/kg</td>
<td>1 96</td>
<td>4</td>
</tr>
<tr>
<td>Total Sulphur (S)</td>
<td>mg/kg</td>
<td>400 840</td>
<td>&lt;400</td>
</tr>
</tbody>
</table>

- Metals, Rare Earth Elements and Hydrocarbons

The results of analysis of sediment for the metals and metalloids, rare earth elements (REEs), and radioisotopes are presented in Table 3-4.

Many metals were not measured at the reported limit of detection (RDL) including: silver (Ag), boron (B), barium (Ba), indium (In), rhenium (Re), antimony (Sb), selenium (Se), tin (Sn), tantalum (Ta), tellurium (Te), and thallium (Tl). All rare earth elements (REEs) and associated mineral zirconium (Zr) were found in the sediment at the three proposed major water crossings but at low levels. The highest concentrations for zirconium (Zr) and cerium (Ce) were found at proposed water crossing # 1. Detected radioisotopes (Th-228, Rd-226, U-238, U-234, Th-230, Th-232, and Ra-228) were at concentrations between 0.01 and 0.04 Bq/g. In terms of hydrocarbons, neither petroleum hydrocarbons (C10-C50) or PAH or MAH/BTEX were detected at the reported detection limit.
### Table 3-4  Sediment Quality Parameters at the three Proposed Major Water Crossings (2012)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>RDL</th>
<th>Proposed Major Water Crossings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>#1 (115)</td>
</tr>
<tr>
<td><strong>Metals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arsenic (As)</td>
<td>mg/kg</td>
<td>2</td>
<td>&lt;2</td>
</tr>
<tr>
<td>Cadmium (Cd)</td>
<td>mg/kg</td>
<td>0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>Chromium (Cr)</td>
<td>mg/kg</td>
<td>10</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Copper (Cu)</td>
<td>mg/kg</td>
<td>10</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Mercury (Hg)</td>
<td>mg/kg</td>
<td>0.2</td>
<td>&lt;0.2</td>
</tr>
<tr>
<td>Nickel (Ni)</td>
<td>mg/kg</td>
<td>20</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Lead (Pb)</td>
<td>mg/kg</td>
<td>10</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Zinc (Zn)</td>
<td>mg/kg</td>
<td>40</td>
<td>42</td>
</tr>
<tr>
<td>Silver (Ag)</td>
<td>mg/kg</td>
<td>0.5</td>
<td>&lt;0.5</td>
</tr>
<tr>
<td>Aluminium (Al)</td>
<td>mg/kg</td>
<td>30</td>
<td>4370</td>
</tr>
<tr>
<td>Boron (B)</td>
<td>mg/kg</td>
<td>20</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Beryllium (Be)</td>
<td>mg/kg</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Bismuth (Bi)</td>
<td>mg/kg</td>
<td>15</td>
<td>&lt;15</td>
</tr>
<tr>
<td>Calcium (Ca)</td>
<td>mg/kg</td>
<td>100</td>
<td>1980</td>
</tr>
<tr>
<td>Cobalt (Co)</td>
<td>mg/kg</td>
<td>15</td>
<td>&lt;15</td>
</tr>
<tr>
<td>Iron (Fe)</td>
<td>mg/kg</td>
<td>500</td>
<td>9730</td>
</tr>
<tr>
<td>Gallium (Ga)</td>
<td>mg/kg</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td>Germanium (Ge)</td>
<td>mg/kg</td>
<td>0.05</td>
<td>0.15</td>
</tr>
<tr>
<td>Potassium (K)</td>
<td>mg/kg</td>
<td>100</td>
<td>564</td>
</tr>
<tr>
<td>Indium (In)</td>
<td>mg/kg</td>
<td>1</td>
<td>&lt;1</td>
</tr>
<tr>
<td>Lithium (Li)</td>
<td>mg/kg</td>
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<td>&lt;20</td>
</tr>
<tr>
<td>Magnesium (Mg)</td>
<td>mg/kg</td>
<td>100</td>
<td>1610</td>
</tr>
<tr>
<td>Manganese (Mn)</td>
<td>mg/kg</td>
<td>10</td>
<td>145</td>
</tr>
<tr>
<td>Molybdenum (Mo)</td>
<td>mg/kg</td>
<td>2</td>
<td>&lt;2</td>
</tr>
<tr>
<td>Sodium (Na)</td>
<td>mg/kg</td>
<td>100</td>
<td>&lt;100</td>
</tr>
<tr>
<td>Rubidium (Rb)</td>
<td>mg/kg</td>
<td>10</td>
<td>152</td>
</tr>
<tr>
<td>Rhenium (Re)</td>
<td>mg/kg</td>
<td>0.001</td>
<td>0.001</td>
</tr>
<tr>
<td>Antimony (Sb)</td>
<td>mg/kg</td>
<td>20</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Selenium (Se)</td>
<td>mg/kg</td>
<td>1</td>
<td>&lt;1.0</td>
</tr>
<tr>
<td>Silicium (Si)</td>
<td>mg/kg</td>
<td>150</td>
<td>159</td>
</tr>
<tr>
<td>Tin (Sn)</td>
<td>mg/kg</td>
<td>5</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Strontium (Sr)</td>
<td>mg/kg</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Tantalum (Ta)</td>
<td>mg/kg</td>
<td>10</td>
<td>&lt;10</td>
</tr>
<tr>
<td>Titanium (Ti)</td>
<td>mg/kg</td>
<td>1</td>
<td>505</td>
</tr>
<tr>
<td>Thallium (Tl)</td>
<td>mg/kg</td>
<td>15</td>
<td>&lt;15</td>
</tr>
<tr>
<td>Uranium (U)</td>
<td>mg/kg</td>
<td>20</td>
<td>&lt;20</td>
</tr>
<tr>
<td>Vanadium (V)</td>
<td>mg/kg</td>
<td>15</td>
<td>&lt;15</td>
</tr>
<tr>
<td>Tungsten (W)</td>
<td>mg/kg</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

**Rare earth elements (REE) and associated minerals (Nb, Th, Zr)**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerium (Ce)</td>
<td>mg/kg</td>
<td>1</td>
</tr>
<tr>
<td>Dysprosium (Dy)</td>
<td>mg/kg</td>
<td>0.06</td>
</tr>
<tr>
<td>Erbium (Er)</td>
<td>mg/kg</td>
<td>0.03</td>
</tr>
<tr>
<td>Europium (Eu)</td>
<td>mg/kg</td>
<td>0.03</td>
</tr>
</tbody>
</table>
3.2 Port

3.2.1 Climate

Based on the climate normal data collected between 1981 and 2010 at a weather station located in Nain which is about 28 km from the port area (Environment Canada, 2014), the annual daily average temperature is -2.5°C and the monthly daily minimum temperature is between -22°C (February) and 6.1°C (August). The extreme minimum temperature observed at Nain was -41.5°C (December 22, 1990) and the extreme maximum temperature was 33.3°C (July 31, 2000). Annual average precipitation is 952.4 mm at Nain, composed of 450.2 mm of rain and 475 mm of snow. The mean snow cover thickness observed over this period (1981 to 2010) at Nain is 92 cm in March. The annual precipitation distribution is relatively uniform or slightly drier in the summer.

A weather station was installed near the port site (Anaktalak Bay; approximate coordinates 56° 25’ 26.5” N – 62° 05’ 29” W) in November 2012 to measure barometric pressure, temperature and wind (speed and direction). From data compiled from November 9th 2012 to August 19th 2014, the wind rose chart indicates the main wind directions at the port are south south-west (SSW; 28.0%) and south-west (SW; 20.5%). Nevertheless, north northeast (NNE) winds accounted for 13.8% (Figure 3-7). Wind speed according to direction is illustrated on Figure 3-8. Table 3-5 compiles monthly and annual means of air temperature, wind direction and wind speed (2012-2014). Winds are greater for a period of three months starting from November to January. The highest daily maximum wind speed was observed in January (76.7 m/s).
Annual mean of air temperature was -2.9°C. The lowest daily minimum was observed in February, with a monthly average of -21.5°C of air temperature. Air temperature means (monthly and annual) correspond likely to the climatic data collected from 1981 to 2010 at Nain’s station (Environment Canada, 2014).

Figure 3-7 Wind Rose Chart – Wind Direction at Anaktalak Bay Weather Station (2012-2014)

Figure 3-8 Wind Rose Chart – Wind Speed at Anaktalak Bay Weather Station (2012-2014)
Table 3-5  Monthly and Annual Means of Air Temperature and Wind (Direction, Speed) at the Weather Station, Anaktalak Bay (2012-2014)

<table>
<thead>
<tr>
<th>Climatic Variable</th>
<th>Monthly and Annual Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Jan</td>
</tr>
<tr>
<td><strong>Air Temperature</strong></td>
<td></td>
</tr>
<tr>
<td>Daily Average (°C)</td>
<td>-17.0</td>
</tr>
<tr>
<td>Daily Maximum (°C)</td>
<td>-12.4</td>
</tr>
<tr>
<td><strong>Wind Direction</strong></td>
<td></td>
</tr>
<tr>
<td>Daily Average (°)</td>
<td>199.2</td>
</tr>
<tr>
<td>Standard Deviation (°)</td>
<td>37.6</td>
</tr>
<tr>
<td><strong>Wind Speed</strong></td>
<td></td>
</tr>
<tr>
<td>Daily Average (km/h)</td>
<td>31.3</td>
</tr>
<tr>
<td>Daily Maximum (km/h)</td>
<td>76.7</td>
</tr>
</tbody>
</table>

3.2.2 Air Quality

Environmental Baseline Studies conducted between 1995 and 1997 for the Voisey's Bay Mine Project included ambient air monitoring to establish background levels of total suspended particulates (TSP); dustfall; nitrogen dioxide; and sulphur dioxide. There were no particular concerns or issues noted, and air quality was typical of a remote site located away from industrial developments and residential centres (JWEL, 1997g). Vale has since constructed its own port within Edward's Cove, and the Road is used as a transport route from the Vale mine site (Voisey's Bay, located approximately 10 km to the south) to the port. The predominant wind direction is expected to be seaward off the land although easterly winds have been reported to blow occasionally inland off the Labrador Current, which could transport emissions from the Vale port installations. Emissions may include metal-laden particulate matter from mining and from Vale's port, stockpiling and concentrating as well as diesel combustion emissions.

3.2.3 Noise

Background noise at the port area before construction of the VBNC mine was estimated for noise modeling (Morrison Hershfield, 1997). Sources of noise included wind, waves, flowing water and animals; levels would typically remain below 80 dBA. Anticipated noise sources at the port area from VBNC operations include aircraft, ground vehicles and mining activities.

The current main noise sources in the vicinity of the port area are:

- Constant low background noise from equipment (powerhouse, etc.);
- Blasting from mining operations;
- Traffic noise, mostly when there are operations at the Vale port; and,
- From time to time the speedboats (summer), snowmobiles (winter), helicopters, and charter flights.

Human receptors (boaters, hunters/fishermen, workers) are more frequent near Edward's Cove than at Voisey's Bay (mine site), although activity is still relatively limited. Higher levels of natural background noise are expected at the port area compared to the inland parts due to greater wind and wave exposure.

3.2.4 Geology

Within the Nain Province, the bedrock geology underlying the eastern side of Edward's Cove is Archean-aged tonalite gneiss. The gneiss has a planar foliation defined by plagioclase feldspar and mafic minerals. The large topographic feature on the western side of Little Reid Brook and the western side of Edwards's Cove is a bedrock
exposure composed of Proterozoic mafic intrusive rock (troctolite) of the Nain Plutonic Suite (Ryan 1990). The contact between these two rock types is expressed as the lowlying area along Little Reid Brook. The troctolite likely displays limited deformation or structural fabric. Fracturing of bedrock is expected to follow the regional east to west strike-slip faults, with secondary fractures at acute angles to the main fractures.

The surficial geology consists of glacial sediments deposited as the Laurentide ice sheet melted approximately 10,000 years ago. The surficial deposits are dominated by glaciofluvial features such as outwash plains and eskers formed by moving water and are interpreted to be the product of downwasting of the ice sheet (Ives 1960).

3.2.5 Geomorphology

The coastal geomorphology at the port was investigated during the VBNC EIS (JWEL 1997c). The area was classified as protected from wave exposure and composed of a sand and gravel beach. A small estuary of Little Reid Brook is located in the port area.

3.2.6 Permafrost

The study area is located in the discontinuous permafrost zone where frozen ground is expected beneath a seasonal active layer. The lateral distribution of permafrost along the Road and Port may be interrupted by perennially unfrozen water bearing strata referred to as taliks. Generally speaking, permafrost is extensive along most of the proposed Road corridor but is expected to lessen approaching the coast as a result of increased snow cover and warmer temperatures.

3.2.7 Hydrogeology

The hydrogeological units listed in increasing hydraulic conductivity are: bedrock, till and moraine deposits, ablation drift, glaciomarine and marine deposits and glaciofluvial deposits. Permafrost will reduce the hydraulic permeability and its presence will impact and in some cases control the groundwater movement in the area.

Within the active zone, shallow groundwater movement is expected to follow local topography, but movement will also be influenced by the distribution and connectivity of taliks. The regional groundwater movement in the bedrock is expected to be controlled by the regional topography and physiography. Issues of particular interest are those related to groundwater movement and resulting road instability and the effect of melting permafrost on groundwater movement due either to short-term changes causes by project construction or longer-term changes due to global warming.

3.2.8 Soil Quality

Twelve soil samples were analyzed for trace metals as a part of the Voisey’s Bay Nickel Mine project (JWEL 1997d). The concentration of heavy metals in the soil fall within the range expected for soils at northern latitudes and all values were below applicable CCME environmental soil quality criteria. Characterizing the soil chemistry before the development of the port and comparing these results to the VBNC EIS will be necessary to establish pre-development conditions.

3.2.9 Freshwater Sediment Quality


Given the industrial partnership, five stations are monitored by VBNC. Stations of interest for the Project are on the Reid Brook main stem: Upper Reid Brook (NF03NE009; outlet of Reid Pond), Lower Reid Brook.
Instrumentation was installed on July 2003. These stations correspond to daily flow and water level data received in 2014 by Vale. For the outlet of Reid Pond (NF03NE009), measurements of the following parameters for surface water: temperature, pH, turbidity, specific conductance, dissolved oxygen, % saturation, and total dissolved solids.

3.2.10 Physical Marine Environment

3.2.10.1 Physical Oceanography

The physical oceanography of the port area was characterized for the VBNC EIS (Rescan 1997). The data collection included currents and tides, as well as conductivity and temperature profiles in Anaktalak Bay.

A review of this report indicates that strong salinity stratification is developed during peak runoff in July and progressively weakens through October. Currents are typically less than 0.1 m/s except for the passage between Voisey’s Bay and Anaktalak Bay where tidal speeds can exceed 1.0 m/s. Tides are strongly semi-diurnal. The spring tidal range is generally 2.5 m but may reach up to 2.9 m. There is insufficient fetch to produce destructive waves at the port location.

The coastal waters near the port site were investigated for the VBNC EIS (JWEL 1997a). Stratification of water based on temperature was observed in the inshore waters. Samples were collected for analyses of metals and nutrients and no anomalies were observed.

3.2.10.2 Coastal Ice Conditions

The historical ice conditions (1972 to 1996) of Edward’s Cove were compiled for the VBNC EIS (DF Dickins Associates 1997). The first ice generally appears in December and lasts until June; land-fast ice is present for an average of 183 days. Ice forms in protected bays and channels and extends rapidly seaward to be incorporated into the ice forming on offshore islands. The range of April land-fast ice thickness is between 110 and 140 cm. Ice pressure resulting from sustained high wind levels occur most frequently in March and April with events lasting up to 109 hours.

Ice thickness, growth and snow accumulation were monitored in 1997 (Cormorant 1997) and 1998 (Cormorant 1998) along the shipping route from Edward’s Cove near the proposed port location. Average ice thickness in 1997 was 114 cm with 21 cm of average snow accumulation and in 1998 average ice thickness was 88 cm and average snow accumulation was 32 cm.

3.2.10.3 Relative Sea Level

The relative sea level at the port location will be impacted by global sea level rise and eustatic rebound from deglaciation. An estimate of 30 cm increase in relative sea level is predicted for 2049 in the Nain area (Batterson and Liverman 2010).

3.2.10.4 Marine Sediment quality

A marine sediment quality investigation was completed for VBNC EIS (JWEL 1997e) to characterise the baseline sediment chemistry and particle size composition, sediment toxicity and benthic community. This investigation included 12 sampling locations in Anaktalak Bay near Edward’s Cove. The sediment grain size in Anaktalak Bay is fine grained. No toxicity was observed in the sediments. For the Quest project, an investigation of marine sediment quality was initiated during the 2012 field program.
4 Biological Environment

Chapter 4 presents a description of the biological environment for the road and the port, including the vegetation, semi-aquatic and terrestrial fauna, freshwater aquatic ecology and marine biology.

4.1 Road

4.1.1 Vegetation

Plant communities were investigated along the proposed road alignment at two different scales and distances from the proposed centerline. The first one includes a smaller scale approach aimed at describing vegetation within 5 km of the road corridor. Such scale was considered adequate to assess habitats available for most wildlife species inhabiting the road vicinity. The second approach consisted at characterizing vegetation at a much larger scale within a 400m wide strip following the proposed road alignment. The information was used to describe more precisely plant communities present along the road corridor.

The Strange Lake Project lies within the Taiga Shield Ecozone as defined by the Canadian Ecological Framework. The Russian term "taiga" refers to the northern edge of the boreal coniferous forest, which is also considered a transitional ecosystem to the treeless arctic biome to the north. The term "shield" refers to the predominance of Precambrian bedrock (Canadian Shield) (ESWG, 1995). On a regional scale, it is located in the Kingarutuk-Fraser River Ecoregion, which includes the southern continental tundra covering the George Plateau and several nearby mountainous areas.

4.1.1.1 Vegetation – 5 km Wide Road Corridor Study Area

For the 5 km wide road corridor, the study of vegetation and the preparation of a cover map were based on automatic classification of SPOT satellite data (satellite images). The study area comprises the entire road corridor. In total, 15 vegetation classes were designated along the road corridor and are presented in Table 4-1.

The following provides a general description of the four Land Regions that fall within the Road corridor.

The Western Plateau located on the western part of the study area is largely dominated by dwarf shrublands (52%). Wetlands are the other important component of the landscape (29% for wetlands and mixed wetlands), mainly in the western part, in the streamlined plateau and lowlands. Tall shrublands represent 13% of the corridor area. They are becoming more abundant east of Kogaluk’s tributary, as wetlands occupy a lesser proportion of the land. Snowpatches (with remaining snow still visible on images) are present and very large.

The Central Range Region is characterized by a mosaic of dwarf and tall shrublands (around 40% each) with barelands and mixedlands (7%). Wetlands include sedge fens with open water and other wetlands (the mixed wetland class, MWT). A tall shrubland marks the northern edge of the Ikadlivik Brook Valley and becomes dominant in the Central Range East District.

The Fraser River Valley Region is clearly different, dominated by closed coniferous forests (54%) with pockets of open coniferous forests (24%), mainly lichen woodlands. Tall shrublands (including deciduous forests) represents 15% of the area. In the floodplain of Ikadlivik’s Brook, land cover alternates between bare alluvial areas and tall shrub riparian swamp areas.

A small part of the Sagleak-Hopedale Land Region, typical of the coast of Labrador, is within the 5km road corridor. Dense coniferous forest dominates this Region (62%), with openings of tall shrublands (19%) or open coniferous forest (11%).
### Table 4-1  Vegetation Classes and Description of Vegetation within the 5 km wide Road Corridor study area

<table>
<thead>
<tr>
<th>Vegetation Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 WATER</td>
<td>Lake or river</td>
</tr>
<tr>
<td>2 WL</td>
<td>Wetland (including stream swamp, bog and fen peatlands)</td>
</tr>
<tr>
<td>3 SLd</td>
<td>Dwarf Shrubland (shrub species less than 30 cm)</td>
</tr>
<tr>
<td>4 SLt</td>
<td>Tall Shrubland (including deciduous forest)</td>
</tr>
<tr>
<td>5 BL</td>
<td>Bareland or Mixedland (Shrubland with Bareland)</td>
</tr>
<tr>
<td>6 MWT</td>
<td>Wetland (sedge fen or shrub fen without open water) or Wetland mixed with Shrubland</td>
</tr>
<tr>
<td>7 Snowbed</td>
<td>Snowbed</td>
</tr>
<tr>
<td>8 SW_Riparian</td>
<td>Tall Shrub Riparian Swamp</td>
</tr>
<tr>
<td>9 Alluvium</td>
<td>Alluvial deposits (bare soil)</td>
</tr>
<tr>
<td>10 CFc</td>
<td>Closed Coniferous Forest ($\geq 40%$ cover)</td>
</tr>
<tr>
<td>11 CFo</td>
<td>Open Coniferous Forest (10 - 39% cover)</td>
</tr>
<tr>
<td>12 Road</td>
<td>Road (Vale)</td>
</tr>
<tr>
<td>13 Mine</td>
<td>Mine (Vale)</td>
</tr>
<tr>
<td>14 Snow</td>
<td>Snow or ice visible on image</td>
</tr>
<tr>
<td>15 Shadow</td>
<td>Ground obscured by shadow</td>
</tr>
</tbody>
</table>

#### 4.1.1.2  Vegetation – 400 m Wide Road Corridor Study Area

The 400 m wide road corridor study area, including road options located in Quebec and Labrador covers an area of about 8,400 ha (or 84 km²). A total of 148 vascular plant species were found in this study area and the distribution of these plant species between the different strata was: 5 trees, 41 shrubs and 102 herbaceous plants.

Based on the Ecoforest Approach developed by MRNF (2011), a total of 71 ecological types in three main categories (Arctic Lands, Forests and Wetlands) were defined on the basis of vegetation structure along with height of the shrub layer (if present), surficial material (combination of thickness, texture and drainage) and specific physical features. These were regrouped into 18 generalized vegetation classes and 26 subclasses. Vegetation classes are defined in Table 4-2.
<table>
<thead>
<tr>
<th>Class Types/Formation</th>
<th>Class</th>
<th>Subclass (Tall-H/Dwarf-B)</th>
<th>Structure Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arctic Land</td>
<td>Lichen Shrubland (LT1)</td>
<td>Lichen Tall Shrubland (LT1H)</td>
<td>Land in which the cover of lichen is more dominant than shrubs (or equal to). Shrubs may be tall or dwarf.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lichen Dwarf Shrubland (LT1B)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Shrubland (LT2)</td>
<td>Tall Shrubland (LT2H)</td>
<td>Vegetation in which the cover of shrubs (tall or dwarf) is dominant.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dwarf Shrubland (LT2B)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mixedland (LT5)</td>
<td>Tall Shrub Mixedland (LT5H)</td>
<td>Land in which the cover of vegetation (tall or dwarf shrubs) and bareground (bedrock, boulders, bare soil) are mixed in similar proportions.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dwarf Shrub Mixedland (LT5B)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Snowbedland (LT6)</td>
<td>Snowbedland (Dwarf Shrub LT6B)</td>
<td>Land located within a snowbed. Usually dominated by dwarf shrubs but a lot of variation is present.</td>
</tr>
<tr>
<td></td>
<td>Polygonland (LT7)</td>
<td>Polygonland (Dwarf Shrub) (LT7B)</td>
<td>Land with a polygonal structure due to the presence of permafrost. Usually dominated by dwarf shrubs, lichen, sedges and mosses in comparable proportions.</td>
</tr>
<tr>
<td></td>
<td>Bareland (LT4)</td>
<td>Tall Shrub Bareland (LT4H)</td>
<td>Land in which bare rock (or gravel or boulders) is more dominant than vegetation cover, characterized by the predominance of tall or dwarf shrubs.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Dwarf Shrub Bareland (LT4B)</td>
<td></td>
</tr>
<tr>
<td>Forest Land/Forest</td>
<td>Mixed Forest (MF)</td>
<td>Paper Birch</td>
<td>Forests dominated by paper birch with white spruce as a minor component.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>White Spruce Forest</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coniferous Moss Forest (CMF)</td>
<td>White Spruce Forest</td>
<td>Open to dense (15-75%) homogenous white spruce forest with dominant shrub layer of ericaceous shrubs and a thick moss carpet.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>White Spruce Tamarack-Black Spruce Forest</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Coniferous Lichen Forest (CLF)</td>
<td>Black Spruce Lichen Forest</td>
<td>Open to mid-density (10-35%) forest dominated by black spruce with tamarack and a well developed shrub and moss layer.</td>
</tr>
<tr>
<td>Forest Land/Forested Wetlands Ombrotrophic</td>
<td>Coniferous Sphagnum Forest (CSF)</td>
<td>Black Spruce Forested Bog</td>
<td>Open to mid-density (10-35%) forest, developed on nutrient-poor organic deposit, dominated by black spruce with a sphagnum carpet.</td>
</tr>
<tr>
<td>Forest Land/Forested Wetlands Minerotrophic</td>
<td>Coniferous Forested Swamp (CFS)</td>
<td>Black Spruce or White Spruce-Tamarack Forested Swamp</td>
<td>Open to closed forest (15 - 75%), developed on nutrient-rich organic deposits, dominated by black spruce or by tamarack and white spruce, with a well developed shrub layer and the ground layer consisting of a mixture of mosses, sedges and herbs.</td>
</tr>
</tbody>
</table>
### Class Types/Formation

<table>
<thead>
<tr>
<th>Class</th>
<th>Subclass</th>
<th>Structure Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wetlands</td>
<td>Litoral (L1)</td>
<td>Beach</td>
</tr>
<tr>
<td>Riparian Marsh (MH1)</td>
<td>Tall Shrub (MH1H)</td>
<td>Riparian vegetation in which the cover of sedges or other herbaceous species is dominant with a minor proportion of tall or dwarf shrubs (often equivalent to a riparian sedge fen)</td>
</tr>
<tr>
<td>Riparian Swamp (MA1)</td>
<td>Riparian Tall Shrub Swamp (MA1H)</td>
<td>Riparian vegetation in which the cover of tall shrubs is dominant (&gt;60%)</td>
</tr>
<tr>
<td>Sedge Fen (Herbaceous Fen) (THF)</td>
<td>Sedge Fen (Dwarf Shrub) (THFB)</td>
<td>Wetland vegetation in which the cover of sedges is dominant (50-85%) with a minor proportion of dwarf shrubs (2-35%)</td>
</tr>
<tr>
<td>Shrub Fen (TAF)</td>
<td>Tall Shrub Fen (TAFH)</td>
<td>Wetland vegetation in which the cover of tall shrubs is dominant or co-dominant with sedges</td>
</tr>
<tr>
<td>Shrub Fen (TAF)</td>
<td>Dwarf Shrub Fen (TAFB)</td>
<td>Wetland vegetation in which the cover of dwarf shrubs is dominant or co-dominant with sedges (e.g. 50% dwarf shrubs &amp; 40% sedges)</td>
</tr>
<tr>
<td>Polygon Fen (TPF)</td>
<td>Polygon Fen (Dwarf Shrub) (TPFB)</td>
<td>Wetland with a polygonal structure due to the presence of permafrost. Usually dominated by sedges and dwarf shrubs, with masses and lichen in comparable proportions.</td>
</tr>
<tr>
<td>Palsa Fen (TPP)</td>
<td>Palsa Fen (Dwarf Shrub) (TPPB)</td>
<td>Wetland with perennially frozen, treeless mounds of peat (palsas) in a fen.</td>
</tr>
</tbody>
</table>

### 4.1.1.3 Rare Plants and their Particular Habitats

Twenty-four rare plant species were found in the road corridor study area (S1 to S3 rankings), including 4 species with an S1 ranking (5 or fewer occurrences in Labrador), and 6 species with an S2 ranking (rare throughout their range). The species are presented in Table 4-3.

#### Table 4-3 List of Rare Species encountered in the Labrador Portion of Road Corridor Study Area in July 2012

<table>
<thead>
<tr>
<th>Rank for Labrador</th>
<th>Latin Name</th>
<th>Common Name</th>
<th>Habitat (Vegetation Subclass)</th>
<th>Affinities for Particular Substrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1</td>
<td>Carex williamsii</td>
<td>Williams’ Sedge</td>
<td>Sedge Fen</td>
<td>Ca</td>
</tr>
<tr>
<td>S1</td>
<td>Oxytropis campestris var. johannensis</td>
<td>Saint John River Loovered</td>
<td>Bareland, Mixelend (Summit)</td>
<td>Ca</td>
</tr>
<tr>
<td>S1</td>
<td>Sagina caespitosa</td>
<td>Tufted Pearlwort</td>
<td>Bareland</td>
<td></td>
</tr>
<tr>
<td>S1</td>
<td>Carex nardina</td>
<td>Narrow Sedge</td>
<td>Dwarf Mixelend</td>
<td>Ca</td>
</tr>
<tr>
<td>S2</td>
<td>Ranunculus arcticus (syn. Ranunculus arcticus var. affinis)</td>
<td>Northern Buttercup</td>
<td>Sedge Fen</td>
<td>Ch</td>
</tr>
<tr>
<td>S2</td>
<td>Ranunculus arcticus (syn. Ranunculus pedatifidus var. affinis)</td>
<td>Northern Buttercup</td>
<td>Sedge Fen</td>
<td>Ch</td>
</tr>
<tr>
<td>S2</td>
<td>Bartsia alpina</td>
<td>Alpine Bartsia</td>
<td>Riparian Swamp, Sedge Fen</td>
<td></td>
</tr>
<tr>
<td>S2</td>
<td>Draba lactea</td>
<td>Milky Whitlow-grass</td>
<td>Dwarf Shrubland</td>
<td>Ca</td>
</tr>
<tr>
<td>S2</td>
<td>Pedicularis groenlandica</td>
<td>Elephant’s-head Lousewort</td>
<td>Sedge Fen</td>
<td>Dwarf Shrubland, Snowbed, Bareland (Riparian)</td>
</tr>
<tr>
<td>S3</td>
<td>Antennaria alpina</td>
<td>Alpine Pussels</td>
<td>Lichen Dwarf Shrubland</td>
<td></td>
</tr>
</tbody>
</table>
### Rank for Labrador

<table>
<thead>
<tr>
<th>Rank</th>
<th>Species Long Name</th>
<th>Common Name</th>
<th>Habitat (Vegetation Subclass)</th>
<th>Affinities for Particular Substrate</th>
</tr>
</thead>
<tbody>
<tr>
<td>S3</td>
<td>Carex arctogena (syn. Carex capitata ssp. arctogena)</td>
<td>Capitate Sedge</td>
<td>Dwarf Shrub Bareland</td>
<td>Ca</td>
</tr>
<tr>
<td>S3</td>
<td>Isoetes lacustris</td>
<td>Lake Quillwort</td>
<td>Riparian Swamp</td>
<td></td>
</tr>
<tr>
<td>S3</td>
<td>Juncus biglumis</td>
<td>Two-flower Rush</td>
<td>Dwarf Shrubland</td>
<td></td>
</tr>
<tr>
<td>S3</td>
<td>Pyrola grandiflora</td>
<td>Arctic Wintergreen</td>
<td>Bareland (Riparian)</td>
<td></td>
</tr>
<tr>
<td>S3</td>
<td>Taraxacum lasiacum</td>
<td>Lapland Dandelion</td>
<td>Sedge Fen, Snowpatchland</td>
<td></td>
</tr>
<tr>
<td>S3S4</td>
<td>Cardamine bellidifolia</td>
<td>Alpine Bittercress</td>
<td>Bareland (Riparian)</td>
<td>Ch</td>
</tr>
<tr>
<td>S3S4</td>
<td>Juncus trigrumus ssp. Albescens</td>
<td>Northern White Rush</td>
<td>Sedge Fen, Dwarf Shrubland, Bareland (Riparian)</td>
<td></td>
</tr>
<tr>
<td>S3S4</td>
<td>Juncus trifidus</td>
<td>Highland Rush</td>
<td>Tall Shrubland, Tall Shrub Bareland</td>
<td>Ch</td>
</tr>
<tr>
<td>S3S4</td>
<td>Parnassia kotzebuei</td>
<td>Kotzebuei's Grass of Parnassus</td>
<td>Sedge Fen, Lichen Dwarf Shrubland, Bareland (Riparian)</td>
<td>Ca</td>
</tr>
<tr>
<td>S3S4</td>
<td>Pedicularis lapponica</td>
<td>Lapland Lousewort</td>
<td>Dwarf Shrubland, Riparian Swamp, Sedge Fen, Tall Shrubland, Dwarf Shrub Fen Snowbed</td>
<td>Ch</td>
</tr>
<tr>
<td>S3S4</td>
<td>Salix vestita</td>
<td>Hairy Willow</td>
<td>Riparian Swamp, Dwarf Shrubland</td>
<td>Ca</td>
</tr>
<tr>
<td>S3S4</td>
<td>Solidago multiflora</td>
<td>Alpine Goldilocks</td>
<td>Sedge Fen (Riparian)</td>
<td>Ca</td>
</tr>
<tr>
<td>S3S4</td>
<td>Tofieldia pusilla</td>
<td>Scotch False Asphodel</td>
<td>Dwarf Shrubland, Sedge Fen, Lichen Dwarf Shrubland, Tall Shrubland</td>
<td>Ca</td>
</tr>
</tbody>
</table>

1. S1: Critically Imperiled: At very high risk of extinction due to extreme rarity (often 5 or fewer populations), very steep declines, or other factors. S2: Imperiled: At high risk of extinction or elimination due to very restricted range, very few populations, steep declines, or other factors. S3: Vulnerable: At moderate risk of extinction or elimination due to a restricted range, relatively few populations, recent and widespread declines, or other factors. S4: Apparently Secure: Uncommon but not rare, some cause for long-term concern due to declines or other factors. S3S4: A range between S3 and S4. Denotes range of uncertainty about the exact rarity of the element.

2. Ca: Calcicole; Se: Serpentine; Ch: Chionophile.

### 4.1.2 Semi-Aquatic and Terrestrial Wildlife

Along the road corridor, 13 waterfowl species and one loon species were recorded during two summer aerial surveys. The species with the highest number of individuals was the red-breasted merganser, followed in abundance by the common merganser, the Canada goose, the long-tailed duck, the greater scaup, the harlequin duck, the great-winged teal and the surf scoter. The breeding harlequin duck, a species listed as of special concern in Canada and as vulnerable both in Québec and Newfoundland and Labrador's endangered species legislation, was found in the streams and rivers located in or near the road corridor.

Five different raptor species were observed along the road corridor during three summer aerial surveys: peregrine falcon, golden eagle, merlin, gyrfalcon, and short-eared owl. Three active peregrine falcon nests were found in the road corridor study area. Twenty-three passerines and galliforme bird species were also detected in deciduous forest, heath and coniferous forest habitats.

Along the road corridor, a total of 5 caribou groups (266 individuals) were observed during an aerial fall survey, with 85% females and 35% males. Caribou tracks observed in the snow during the winter indicates that the...
species travel along east-west and north-south axes. The caribou presents a key issue, given the value of this animal for native and non-native peoples of Labrador as well as the George River herd's recent severe decline in population. Caribou cross portions of the road corridor twice annually, when moving to northerly calving grounds in the spring, then back south in the fall for their wintering range. Based on the analysis of telemetry data from 2000 to 2011, the migration corridor is fairly extensive across the road corridor although there are certain segments where caribou crossings are more concentrated.

During the winter track aerial survey of the road corridor, animal tracks belonging to 14 different species or species groups were recorded. Track abundance in the Ikadlivik Brook valley was 3 times greater than on the Plateau area located west of the same Valley, along the Mine access road corridor. Snowshoe hare, red squirrel and likely willow ptarmigan were the most abundant species, especially in the Valley. Closed coniferous habitats were home to a greater number of animal species than others habitat types. Open coniferous forests and high shrublands also exhibited high species diversity and abundance along the road corridor. For small mammals, capture rate was higher in wet habitats than in dry ones. During the summer, major mammal species observed included caribou from the George River Caribou Herd, black bear, arctic and red fox, arctic hare, red-backed vole and masked shrew.

4.1.3 Freshwater Aquatic Ecology

Helicopter aerial surveys and ground surveys were conducted during the summer of 2012 along the proposed road corridor to characterize the aquatic components at water crossings. Benthic invertebrate communities were investigated at the three proposed major crossings along the road corridor (see Appendix 3). At the crossing point, in situ surface water parameters (water temperature, pH, dissolved oxygen, conductivity and turbidity) were measured (see section 3.1.8).

The freshwater habitat along the proposed road corridor is mainly composed of oligotrophic aquatic conditions. Low nutrient inputs and low primary productivity resulted in low fish and macroinvertebrate diversity and densities. However, the tributaries connected to the Ikadlivik Brook in the eastern portion of the road corridor have relatively higher productivity.

4.1.3.1 Fish and Fish Habitat

Aerial Survey

In 2012, the Project considered many road alignments totaling more than 500 water crossings on more than 400 different water courses. In 2014, the final alignment of the proposed road corridor totalises 268 water crossings in Labrador. Given the large number of water crossings along the proposed road corridor, a classification of the different water crossings was made prior to the detailed field work in 2012 based on a previous methods used for other studies on linear corridors. This classification was based on the watershed surface area located upstream of the crossing point. An aerial survey by helicopter was completed on all water crossings to determine the water course general flow (nil, intermittent or ephemeral, permanent) and the importance (%) of general habitat types (riffle, run, pool, steady, etc.). Thereafter, ground surveys were conducted on a subsample of stream crossing sites along the road corridor in 2012, using an approach based on the probability of finding more fish habitat within progressively larger streams.

Aerial validation confirmed that around half of the aquatic features consisted of intermittent flow at proposed water crossings. For less than 10% of water crossings, no sign of water flow was observed during the aerial survey. Prior to assessment, helicopter surveys were conducted on September, 6th 2011 to collect high resolution digital photography (25 cm ground resolution aerial photography) of the study area. Interpretation of aerial photographs was used to identify water flow systems. At this scale, all streams with a defined channel and classified as potential fish habitat were located and mapped along the proposed Road Option. Subsequent orthophotos were produced for a corresponding scale of 1:5,000.
According to aerial assessment of habitat types conducted in accordance with methodology by McCarthy et al. (draft, revised 2010), the slow channel (<0.2 m/s, <0.5 m, gradient <1%) and moderate water (riffle, flat/steady) were the flow and habitat types represented in higher proportions, on average, at water crossings along the different road corridor alternatives studied.

Ground Surveys

As mentioned previously, more than 500 water crossings on more than 400 different water courses were potentially considered for ground surveys in 2012 due to various road alignment alternatives. However, ground surveys were limited to 49 streams in Labrador, all having a drainage area higher that 2 km². From these, two (crossings #165 and 261) were categorized as not providing any fish habitat and no fishing effort was made.

Fish habitat characterization (habitat type, riparian vegetation) and fishing efforts were completed on average over a 100 m long reach, i.e. 50m downstream to 50m upstream of each road crossing. Habitat characteristics (substrate, width, velocity, depth, riparian vegetation) were assessed at three transects within the study reach. Table 4-4 outlines the results of the habitat assessment for ground surveys. The majority (>85%) of streams was associated with permanent flow showing heterogeneous substrate and habitat types (lentic channel, riffle, rapids, falls, run, flat). However, a non-negligible proportion (>45%) of water courses was determined to be fishless streams in the study reach, in part owed to the presence of natural obstacles (vertical drops, low flow barriers) preventing fish passage downstream of study reach. From fish habitat streams (excluding proposed bridge locations), the average depth was of 0.25 ±0.10 m and the average flow of 0.35±0.23 m/s. The wetted width was variable (5.7±3.9 m).

Water crossings were representative mostly of stream habitat, however, ponds were found in the study area. Thus, water crossings # 92, 110, 119, 163, and 240 were associated with a proportion of pond and lake habitat in the surveyed reach (Table 4-4).

Two types of aquatic habitat were mainly observed in the study reach surveyed: fishless streams; and streams dominated by brook trout fish communities. Twenty-five of the water crossings were determined to be fishless (Table 4-4). Almost half of fishless streams had natural obstacles to fish passage and migration within the surveyed section. Obstacles were of two types: vertical drop (cascade, waterfalls) and low flow barrier (low water level flowing over exposed boulders or bedrock). Absence of fish in Labrador has been reported in small, higher elevation, and primarily first order tributaries that had barriers downstream (Vale Inco, 1997). Some fishless water crossings had fine substrate as the dominant substrate type.

A total of eight fish species were caught: brook trout, lake chub, longnose sucker, burbot, sculpin sp., Arctic char, Atlantic salmon and lake trout. Lake trout was caught at the proposed major water crossing #1 only, during angling efforts conducted in the fall. Most of the watercourses sampled on the ground, other than the fishless streams, were dominated by brook trout that accounted for more than 70% of the catch. Suitable heterogeneous habitat characteristics were found for brook trout including habitat types and substrates that provide holding, rearing and/or potential spawning habitats for the species. The anadromous brook trout was considered to be mainly associated with the eastern portion of the proposed road corridor (Reid Brook, proposed major water crossing #3), and at water crossings associated with Ikadalik Brook system (see Appendix 3). In this section of the proposed road corridor, Arctic char and Atlantic salmon were also part of the aquatic fish community. It is noteworthy that Arctic char was also caught at proposed bridge #1 (WC#116), which is hydroconnected to the Kogaluk River flowing south of Ikadalik Brook, and draining into the east coast of Labrador, in Voisey’s Bay. Atlantic salmon, when present, was found in association with brook trout (water crossings #269, 331, and 393). Arctic char was caught in #284 as a solitary species. Water crossings #116 and 319 had a salmonid community composed of both brook trout and Arctic char.

Electrofishing densities were calculated as a standardized fishing effort (density per 100 m²) in streams. Omitting the 25 fishless streams, fish density varied from 0.65 (#100) to 55.32 fish/100 m² upstream of water crossing #509 (proposed major water crossing #3; Table 4-5; Appendix 3) Generally, electrofishing density was greatest in stream sections which provided good cover, with stream gradient not exceeding 4%, in heterogeneous habitat.
types such as in slow water, or run, riffle, flat/steady, and when no obstacle was present downstream (vertical drop). Three Arctic char were also captured with angling effort downstream of proposed bridge 3 (#509). Vale Inco (1997) reported that above Reid Falls, the ratio of brook trout to Arctic char increased to 8:1 compared to 1.5:1 below Reid Falls, most likely due to Reid Falls limiting upstream movement of anadromous char.

Overall, the presence of instream vegetation cover was rare. In terms of riparian vegetation, a total of 40 species were reported. The most frequent and largely distributed were: glandular birch (*Betula glandulosa*), bluejoint reedgrass (*Calamagrostis canadensis*), Bigelow’s sedge (*Carex bigelowii*), slender cottongrass (*Eriophorum gracile*), common Labrador tea (*Rhododendron groenlandicum*), northern willow (*Salix arctophila*), tufted clubrush (*Trichophorum cespitosum*), and alpine bilberry (*Vaccinium uliginosum*).

In the eastern part of the road corridor, all water crossings located in tributaries of Ikadlivik Brook which contained no barriers in their downstream reaches are likely to be habitat for salmonids since the mouths of these tributaries are accessible to anadromous and non-anadromous resident fish, entering the system as far as Voisey’s Bay.
### Table 4-4  Habitat Characteristics of Water Crossings with Confirmed Fish Presence, Electrofishing Density and Number of Fish Captured (by Species) Along the Proposed Road Corridor

<table>
<thead>
<tr>
<th>Water Crossing</th>
<th>Mean Width (m)</th>
<th>Flow Type</th>
<th>Substrate Cover (%):</th>
<th>Dominant Substrate Type</th>
<th>Mean Depth (m)</th>
<th>Mean Flow (m/s)</th>
<th>Length (m)</th>
<th>Width (m)</th>
<th>Area (m²)</th>
<th>Total Catch # fish</th>
<th>Density (fish per 100m)</th>
<th>Captures (Number of Individuals)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>0.77</td>
<td>Lentic channel</td>
<td>5B(53), 23Sa, 23BMC</td>
<td>Heterogeneous</td>
<td>0.19</td>
<td>0.03</td>
<td>111</td>
<td>0.75</td>
<td>63.25</td>
<td>4</td>
<td>4.8</td>
<td>4</td>
</tr>
<tr>
<td>9</td>
<td>0.87</td>
<td>Lentic channel and pool</td>
<td>63SMC, 17SB, 13Sa, 7Gr</td>
<td>Fine</td>
<td>0.22</td>
<td>0.04</td>
<td>110</td>
<td>0.8</td>
<td>88</td>
<td>3</td>
<td>3.41</td>
<td>3</td>
</tr>
<tr>
<td>12</td>
<td>0.87</td>
<td>Flat and riffle</td>
<td>40SB, 15Sr, 15Sa, 13Rb, 8Co, 7Pe, 2LB</td>
<td>Heterogeneous</td>
<td>0.18</td>
<td>0.18</td>
<td>100</td>
<td>4.5</td>
<td>450</td>
<td>3</td>
<td>0.87</td>
<td>2</td>
</tr>
<tr>
<td>13</td>
<td>10.7</td>
<td>Lentic channel and riffle</td>
<td>33SB, 23Sa, 22Gr, 7Br, 7Fp, 5Co, 3Rb</td>
<td>Heterogeneous</td>
<td>0.42</td>
<td>0.08</td>
<td>100</td>
<td>8</td>
<td>800</td>
<td>12</td>
<td>1.5</td>
<td>8</td>
</tr>
<tr>
<td>15</td>
<td>0.44</td>
<td>Riffle</td>
<td>18Gr, 16Sa, 17Rb, 15SB, 13Pe, 12BMC, 7Co</td>
<td>Medium</td>
<td>0.15</td>
<td>0.22</td>
<td>105</td>
<td>0.4</td>
<td>42</td>
<td>2</td>
<td>4.76</td>
<td>2</td>
</tr>
<tr>
<td>91</td>
<td>1.47</td>
<td>Rapids and flat</td>
<td>52RS, 22SB, 12Co, 7Pe, 70mm 25Sa</td>
<td>Coarse</td>
<td>0.15</td>
<td>0.27</td>
<td>115</td>
<td>1</td>
<td>115</td>
<td>9</td>
<td>7.83</td>
<td>6</td>
</tr>
<tr>
<td>94</td>
<td>0.62</td>
<td>Rapids and lentic channel</td>
<td>37Rb, 23Co, 18BMC, 13BM, 5Pe, 2Gr, 2Sa</td>
<td>Medium</td>
<td>0.15</td>
<td>0.13</td>
<td>120</td>
<td>0.8</td>
<td>96</td>
<td>3</td>
<td>3.13</td>
<td>3</td>
</tr>
<tr>
<td>96</td>
<td>0.53</td>
<td>Rapids</td>
<td>43SB, 24SB, 17Br, 7Pe, 8Co</td>
<td>Heterogeneous</td>
<td>0.29</td>
<td>0.24</td>
<td>120</td>
<td>1.5</td>
<td>185.5</td>
<td>20</td>
<td>10.67</td>
<td>13</td>
</tr>
<tr>
<td>59</td>
<td>5.88</td>
<td>Flat and lentic channel</td>
<td>33SB, 25SA, 7Rb, 12Co, 7Pe</td>
<td>Coarse</td>
<td>0.27</td>
<td>0.15</td>
<td>102</td>
<td>2.5</td>
<td>255</td>
<td>15</td>
<td>5.88</td>
<td>8</td>
</tr>
<tr>
<td>100</td>
<td>2.33</td>
<td>Lentic channel</td>
<td>37SB, 33LB, 3SRb</td>
<td>Coarse</td>
<td>0.18</td>
<td>0.05</td>
<td>101</td>
<td>2</td>
<td>202</td>
<td>4</td>
<td>1.68</td>
<td>2</td>
</tr>
<tr>
<td>101</td>
<td>10.63</td>
<td>Lentic channel and rapids</td>
<td>40Rb, 30SB, 23Co, 2SB, 2Pe</td>
<td>Coarse</td>
<td>0.3</td>
<td>0.16</td>
<td>103</td>
<td>2</td>
<td>206</td>
<td>6</td>
<td>3.88</td>
<td>1</td>
</tr>
<tr>
<td>108</td>
<td>7.68</td>
<td>Run, flat and lentic channel</td>
<td>32SB, 20UL, 18Rb, 8Sw, 7Co, 5Pe, 3Gr, 3SA, 3SMC</td>
<td>Coarse</td>
<td>0.27</td>
<td>0.22</td>
<td>103</td>
<td>2</td>
<td>206</td>
<td>5</td>
<td>2.43</td>
<td>5</td>
</tr>
<tr>
<td>173</td>
<td>6.1</td>
<td>Riffle</td>
<td>90SB, 20Ru, 15Co, 5LB</td>
<td>Coarse</td>
<td>0.09</td>
<td>0.05</td>
<td>125</td>
<td>2</td>
<td>250</td>
<td>5</td>
<td>2.5</td>
<td>5</td>
</tr>
<tr>
<td>269</td>
<td>5.25</td>
<td>Cascade and falls</td>
<td>33Be, 33SB, 23Br, 15Rb</td>
<td>Coarse</td>
<td>0.32</td>
<td>0.51</td>
<td>100</td>
<td>1</td>
<td>100</td>
<td>12</td>
<td>12</td>
<td>9</td>
</tr>
<tr>
<td>284</td>
<td>0.61</td>
<td>Lentic channel, riffle and rapids</td>
<td>47Ru, 20Co, 17SB, 8Pe, 3SA, 3SMC, 25Gr</td>
<td>Heterogeneous</td>
<td>0.2</td>
<td>0.3</td>
<td>130</td>
<td>0.7</td>
<td>91</td>
<td>1</td>
<td>1.1</td>
<td>1</td>
</tr>
<tr>
<td>310</td>
<td>9.5</td>
<td>Falls, rapids</td>
<td>40SB, 32Gr, 17Rb, 13SMC, 7Pe, 5Co</td>
<td>Heterogeneous</td>
<td>0.51</td>
<td>0.59</td>
<td>100</td>
<td>1</td>
<td>100</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>311</td>
<td>2.85</td>
<td>Falls, riffle and rapids</td>
<td>40Ru, 32GR, 13BS, 7Gr, 3Pe, 3SA</td>
<td>Heterogeneous</td>
<td>0.34</td>
<td>0.34</td>
<td>100</td>
<td>0.5</td>
<td>50</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>319</td>
<td>6.93</td>
<td>Riffle and cascade</td>
<td>50BR, 17LB, 13SB, 10Ru, 7Co, 2FB, 2GR</td>
<td>Coarse</td>
<td>0.27</td>
<td>0.83</td>
<td>112</td>
<td>1.5</td>
<td>160</td>
<td>11</td>
<td>6.55</td>
<td>9</td>
</tr>
<tr>
<td>331</td>
<td>15.33</td>
<td>Riffle, flat and run</td>
<td>60Ru, 15Co, 10SB, 10Pe, 5Gr</td>
<td>Heterogeneous</td>
<td>0.31</td>
<td>0.36</td>
<td>112</td>
<td>1.5</td>
<td>160</td>
<td>21</td>
<td>12.5</td>
<td>20</td>
</tr>
<tr>
<td>353</td>
<td>3.63</td>
<td>Riffle</td>
<td>33Ru, 20Co, 30Pe, 20Gr, 8Sa</td>
<td>Heterogeneous</td>
<td>0.13</td>
<td>0.31</td>
<td>85</td>
<td>2</td>
<td>170</td>
<td>25</td>
<td>14.71</td>
<td>23</td>
</tr>
<tr>
<td>356</td>
<td>3.78</td>
<td>Riffle and falls</td>
<td>40Ru, 37SB, 17Co, 8Pe, 5LB, 3Be</td>
<td>Heterogeneous</td>
<td>0.2</td>
<td>0.38</td>
<td>75</td>
<td>1</td>
<td>75</td>
<td>14</td>
<td>18.67</td>
<td>14</td>
</tr>
<tr>
<td>407</td>
<td>6.42</td>
<td>Cascade and falls</td>
<td>77Br, 13LB, 10SB</td>
<td>Sedrock</td>
<td>0.25</td>
<td>0.85</td>
<td>85</td>
<td>1</td>
<td>85</td>
<td>12</td>
<td>14.12</td>
<td>12</td>
</tr>
<tr>
<td>415</td>
<td>6.51</td>
<td>Run and rapids</td>
<td>37Ru, 26L, 22SB, 10Co, 3Pe</td>
<td>Coarse</td>
<td>0.36</td>
<td>0.61</td>
<td>100</td>
<td>2</td>
<td>200</td>
<td>17</td>
<td>8.5</td>
<td>17</td>
</tr>
<tr>
<td>500</td>
<td>1.3</td>
<td>Flat and riffle</td>
<td>29SB, 26G, 17Rb, 13Rb</td>
<td>Heterogeneous</td>
<td>0.18</td>
<td>0.24</td>
<td>105</td>
<td>1</td>
<td>105</td>
<td>25</td>
<td>23.81</td>
<td>25</td>
</tr>
</tbody>
</table>

A: Be: Bedrock (>1 m diameter); LB: Large Boulders (>1 m diameter); SB: Small Boulders (25 cm – 1 m); Ru: Rubble (14-25 cm); Co: Cobble (6-13 cm); Pa: Pebble (3-5 cm); Gr: Gravel (20 mm – 3 cm); Sa: Sand (0.06 – 20 mm); BMC: Silt, Mud (0.004 – 0.05 mm), and Clay (0.004 – 0.05 mm) (from Sooley et al., 1998).
### Table 4-5  Habitat Characteristics of Major Water Crossings with Confirmed Fish Presence, Electrofishing Density and Number of Fish Captured (by Species) Along the Proposed Road Corridor

<table>
<thead>
<tr>
<th>Water crossing ID</th>
<th>Flow Type</th>
<th>Substrate Cover (m²%)</th>
<th>Dominant Substrate Type</th>
<th>Mean Depth (m)</th>
<th>Mean Flow (m/c)</th>
<th>Length (m)</th>
<th>Width (m)</th>
<th>Area (m²)</th>
<th>Total Catch # fish</th>
<th>Density (fish per 100m)</th>
<th>Brook trout</th>
<th>Lake chub</th>
<th>Barbot</th>
<th>Longnose sucker</th>
<th>Sculpis sp</th>
<th>Arctic char</th>
<th>Atlantic salmon</th>
</tr>
</thead>
<tbody>
<tr>
<td>116 (upstream)</td>
<td>Cascade, chute and run</td>
<td>48Be, 15SB, 16Ru, 10Co, 8LB, 5Pe, 5Gr</td>
<td>Coarse</td>
<td>0.85</td>
<td>1.4</td>
<td>65</td>
<td>4.5</td>
<td>10</td>
<td>15</td>
<td>9.23</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>116 (downstream)</td>
<td>Rifle</td>
<td>60SB, 20Ru, 10LB, 10Co</td>
<td>Coarse</td>
<td>0.48</td>
<td>0.95</td>
<td>120</td>
<td>2</td>
<td>240</td>
<td>25</td>
<td>10.42</td>
<td>22</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>177 (upstream)</td>
<td>Run</td>
<td>30Be, 30LB, 30SB, 5Ru, 5Co</td>
<td>Coarse</td>
<td>0.98</td>
<td>0.85</td>
<td>75</td>
<td>2</td>
<td>150</td>
<td>11</td>
<td>7.33</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>177 (downstream)</td>
<td>Rifle</td>
<td>30SB, 30Ru, 20LB, 15Co, 5Pe, 5Gr</td>
<td>Coarse</td>
<td>0.43</td>
<td>0.63</td>
<td>60</td>
<td>2</td>
<td>120</td>
<td>12</td>
<td>10</td>
<td>11</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>509 (upstream)</td>
<td>Rapids, riffle and falls</td>
<td>30Ru, 25SB, 25Be, 6Co, 5LB, 4Pe, 1Gr, 1Sa</td>
<td>Coarse</td>
<td>0.43</td>
<td>1.35</td>
<td>107</td>
<td>1</td>
<td>107</td>
<td>12</td>
<td>11.21</td>
<td>12</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>509 (downstream)</td>
<td>Riffle</td>
<td>50Ru, 25SB, 18Co, 5Pe, 2Gr</td>
<td>Coarse</td>
<td>0.31</td>
<td>0.44</td>
<td>47</td>
<td>1</td>
<td>47</td>
<td>25</td>
<td>55.32</td>
<td>26</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A: Be : Bedrock (>1 m diameter); LB : Large Boulders (>1 m diameter); SB : Small Boulders (25 cm – 1m); Ru : Rubble (14-25 cm); Co : Cobble (6-13 cm); Pe : Pebble (3-5 cm); Gr : Gravel (20 mm – 3 cm); Sa : Sand (0.06 – 0.05 mm); SMC : Silt, Mud (0.004 – 0.05 mm), and Clay (0.004 – 0.05 mm) (from Sooley et al., 1998)
Spawning

In Labrador, fourteen sites along the proposed road corridor were investigated during the spawning season (October 1\textsuperscript{st} to October 6\textsuperscript{th} 2012) owing mostly to the presence of salmonid young-of-the-year (YOY) in the summer electrofishing catch that could indicate probable spawning at or nearby the site of observation. From this field work, rearing habitats were found at each proposed major water crossings (#s116, 177, 509) for brook trout (Table 4-6).

Salmonid spawning grounds were confirmed, based on observations of reds and spawners, for four water courses: #269, 311, 393, and 509 (proposed major water crossing #3) (see Photo 5). Half of these spawning sites were located immediately at the water crossings (#311, 509), and were for brook trout. Brook trout and Arctic char spawning habitats were found in water course #393, 156 m downstream from the crossing point. Within the Ikadlivik main stem, 164 m upstream of the point of confluence with #393, reds of Arctic char and Atlantic salmon were observed. At water crossing #269, spawning habitat was found within the Ikadlivik Brook main stem, 84 m upstream from the confluence of the tributary and Ikadlivik Brook. The spawning habitat found at proposed bridge 3 (#509) is indirectly connected to Ikadlivik Brook, through Reid Brook, which is normally considered as an extended tributary of the Kogluktokoluk Brook and Ikadlivik Brook system (Bernatchez et al., 1998) (Table4-6).
Photo 3: Brook trout/Arctic char spawning ground downstream of #393

Photo 4: Arctic char/Atlantic salmon spawning ground in Ikadlivik near confluence with #393

Photo 5: Proposed crossing #3 (downstream of Reid Falls): brook trout spawning and Arctic char spawners

Photo 6: Reid Falls, natural passable obstruction limiting passage upstream
Table 4-6  Results of Salmonid Reproduction Investigation at Selected Water Crossings along the Proposed Road Corridor (October 2012)

<table>
<thead>
<tr>
<th>Water Crossing ID</th>
<th>Habitat Characteristics and Presence of YOY</th>
<th>Length (m)</th>
<th>In situ Water Temperature (°C)</th>
<th>Spawning Validation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potential Spawning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>210</td>
<td>Brook trout YOY and spawning potential</td>
<td>300</td>
<td>5.18</td>
<td>Good potential downstream of the barrier</td>
</tr>
<tr>
<td>284</td>
<td>Arctic char presence</td>
<td>219</td>
<td>5.83</td>
<td>No spawning habitat, only rearing habitat</td>
</tr>
<tr>
<td>310</td>
<td>brook trout YOY spawning potential and nursery</td>
<td>159</td>
<td>7.38</td>
<td>Good habitat for spawning and presence of a pool (connected to 311)</td>
</tr>
<tr>
<td>319</td>
<td>Arctic char YOY</td>
<td>665</td>
<td>8.64</td>
<td>Good habitat for spawning but no indices to validate the use. Given the high water temperature, might be used later by Arctic char</td>
</tr>
<tr>
<td>331</td>
<td>Atlantic salmon YOY and spawning potential</td>
<td>1,100</td>
<td>8.91</td>
<td>Good habitat for spawning; 2 Atlantic salmon and 8 Arctic char observed in small pool</td>
</tr>
<tr>
<td>366</td>
<td>brook trout YOY presence of gravel pockets</td>
<td>177</td>
<td>7.98</td>
<td>No spawning habitat; presence of a vertical drop 5 m large (barrier to migration)</td>
</tr>
<tr>
<td>415</td>
<td>brook trout YOY</td>
<td>360</td>
<td>8.74</td>
<td>Low spawning potential, coarse substrate, although many small gravel pockets. Presence of an impassable obstacle between #411 and 415. Downstream of obstacle: rearing habitat for Arctic char and brook trout</td>
</tr>
<tr>
<td>500</td>
<td>brook trout YOY and spawning potential</td>
<td>245</td>
<td>4.95</td>
<td>Low spawning potential upstream the crossing, coarse substrate</td>
</tr>
<tr>
<td>Confirmed Spawning</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>269</td>
<td>Atlantic salmon YOY</td>
<td>330</td>
<td>8.34</td>
<td>Confirmed spawning at mouth (Ikadlivik Brook, 84 m upstream): 2 reds, with eggs, and 2 Atlantic salmon observed during helicopter flight over Ikadlivik Brook at mouth. Substrate, velocity and connection to Ikadlivik assure high spawning potential. Rearing habitat for Atlantic salmon in 269</td>
</tr>
<tr>
<td>311</td>
<td>brook trout YOY</td>
<td>91</td>
<td>7.18</td>
<td>Confirmed spawning 2 reds; adult brook trout on redds (connected to 310) Ikadlivik</td>
</tr>
<tr>
<td>393</td>
<td>Atlantic salmon YOY and spawning potential</td>
<td>147</td>
<td>8.12</td>
<td>Confirmed spawning in 393 main stem, 156 m downstream of cross point: 25 reds (downstream of impassable obstacle). Brook trout (n=15) and Arctic char (n=12) spawners. Confirmed spawning at mouth (Ikadlivik Brook, 156 m upstream): Aggregation of spawners (Atlantic salmon, Arctic char). Spawning activity ongoing; around 100 reds, and egg presence verified</td>
</tr>
</tbody>
</table>

Three Proposed Major Water Crossings

<table>
<thead>
<tr>
<th>Water Crossing ID</th>
<th>Habitat Characteristics</th>
<th>Length (m)</th>
<th>In situ Water Temperature (°C)</th>
<th>Spawning Validation</th>
</tr>
</thead>
<tbody>
<tr>
<td>116</td>
<td>Arctic char presence, brook trout YOY</td>
<td>500</td>
<td>5.71</td>
<td>Coarse substrate upstream. With angling, capture of a running male (lake trout) and presence of a pool</td>
</tr>
<tr>
<td>177</td>
<td>brook trout YOY downstream</td>
<td>904</td>
<td>5.64</td>
<td>Good substrate for spawning (gravel) but no redds found, neither spawners for almost 1 km stretch</td>
</tr>
<tr>
<td>508</td>
<td>brook trout YOY</td>
<td>451</td>
<td>6.84</td>
<td>Confirmed spawning for brook trout: 7 reds and 12 spawners observed. Probably use by Arctic char (5 spawners observed). Connected to Reid Pond. Rearing habitat for both species as well</td>
</tr>
</tbody>
</table>

4.1.3.2 Proposed Major Water Crossings

Particle-Size Analysis

Particle-size analysis of substrate at the three proposed major water crossings revealed that they were composed of coarse substrates as indicated by visual observations. On average, 91.8% of substrate was composed of sand and gravel.
Benthic Invertebrates

In terms of benthic invertebrate communities, the three proposed major water crossings showed variable composition, densities and taxonomic richness. The highest benthic density was obtained at the proposed crossing #1 (2,154 org./m²), and the highest taxonomic richness (n=10 taxa) was observed at the proposed crossing #3. Plecoptera Chloroperlidae, benthic organisms known to be very intolerant to water pollution, was only observed at the proposed crossing #3 in Reid Brook.

4.2 Port

4.2.1 Vegetation

In 2012, observations of vegetation zones were made during the helicopter reconnaissance survey and follow-up air photo analysis. Near the port, but in undeveloped areas, terrestrial vegetation is dominated by spruce forests with a moss understory and the occasional presence of larch. Bedrock outcrops are generally treeless with variable levels of shrub cover. The coastal shores usually show a dense cover of shrubs before the denuded beaches.

At the port, Vale’s installations have modified the natural terrestrial vegetation years ago. The facilities of the Project will be installed in an area mostly lacking vegetation cover and already impacted by the presence of Vale and anthropogenic surrounding activities. Potential presence of significant plant species could be validated through investigations on-site.

4.2.2 Marine Biology

The environmental assessments completed by VBNC in 1995, 1996 and 1997 include investigations of the marine environment and ecosystems. A survey of marine fauna was completed for the VBNC EIS (JWEL 1997a) in coastal areas around the proposed port location including Anaktalak Bay. Nineteen fish species were collected in Anaktalak Bay; the most abundant are shorthorn sculpin, snakeblenny and Arctic staghorn sculpin. Harp seals, minke whales, bearded seals and ringed seals were observed by VBNC biologists in the area. Anaktalak Bay is identified as an area for possible spring and summer polar bear habitat.

Surveys were also conducted in 2012 for the Project to characterize the marine habitats and biota in Anaktalak Bay on a zone of 1 km in Edward’s Cove. In September 2012, ringed seals, harp seals, bearded seals, and minke whales were observed in the study area (AECOM, 2013h). In the summer of 2012, fish were inventoried in Edward’s Cove by experimental gill nets, fukui traps, and handlines during a total fishing effort of over 230 hours. The fish catch included winter flounder, Greenland cod, Arctic char, rock gunnel, banned gunnel, shorthorn sculpin and twohon sculpin (AECOM, 2013h).

4.2.3 Terrestrial Wildlife

4.2.3.1 Caribou

Caribou is a top concern by resource managers, resources users, aboriginal groups and other stakeholders due to the recent decline of the George River Herd. No caribou were seen around the port site in June and October 2012 road surveys. The absence of caribou sightings along the port site was expected based on the known migration routes and timing of movements of the George River Caribou Herd (GRCH) to the wintering habitats south of the tree line.

Caribou from the GRCH have been using the study area in previous years. However the herd has shown a sharp decline in the past ten years, reducing potential sightings in the area in recent years. Data used in the environmental impact assessments of Voisey’s Bay Project was collected during 22 dedicated aerial surveys conducted twice a month from January to May of 1996 and January to June 1997. Aerial and ground surveys also
occurred during calving and rutting periods. Incidental observations of caribou and caribou sign were also compiled during field surveys for other VBNC studies.

4.2.3.2 Black Bears

Some anecdotal observations of black bear have been made during other species surveys as no specific bear surveys was conducted for the project. Investigations completed for the VBNC included observations of black bear demographics, abundance, distribution, habitat use and movement in the area near the proposed port (JWEL 1997b). In 1996 and 1997, 10 black bears were studied with radio-telemetry. The estimated population density of black bears in the port area was 0.5 bear per km\(^2\).

4.2.3.3 Small Mammals

The abundance, distribution, habitat and chemical profile of small mammals were investigated near the port site for the VBNC EIS (JWEL 1997c and JWEL 1997d). Small animal species observed include: arctic shrew, deer mouse, Gapper’s red-backed vole, heather vole, Labrador collared lemming, masked shrew, meadow jumping mouse, meadow vole, northern bog lemming, pygmy shrew, rock vole, and Ungava lemming.

Wolverine is listed as “endangered” by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and Newfoundland-Labrador and as “threatened” in Quebec legislation. No information is available on the likely presence of this species in the study area. Among other listed or potential species at risk (endangered or threatened), the least weasel is the only mammal likely to be found in the study area.

4.2.3.4 Birds

Meades (1990) provides a list of expected bird species in the Voisey’s Bay area and JWEL (1997e) provides information on birds using the coastal area near the proposed port location, mainly waterfowl, terrestrial birds, shorebirds and seabirds. Possible ranges and breeding sites of significant bird species including Barrow’s goldeneye, common nighthawk, ivory gull, gray-cheeked thrush, harlequin duck and peregrine falcons were mapped.

Waterfowl

There are two Important Bird Areas (IBAs) within 80 km of Voisey’s Bay: ‘Nain Coastline’ (Site ID: LB006) and ‘Offshore Islands Southeast of Nain’ (Site ID: LB005). The nearest IBA is the Nain Coastline, located approximately 35 km east of the port site. The following waterfowl were observed in the proposed port area: harlequin duck, American black duck, Canada goose, common and red-breasted merganser, common goldeneye and mallard (JWEL 1997e). The harlequin duck and Barrow’s goldeneye are listed as “vulnerable” species in Newfoundland and so their habitat requirements should be considered and avoided during project planning.

During the waterfowl aerial survey, a total of 169 individuals and 86.5 indicated breeding pairs from 12 waterfowl species (1 species of goose, 3 species of dabbling duck, and 8 species of diving duck) and one loon species were observed in the waterfowl survey area (500 m on each side of the different proposed road options at that time). On average, 40.8 indicated pairs were observed per 100 km\(^2\). Expressed in linear kilometers of shoreline, the average waterfowl density ranged from 2.9 individuals, or 1.5 breeding pairs per 10 km of shoreline, regardless of the species, during waterfowl aerial survey.
Shorebirds and Sea birds

Many species of birds were observed near the proposed port areas during the marine surveys conducted by Sikumiut Environmental Management Limited in September 2012, including black guillemots, puffins, scoters, black ducks, harlequin ducks, long tailed ducks, Canada geese, gray jays, and numerous gulls (herring, greater black back, ring billed, and Iceland).

Shorebirds were observed in the port area including various species of plovers and sandpipers (JWEL 1997e).

Seabirds observed near the port area include herring gull, great black-backed gull, common tern, arctic tern, black guillemots, thick billed murre, razorbills, common eider, merganser, white-winged scoter and Atlantic puffins (JWEL 1997e).

Raptors

Merlin and a merlin nest were observed during the 2012 raptor surveys. The nest was located more than 1 km away from the disturbance of the actual port, in a cliff fronting Anaktalak Bay.

Cliff nesting and woodland raptors were identified in the port area (JWEL 1997e) including golden eagle, peregrine falcon, gyrfalcon and osprey.

Terrestrial Birds

Migratory, resident and nomadic birds were observed in the port area (JWEL 1997e).

- Migratory birds: ruby-crowned kinglets, American robin, yellow-rumped warbler, fox sparrow and dark-eyed junco.
- Resident birds: spruce grouse, black-backed woodpecker, gray jay and boreal chickadee.
- Nomadic Residents: pine grosbeak, white-winged crossbill and common redpoll.

In June/July 2012, an average of 17 terrestrial bird species per point count were detected in ecotone and deciduous forests, heaths and coniferous forests habitats for a total of 23 passerines and galliforme bird species. The average density established by the limited radius count (LRC) data was 4.38 breeding pairs/ha, and the average Shannon Diversity Index for the conifer point counts is 0.86, both parameters being about two times higher than those obtained in ecotone and heath habitats.

Bird Species at Risk

A number of bird species with potential habitat at the port have the following status at the federal level (COSEWIC 2012):

- Endangered: eskimo curlew, red knot;
- Special concern: rusty blackbird, harlequin duck, peregrine falcon, Barrow's goldeneye, short-eared owl.

In Newfoundland and Labrador regulation, the following species are listed as vulnerable: Barrow's goldeneye, harlequin duck, peregrine falcon, rusty blackbird and short-eared owl.

4.2.4 Freshwater Fish and Fish Habitat

4.2.4.1 Little Reid Brook

The Little Reid Brook is among the streams and ponds found in the study area, and for which watersheds were studies for VBNC EIS. Little Reid Brook drains in Edward’s Cove in Anaktalak Bay, in the vicinity of the port.
Little Reid Brook has a drainage area of approximately 15 km² and is the only of eight watershed studied that is composed of streams only (no ponds) (JWEL, 1997f). This freshwater ecosystem is characterized as oligotrophic with regard to water conditions (low productivity) Nevertheless, aquatic life in the lower part of the watershed is richer in abundance and diversity than in the upper headwaters. Winding through a thick glacial deposit, the brook is relatively narrow and dominated by sand and gravel substrates. The main channel meanders and has banks of sand and gravel. Groundwater discharge is evident at the base of steep slopes in the form of spring pools and seepage. The tributaries are generally small, have low flow and are often intermittent. Resident brook trout occur in most accessible habitat within the system, but no Arctic char were taken through two seasons of electro fishing. Arctic char smolts have been observed in the lower section of the stream near the mouth. Inuits indicate that Little Reid Brook is an anadromous Arctic char spawning river (Williamson 1997). However, field surveys found evidence of only brook trout spawning (JWEL, 1997f).
5 Socioeconomic Environment

5.1 Land Use and Traditional Ecological Knowledge

Land Use and Traditional Knowledge studies for all affected communities in the North were completed in 2012-13. The data offers a comprehensive understanding of both past and present use of the land and resources in the Project’s study area by Aboriginal groups (i.e. identification of knowledge holders, trails and pathways, areas occupied and used, resources harvested, historic and cultural sites, local land use management practices).

The study reveals that many Aboriginal groups were traditionally using territories located within or near the Strange Lake Project study area. It also shows that some groups continue to visit these lands. Available documents, meetings with aboriginal leadership, as well as information gathered during community meetings regarding the road corridor revealed that the Project will likely interact with the contemporary activities such as caribou hunting and small game hunting, char fishing, and snowmobile transportation.

Aboriginal group land use is greater at the proposed port area. Anaktalak Bay is used by the Labrador Inuit for numerous harvesting activities and is occasionally used by the Innu. Edward’s Cove is visited for waterfowl hunting and for trapping. Seasonal camps have been established in different parts of the bay, including Edward’s Cove for specific activities. Fishing is practiced at river mouths in the summer and further upstream in the winter to catch salmon and arctic char. Waterfowl is hunted near river mouths, in coves and around islands. Berry picking, black bear hunting/trapping, fox trapping, and small game hunting are the activities conducted along the coast surrounding the bay. Sea mammal hunting (seals and beluga) is also practiced in the area.

5.2 Archaeology Surveys

Two archaeological inventories were carried out in the Northern Project Area in 2011 and 2012. The inventory realized along the road corridor and Edward’s Cove area in the in 2012 confirmed the presence of a known burial site (HcCm-20) as well as a flake concentration within the easterly half of the proposed pit. The westerly half of this same pit also presents numerous concentrations of flakes as well as archaeological site HcCm-22 not directly observed in 2012. During the inventory of the Edward’s Cove shores, the known archaeological sites were reassessed, including any previously established protection areas (site HcCm-08 especially). The port site area has already been the subject of an archaeological inventory in 2002. A stone cover (HCCM-15) seems to delineate the northern end of the future port.

5.3 Socio-Economic Issues

The Strange Lake Project is expected to have a greater effect on Aboriginal communities than non-Aboriginal communities in Northern Quebec and Labrador. Communities such as Kuujjuaq, Kangiqsualujjuaq, Nain, Kawawachikamach or Natuashish tend to have greater socioeconomic vulnerability than their non-aboriginal counterparts.

Aboriginal groups in the region share a strong sense of belonging to the land and the environment. Traditional activities such as hunting, fishing, and harvesting of country foods are still currently maintained with high social and cultural value although economic value is now limited. For some of these communities, traditional land-based activities can be as important as language in defining cultural identity.

Specific issues faced by aboriginal communities include:

- Younger populations;
- Overcrowded housing;
- Local institutions which are consolidating or strengthening, often in need of larger facilities or more space;
- Lower education levels and employment skills;
- Higher unemployment;

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• Limited training and new employment opportunities;
• Social issues including drug and alcohol abuse, child neglect, and suicide;
• Isolation and challenges in terms of accessing and delivering social and health services; and,
• Higher costs of living, financial insecurity, and poverty.

Table 5-1 summarizes key indicators of the Aboriginal communities.

By comparison, nearby communities with significant non-Aboriginal residents, such as Schefferville, Fermont, Sept-Iles, Labrador City/Wabush, and Happy Valley-Goose Bay, are more concerned by:

• Economic boom and bust cycles in the mining and/or resource sectors;
• An increasing demand for short-term temporary accommodation options;
• High inflation, particularly for housing and accommodation costs;
• Insufficient existing infrastructure;
• A need for newer education and training programs; and
• Harmonious relationships with Aboriginal peoples residing within the towns.

As people of the north, both Aboriginals and non-Aboriginals have common socio-economic interests and concerns with respect to mining projects. Pre-consultations suggest they would expect the following issues to be addressed through an EIA process:

• Equitable employment, training, and business opportunities:
  ▪ guaranteed jobs and a local employment preferences policy;
  ▪ targets and government participation in funding training;
  ▪ business opportunities fairly distributed, particularly for air transportation and mining services (lodging, catering, etc.).
  ▪ risk of social conflicts if employment and business opportunities are not provided to Aboriginal groups.
  ▪ cumulative effects of overlapping with other mining development in Nunavik, Schefferville area (Quebec) and Labrador.

• Local services and infrastructure:
  ▪ modernization of existing infrastructure, housing requirements, women and youth shelters.
  ▪ potential influx of workers leading to an increased pressure on local services and infrastructures (e.g. health services, schools, housing and accommodations).
  ▪ need for in-community project infrastructure such as training facilities, office space, and support services (network/assistance).
  ▪ coherent development priorities, where local management plans are also taken into account.

• Social cohesion:
  minimize or prevent the degradation of conditions in some highly vulnerable communities, including increased substance abuse, prostitution, spread of sexually transmitted diseases, gambling activities, child neglect, domestic violence and family dislocation; and, family problems related with fly-in-fly-out work shift patterns.
Table 5-1  Socio Economic Characteristics of Labrador Aboriginal Communities - 2011

<table>
<thead>
<tr>
<th></th>
<th>Labrador Inuit (Nunatsiavut)</th>
<th>Labrador Innu Nation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nain</td>
<td>Hopedale</td>
</tr>
<tr>
<td>Census Population (2011)</td>
<td>1,188</td>
<td>556</td>
</tr>
<tr>
<td>2006 to 2011 change (%)</td>
<td>15%</td>
<td>5%</td>
</tr>
<tr>
<td>Unemployment rate (%)</td>
<td>27%</td>
<td>32%</td>
</tr>
<tr>
<td>Education Attainment – Population ≥ 15</td>
<td>No certificate, diploma or degree</td>
<td>High school, apprenticeship, trades, College, CEGEP or other non university certificate or diploma</td>
</tr>
<tr>
<td></td>
<td>52%</td>
<td>53%</td>
</tr>
<tr>
<td></td>
<td>38%</td>
<td>41%</td>
</tr>
<tr>
<td></td>
<td>10%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Reference: AECOM 2013u
5.4 Landscape

Using an assessment methodology that takes into account the landscape’s visual accessibility, visual interest and landscape values, it was determined on a preliminary basis that the sections of the Ikadlivik Brook Valley within the road corridor have low compatibility with new infrastructure due to their high human interest and visual values. The modification of the landscape in the valley may raise a social acceptance issue for the Labrador Inuit and Innu people.

The port site area will be located in an environment that was already transformed by the mining industry. Quest projects to use the Vale facilities. Accordingly, expansion or changes to existing facilities will not create any significant change to the landscape.
6 Environmental Effects

Potential environmental effects are presented in the following sections. Effects related to all project phases will be assessed precisely during the EIA, which will provide a basis for recommending mitigation measures to avoid or minimize project environmental effects.

6.1 Construction

6.1.1 Air

Activities carried out during the construction phase of the road and at the port site may result in the emission of greenhouse gases, pollutants and dust, mainly generated by the circulation of heavy machinery and blasting. Air quality could be affected at the port site, as well as along the Access Road.

All the necessary measures will be taken to meet ambient air standards established by the NL Air Pollution Control Regulations.

6.1.2 Noise

Activities during the construction phase will likely generate noise that may have an effect on the surrounding environment, such as the Vale mine site camp, port site and along the access road. Human receptors (boaters, hunters/fishermen, and workers), caribou populations as well as bird populations could be affected by noise.

Sources of noise include blasting from road construction operations, circulation of heavy machinery, use of generators, use of planes and helicopters, and port operations during the construction phase.

During the construction phase, human receptors should not be affected by the noise considering the distance from the construction sites. Noise concerns are most significant with respect to caribou, which may avoid noise by modifying their migration route if construction happens during the migration periods (see section 6.1.8).

Noise effects on ecological receptors will be assessed during the EIA and appropriate mitigation measures will be identified and applied.

6.1.3 Permafrost and Surficial Geology

Construction activities may affect permafrost and soil along the road corridor and at the port site. Surface soil removal could, for example, accelerate permafrost thawing. Terrain movement could also occur in areas of steep slopes. The presence of the road could also change the pattern of snow accumulation, locally changing the permafrost distribution. The consequence of the construction phase activities could occur later, during the operation and maintenance phase for example.

During the next stage of feasibility assessment, a risk assessment of landslide and avalanche potential will be carried out, in conjunction with mapping of snow accumulation along the road corridor.

6.1.4 Fluvial Geomorphology

Construction activities could potentially affect the fluvial geomorphology in the Project area due, for example, to sedimentation during culvert and bridge construction.

Planning of the construction work is necessary to mitigate potential environmental effects. Mitigation measures are presented in Section 6.3 and include the following measure, among others:
• Confine work area to avoid sediment transport into water and ensure that work and materials do not generate excessive turbidity.

6.1.5 Permafrost and surficial Geology

Construction activities may affect permafrost and soil along the road corridor and at the port site. Surface soil removal could, for example, accelerate permafrost thawing. Terrain movement could also occur in areas of steep slopes. The presence of the road could also change the pattern of snow accumulation, locally changing the permafrost distribution. The consequence of the construction phase activities could occur later, during the operation and maintenance phase for example.

During the next stage of feasibility assessment, a risk assessment of landslide and avalanche potential will be carried out, in conjunction with mapping of snow accumulation along the road corridor.

6.1.6 Hydrogeology and Soil Quality

Groundwater and soil quality could be affected during the construction phase, if a petroleum product spill were to occur, for example. Standard pollution prevention and control measures listed in Section 6.3 as well as the standard mitigation measures implemented for the Project will greatly reduce the risk to affect the groundwater and soil quality.

6.1.6.1 Freshwater and Sediment Quality

Standard mitigation measures related to erosion and sedimentation control (suspended matter, shoreline re-vegetation and stabilization), operation of construction equipment (refuelling of equipment), solid waste management (cutting vegetation, soil stripping), and hazardous materials management (spills) will be deployed to prevent contamination and to minimize the effects of construction activities near or on water for all components (water and sediment quality, benthos, fish and fish habitat). Standard pollution prevention and control measures listed in Section 6.3 as well as the standard mitigation measures implemented for the Project will greatly reduce the risk to affect the environment.

6.1.7 Vegetation and Wetland

Construction activities along the road and at the port will lead to vegetation, wetland and riparian habitat loss. Rare plant species could also be affected. Possible effects will be assessed during the EIA process.

Possible mitigation measures include the shifting of right-of-ways to avoid a population of rare plant species. Additional investigations will be undertaken to establish the relative abundance of populations of rare plant species to identify specific mitigation measures.

6.1.8 Semi-Aquatic and Terrestrial Wildlife

Construction activities, particularly road construction, and to a lesser extent construction activities in the port, will likely affect semi-aquatic and terrestrial wildlife species, by causing noise and loss of habitat. Species such as birds could potentially avoid the construction areas and changes could occur in the caribou migration routes. Specific mitigation measures are presented in the following sections for two sensitive species, the Harlequin Duck and the Caribou.

6.1.8.1 Harlequin Duck

The Harlequin Duck, a species listed as special concern in Canada and as vulnerable both in Québec and Newfoundland and Labrador’s endangered species legislation, could be affected by the construction activities along the road since it was found in streams and rivers located in or near the road corridor. The possible
mitigation measure to minimise the effect for the Harlequin duck is to limit construction activities during nesting and rearing period near occurrences of breeding pairs and broods.

6.1.8.2 Caribou

The Caribou, particularly its migration, could be affected by the road construction activities, due to the noise and by the presence of the road in itself. For example, noise disturbance might result in a different migratory pattern. The caribou is a key issue in this Project given the value of this species for native and non-native people of Labrador and Nunatsiavut as well as due to the population severe decline in the last years. The caribou migrates twice a year in the area and cross annually portion of the proposed road corridor.

The implementation of mitigation measures to reduce the potential barrier effects on the migrating caribou, especially for the fall and spring caribou migration at the preferential crossing areas is considered in the design and planning of the Project. For example, slopes of selected sections of road embankment have been softened (i.e. from 2:1 to 5:1 slope for 50m road length section, every 500m, for areas identified as critical, meaning where >1.5m height of fill is planned in the highland plateau outside of Ikadlivik valley). Also, road embankments will be composed of finer fill material (0 mm to 200 mm) on surface between PK0 and PK 70. For the entire affected part of the road, traffic operations would be suspended when caribou are passing through during seasonal migrations. Given the speed at which caribou can travel during peak migration, which can exceed 50km/day, a procedure will be developed to provide advance warning of approaching caribou.

6.1.9 Freshwater Aquatic Ecology

The Aquatic Environment includes surface water, sediment, benthos, and fish and fish habitat that may interact with the Project. The construction activities of the Project will have potential effects on the Aquatic Environment since the project infrastructures includes water crossings along the road corridor. A total of 268 water crossings are planned in Labrador. None of the construction activities linked to the road corridor is expected result in the destruction of fish habitat neither on modification of the water regime. The assessment of potential effects will be performed during the EIA.

Lachance et al. (2008) has studied the impacts associated to culvert construction on brook trout. Culvert construction can increase suspended matter in the water column and lead to subsequent sedimentation. Such accumulation of fine sediment can severely limit reproductive success of salmonids and can have an adverse impact on the abundance and diversity of benthic organisms, thus affecting an important food resource for fish growth and production. A high percentage of fine sediment limits emergence of fry, either by suffocation or through the creation of a compact surface layer that can only be traversed with great difficulty, which are detrimental to spawning sites of salmonids.

Thus, location of fish habitats (spawning and rearing grounds) and the presence of salmonids (Arctic char, Atlantic salmon, brook trout, lake trout) were comprehensively addressed in parallel with the proposed road corridor. Under the EIA, appropriate mitigation measures, will be developed to address the potential effects of the Project related to the Aquatic Environment.

Fisheries Act

The new Fisheries Protection Program has the mandate to maintain the sustainability and ongoing productivity of commercial, recreational and Aboriginal fisheries. The Fisheries Protection Program contains a new prohibition that combines two sections of the earlier version of the Fisheries Act, e.g. section 32 (killing of fish by means other than fishing) and section 35 (harmful alteration, disruption or destruction of fish habitat). No “serious harm to fish”, which is the death of fish or any permanent alteration to, or destruction of, fish habitat is targeted to minimize threat to fish.
Regional Land Use Plan for the Labrador Inuit Settlement Area (LISA)

According to Regional Land Use Plan for the Labrador Inuit Settlement Area (LISA), salmon, char and trout Rivers are an important resource providing traditional food for Inuit. To maintain this renewable resource, protection of fish populations and spawning areas through habitat protection and management is expected. Under the LISA, development and activities that require work such as water crossings, bridges, culverts, stream diversions or stormwater management devices shall be planned, designed and constructed to ensure that fish habitat and movement are preserved, protected and, where possible, enhanced.

Planning

In terms of watercourse crossing protection, efficient project planning will help reducing potential effects on the aquatic environment. Project planning is recommended by DFO as a series of measures to Avoid Causing Serious Harm to Fish and Fish Habitat for projects near water in compliance with the Fisheries Act.

The time work in or around water is the first measure to respect given the timing windows identified will help protecting fish according to its life cycle. It includes their eggs, juveniles, spawning adults and/or the organisms upon which they feed. The planning includes first the Timing Windows for Carrying out Work in Fish Habitat. In Newfoundland and Labrador, time work to occur during the appropriate timing window in order to reduce the risk of harm to fish and fish habitat in Labrador is from June 15th to September 16th. Therefore, at water crossings associated with permanent flow, and where critical habitats of salmonids were observed, in-water work (installation of culverts, etc.) will be restricted to this period, unless otherwise approved. Design or site selection is another important issue in project planning to reduce disturbance to aquatic habitat.

Design at water crossings will be planned perpendicular to the watercourse. Appropriate diameter will be considered to ensure free passage of fish throughout their life cycle and during all flow conditions. To ensure better planning, a detailed execution plan will be completed to ensure best management practices depending on the water course characteristics and site-specific ecological constraints. Thus, the culvert type (arched, elliptical, etc.) will be based on the watercourse characteristics and fish habitat type. In areas where presence of critical spawning and rearing habitats is reported, bottomless arch culverts and/or bridges will be prioritized.

Port Site

The Port facilities are existent given the Project expect to use Vale’s port installations. Nevertheless, for the Project, construction activities in the port area include a new fuel holding tank and a storage infrastructure. No potential effects are expected on the aquatic environment during the construction phase.

6.1.10 Marine Environment

Regarding the construction of onshore facilities (tanks, handling and storage infrastructures), the mitigation measure outlined to protect the aquatic “marine” environment is the precaution to prevent the disturbance of banks with a protection of an environmental buffer of 15m wide along the edge of the Anaktalak Bay. This minimum 15 m bank buffer zone is requested by the Government of Newfoundland and Labrador (2011). Considering the limited footprint at the port, and with the application of the recommended mitigation measures, potential environmental effects on the aquatic “marine” environment during construction will be minimized.

6.1.11 Socio-Economic Environment

6.1.11.1 Potential Effects

The following presents the potential effects on the socio-economic environment during the construction phase.

1. Employment, Training and Business Opportunities
• Increase revenues and living standards for certain individuals and families (close wage gaps relative to other nearby communities).
• Employment opportunities that favour participation of Aboriginal people and women in the workforce.
• Award contracts to local firms and Aboriginal businesses for services, construction, supplies and commodities, including transportation companies.
• Anticipate competition for skilled Aboriginal workers.
• The potential labor shortage may result in a need for temporary foreign workers, which may introduce a risk of social conflicts involving local communities and labor unions.

2. Local, Regional and Provincial Economy
• Induced economic growth from increased incomes and expenditures which can influence both traditional and wage economies.
• Planning should account for inflation including an increased cost of living.
• Government is expecting increased revenues from direct and indirect taxes and royalties.

3. Local Services and Infrastructures
• The influx of workers and migration of job-seekers can increase pressure on local services and infrastructures (e.g., health services, schools, housing and accommodation.)
• Development of in-community Project infrastructure such as training facilities and office space, in both Aboriginal and non-Aboriginal communities.
• Employee shortage for community services as workers are attracted to higher-wage jobs outside of communities. This may result in a difficulty to recruit new workers to remote areas.
• Loss of qualified workers from local service firms as they might be attracted to higher-wage work opportunities.
• Increased movement of personnel and materials through local transportation infrastructure, including airports such as Happy Valley-Goose Bay, Kuujjuaq and/or Sept-Iles might increase traffic and lengthen delays in obtaining local services and supplies.

4. Social Cohesion – Employment at the Project
• Competition may occur between workers from different Aboriginal groups, and between Aboriginal and non-Aboriginal people.
• Risk of increased prostitution and spread of sexually transmitted diseases.
• Difficulty adapting to the mining environment could result in a need for a support network, particularly for Aboriginal workers.
• Work-related stress and lack of self-esteem, particularly for Aboriginal people, could result in potential conflicts in the workplace or a need for more social assistance for employees.

5. Perceived Health and Environmental Risk Associated with the Project
• Concerns may need to be considered proactively: potential effect on caribou, water quality of the George River basin, fish contamination and potential effect on fish habitat.

The following local socio-economic effects are likely to be more pronounced in Aboriginal communities because of their small population.

6. Social Cohesion and Family and Community Relations
• Inequalities are to be expected between those who benefit from the Project and those who don’t.
• Increased social issues may occur in already vulnerable communities as a result of higher cash flows, including alcohol and drug consumption, gambling activities, child neglect, domestic violence, and family dislocation.
• Emotional problems and adjustment to family dynamics associated with fly in-fly out work shift patterns might present difficulties for more vulnerable families.
• There will likely be some relocation of families attracted by job opportunities.
7. Socio-Cultural Issues

- Protection issues regarding archaeological, cultural, historical and sacred sites.
- Disturbance of land use and harvesting activities.
- Loss or change to hunting, fishing, harvesting or other traditional grounds.
- Loss or change to traditional access routes.

These potential socio-economic effects will be assessed in more detail through the Environmental Impact Assessment process.

6.2 Operations and Maintenance

6.2.1 Air

Activities carried out during the operation and maintenance phase may result in the emission of greenhouse gases, pollutants and dust, mainly generated by the circulation of heavy machinery, trucks and ore concentrate handling. Air quality could be affected at the port site as well as along the access road.

All the necessary measures will be taken to meet ambient air standards established by the NL Air Pollution Control Regulations, such as:

- Ensure appropriate dust emissions control equipment are installed where required. Implement a regular inspection and cleaning/replacement schedule to ensure dust control measures remain effective
- Ensure dust emissions from haul roads are controlled on a regular basis through the application of water or approved dust suppressants such as calcium chloride
- Trucks transporting ore concentrate will be equipped of adequate covering (tarpaulin) to prevent dust emission.

6.2.2 Noise

Noise generated during the operation and maintenance phase activities may have an effect on the surrounding environment of the port site and along the access road. Human receptors (boaters, hunters/fishermen, workers), caribou populations and birds population could be affected by noise from circulation, ore concentrate handling and port activities.

As mentioned for the construction phase, caribou may avoid noise by modifying their migration route. This issue is more critical along certain portions of the road corridor where caribou are already known to cross. (see section 6.1.8.2 for mitigation measures)

6.2.3 Permafrost and Surficial Geology

Changes to permafrost and soil could occur during the operation and maintenance phase.

6.2.4 Hydrogeology and Soil quality

Groundwater and soil quality could be affected during the operation and maintenance phase, due to events such as a petroleum spill for example. Mitigation measure includes a diked area with liner for fuel storage tanks. Also, water discharge will be monitored and/or passed through an oil-water separator. Standard pollution prevention and control measures listed in Section 6.3 as well as the standard mitigation measures implemented for the Project will greatly reduce the risk to affect the environment.
6.2.5 Semi-Aquatic and Terrestrial Wildlife

Activities during the operation and maintenance phase, will likely affect semi-aquatic and terrestrial wildlife species, by causing noise and due the presence of the road and the presence of vehicles. Mitigation measures will be geared toward two sensitive species: the Harlequin duck as well as the Caribou are potentially the most sensitive species (see section 6.1.8).

6.2.6 Aquatic Environment

During the operational phase, no negative effects are anticipated under standard activities. Truck transportation of ore concentrate from the Strange-Lake B-Zone deposit could have potential effects on the aquatic environment at water crossings owed mainly to road dust that might reach water bodies. Material will be contained in trucks equipped of adequate covering (tarpaulin) to prevent dust emission. However, potential accidents and malfunctions could likely introduce negative effects if these are made in the vicinity of watercourses. Nevertheless, all of the standard control and preventive measures will minimize the environmental risks in the event of such accidents/malfunctions.

Current activities in the port area associated to Vale will be increased by the Project. The traffic of vessels will be higher in the Anaktalak Bay compared to current activities. Standard pollution prevention and control measures listed in Section 6.3 as well as the standard mitigation measures implemented for the Project will greatly reduce the risk to affect the environment.

6.2.7 Marine Environment

During the operation phase, the effects of the Project on marine environment are related to underwater noise from vessels. Potential effects on fish health during operation will be reduced or eliminated through mitigation measures used during marine shipping (scheduling, route selection. Considering the application of the recommended mitigation measure, potential environmental effects on the aquatic “marine” environment during operation will be minimized.

6.2.8 Socio-Economic Environment

The following presents the potential impacts on the socio-economic environment during the operation phase.

1. Employment, Training and Business Opportunities
   - Increase revenues and living standards for certain individuals and families (close wage gaps relative to other nearby communities).
   - Employment opportunities that favour participation of Aboriginal people and women in the workforce.
   - Award contracts to local firms and Aboriginal businesses for services, construction, supplies and commodities, including transportation companies.
   - Anticipate competition for skilled Aboriginal workers.
   - The potential labor shortage may result in a need for temporary foreign workers, which may introduce a risk of social conflicts involving local communities and/or labor unions.

2. Local, Regional and Provincial Economy
   - Induced economic growth from increased incomes and expenditures which can influence both traditional and wage economies.
   - Planning should account for inflation including an increased cost of living.
   - Government is expecting increased revenues from direct and indirect taxes and royalties.

3. Local Services and Infrastructures
• Development of in-community Project infrastructure such as training facilities and office space, in both Aboriginal and non-Aboriginal communities.
• Employee shortage for community services as workers are attracted to higher-wage jobs outside of communities. This may result in a difficulty to recruit new workers to remote areas.
• Loss of qualified workers from local service firms as they might be attracted to higher-wage work opportunities.

4. Social Cohesion – Employment at the Project
• Competition may occur between workers from different Aboriginal groups, and between Aboriginal and non-Aboriginal people.
• Difficulty adapting to the mining environment could result in a need for a support network, particularly for Aboriginal workers.
• Work-related stress and lack of self-esteem, particularly for Aboriginal people, could result in potential conflicts in the workplace or a need for more social assistance for employees.

5. Perceived Health and Environmental Risk Associated with the Project
• Rare earth mining has been associated with uranium mining, and it is likely that Aboriginal groups and environmental stakeholders will question the health and environmental effects of radioactivity and bioaccumulation.
• Other concerns may need to be considered proactively: potential effect on caribou, water quality of the George River basin, fish contamination.

The following local socio-economic effects are likely to be more pronounced in aboriginal communities because of their small population.

6. Social Cohesion and Family and Community Relations
• Inequalities are to be expected between those who benefit from the Project and those who don’t.
• Increased social issues may occur in already vulnerable communities as a result of higher cash flows, including alcohol and drug consumption, gambling activities, child neglect, domestic violence, and family dislocation.
• Emotional problems and adjustment to family dynamics associated with fly in-fly out work shift patterns might present difficulties for more vulnerable families.
• There will likely be some relocation of families attracted by job opportunities.
• Cultural and lifestyle changes from a traditional way of life and to a mining camp environment and wage economy, could exacerbate certain community or family conflicts.

7. Socio-Cultural Issues
• Protection issues regarding archaeological, cultural, historical and sacred sites.
• Disturbance of land use and harvesting activities.
• Potential change of the diet.
• There will be concerns about protecting the integrity of the Aboriginal language, traditional lifestyle and aboriginal relations to the land and the environment.

These potential socio-economic effects will be assessed in more detail through the Environmental Impact Assessment process.

6.3 General Mitigation Measures

In addition to the specific mitigation measures presented in sections 6.1 and 6.2, certain standard environmental mitigation or control measures were anticipated at the PFS stage (FEL-1) and included in the project design. Examples of these standard mitigation measures are presented in the following sections.
During the feasibility stage and the EIA, the engineering design team will be consulted while mitigation recommendations are being formulated to ensure the project design can realistically incorporate recommended mitigation measures.

Where feasible and necessary, special mitigation measures will be developed for specific impacts to valued biophysical or socio-economic components. These measures will be applied on a case by case basis with the intent of enhancing positive effects and reducing the importance of negative effects.

**Erosion and Sedimentation Control**

- Identify and avoid (to the extent possible) erosion-sensitive zones;
- Minimize stripping, clearing, excavation, backfilling, and grading operations to a strict minimum on work sites;
- Identify and protect natural drainage features and take all appropriate measures to permit normal flow of water;
- Prevent dumping of any excavated or stripped material within 10 m of a watercourse or wetland. Store excavated material more than 10 m from watercourses;
- Avoid removing vegetation from slopes bordering watercourses. When building or improving a road that crosses a watercourse, preserve a 10 m strip of shrub vegetation on either side;
- Install anti-erosion barriers (silt fences, rock check dams, hay bales, etc.) to prevent eroded sediment from reaching watercourses;
- Along steep slopes bordering rights-of-way, use sediment barriers at the foot of the embankment or install protective material (straw, wood chips or mats) directly on the slope to reduce the volume of eroded sediments; and
- Control the quality of surface runoff and water pumped from excavations by filtering, decanting or treating the water. Prohibit the direct release of turbid water to a watercourse.

**Watercourse Crossing Protection**

- Choose the culvert type (arched, elliptical, etc.) based on the watercourse characteristics and fish habitat type;
- Minimize scale and duration of work and confine it where possible to minimum-flow or low-water periods;
- Ensure that fish can move freely at all times and avoid critical periods for fish (spawning, incubation, nursing);
- Build bridges and install culverts on narrow, straight sections without reducing the width of the watercourse, choosing ground with adequate load-bearing capacity and gentle slopes;
- Accurately assess the watercourse’s peak flow in order to choose the appropriate diameter of pipe;
- Build crossings perpendicular to the watercourse;
- Limit tree felling along the shore and mark trees to be left standing;
- Confine work area to avoid sediment transport into water and ensure that work and materials do not generate excessive turbidity;
- Ensure the stability of soil, shorelines, banks, fill and structures during the construction of watercourse crossings (geotextile liner, rip-rap on embankments and watercourse bed, etc.); and
- Upon work completion, restore natural profile of watercourse bed, stabilize banks and revegetate as needed with native species.

**Solid Waste Management**

- Emphasize reduction at source, re-use, recycling and conversion of waste;
- Replace hazardous products with less harmful ones if possible;
- Do not dump any waste into aquatic environments, including waste from cutting vegetation or soil stripping. All waste accidentally introduced into aquatic environments must be removed as quickly as possible;
- Store waste temporarily in a single location inaccessible to wildlife, employees and the public;
- Dispose of waste only as authorized by provincial and federal law; and
- Harmonize project components with the existing landscape (e.g. vegetated berms to hide solid waste piles).
Hazardous Materials Management

- Handle, store and dispose of hazardous materials in accordance with applicable regulations;
- Implement a hazardous waste management plan and emergency response plan to ensure resources and training are in place in case of accident;
- Ensure spill kits for recovering oil products and hazardous materials are present at strategic locations;
- Ensure staff, contractors and visitors are trained to respond to emergency incidents, as required;
- Maintain enough absorbent material in each vehicle to intervene rapidly in the event of a spill;
- Immediately report all accidental spills to emergency response coordinator, who then informs regulators; and
- Keep hazardous substances, including fuel, at least 100 m from water bodies or surface drainage channels.

Drilling and Blasting

- Use an explosives management plan to minimize amount of ammonia and nitrates released to the environment;
- Use explosives in accordance with applicable laws, orders and regulations;
- Allow only properly qualified and trained personnel to handle and detonate explosives as per the manufacturer’s instructions and applicable laws and regulations;
- Consult DFO Guidelines for the Use of Explosives in or near Canadian Fisheries Waters when blasting;
- Blasting may be suspended in certain circumstances to avoid excessive disturbance of wildlife;
- Recover and dispose of explosives waste in an appropriate manner after each blast;
- Take the necessary precautions to control dust emissions from drilling; and
- Consider the distance to the nearest receptors when planning blasts.

Operation of Construction Equipment

- Store equipment and machinery in areas specifically designed for this purpose, these zones should be located 60m or more from watercourses and water bodies;
- Prohibit washing of equipment in natural watercourses;
- Fuel storage, transportation and handling must comply with the relevant standards and guidelines. Ensure employees who handle fuel are appropriately trained;
- All equipment must be refueled more than 15m from a water body;
- Equip pumps and generators with drip pans; and
- Train staff to be familiar with procedures to avoid disturbing wildlife.

Socio-Economic Issues

In order to optimize the economic benefits and prevent the social effects on local communities, the following socially acceptable EIA mitigation measures for both Aboriginal and non-Aboriginal groups are proposed:

- Develop an Aboriginal Participation Strategy;
- Develop a Gender Equity Plan and a Diversity Plan;
- Develop a local workforce training program;
- Develop a policy for small business partnerships;
- Implement a working group to ensure that the Project is developed accordingly to local and regional expectations and development priorities;
- Protect archaeological, cultural, historical and sacred sites. If avoidance of archeological sites is not possible, archaeological excavations must be planned before any activities occur that would disturb the ground surface. This program must be undertaken through an agreement and in collaboration with the Aboriginal groups of Labrador;
- Develop, in collaboration with the Aboriginal groups concerned by the Project, specific mitigation measures to protect and to promote Aboriginal land occupation and resources use;
- Sign IBAs with Aboriginal groups that have rights and interests on the lands affected by the project.
7 Consultations

7.1 Abstract

This Chapter considers Project relations and consultations with government, non-governmental organizations and community stakeholders to help ensure that the Project’s design is politically aligned and socially accepted. Potential issues were identified and assessed as a basis for developing a Project strategy to communicate with and engage effectively with all three key stakeholder groups on an ongoing basis.

Quest has met with senior government representatives of all jurisdictions concerned, to anticipate political and administrative issues or opportunities. In particular, Quest has sought to align with regional economic development priorities and develop relationships with local suppliers that have demonstrated competitive advantages. A mine in northern Quebec and a port on the Labrador coast is an opportunity to work with Inuit, Naskapi and Innu workers who have previous experience with natural resource developments in the region.

7.2 Government Departments and Agencies

The Project would involve the federal, Quebec, Newfoundland and Labrador, Nunatsiavut (Labrador Inuit) and Kativik (Québec Inuit) governments or regional governing bodies. The following provides an appraisal of the different government views on developing the Project based on the preliminary formal conversations with appropriate government agencies. It identifies key issues and their motion going forward.

Since 2011, Quest has been presenting the Strange Lake B-Zone Project to a number of government stakeholders in Ottawa, Québec, and Newfoundland and Labrador – including Nunatsiavut. This was also an opportunity to hear concerns or opportunities for synergies with other projects or programs.

In general, all levels of government so far have been receptive and supportive of the Project. In addition to the political capital interest gained through association with a world-class mineral deposit development, there is much interest in the socioeconomic benefits and spin-offs of opening up a remote part of the north, as well as attracting additional investment to the south.

Upon being presented a summary of the Project, each government initially aims to understand the potential economic benefits of the Project for its own constituents and how the Project-related benefits may flow too freely across borders, whether regional, provincial, or international. There is also interest in the value of the proposed Project’s location to fully access the market. Most importantly, there is interest in how its local human resources (i.e. the number of employees expected on-site and off-site) can be involved in the Project. On these bases, governments affected by the Project may propose incentives or even require a form of written agreement (i.e. equivalent to IBA) to secure these local benefits for a particular region or community.

Government concerns received to-date can be summarized into two (2) main categories: socioeconomic equity and environmental impacts, each with questions specific to the Project’s proposed footprint:

Socioeconomic Equity:

- Will this development benefit my jurisdiction?
- Will there be disproportionate benefits or impacts for any one group, community or government that could embarrass or create conflict with our government’s own planning?

Environmental Impacts:

- Will there be any effects on the water quality of the George River, known for its salmon and cultural significance, which is about 100km downstream from Lac Brisson?
- Will there be any potential effects on the George River Caribou Herd, which is currently in significant decline?
7.3 Aboriginal Groups

The communities surrounding the Project's road corridor and port area are made up of mostly Aboriginal populations (see Table 7-1). Many of their local and regional government agencies have different needs and expectations. For example, Aboriginal communities place a high value on the protection of culture and traditional way of life.

Every Aboriginal group concerned by the Project has a particular background, each with a unique history of interactions with other Project proponents and governments. Each group will need to be considered separately through a specific communication and consultation strategy taking into account their particular institutions, land claim agreements, and experience in the EIA or Impact and Benefits Agreement (IBA) processes.

Table 7-1 Demographic Statistics on Northern Communities in the Region around the Project – 2011 Census

<table>
<thead>
<tr>
<th>Community</th>
<th>Total Population</th>
<th>Population over 15 years old</th>
<th>Aboriginal Population</th>
<th>Distance from the Strange Lake Property (km)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labrador</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nain</td>
<td>1,188</td>
<td>890</td>
<td>1,080 (91%)</td>
<td>155</td>
</tr>
<tr>
<td>Natuashish</td>
<td>931</td>
<td>580</td>
<td>885 (95%)</td>
<td>193</td>
</tr>
<tr>
<td>Hopedale</td>
<td>556</td>
<td>435</td>
<td>505 (91%)</td>
<td>265</td>
</tr>
<tr>
<td>Postville</td>
<td>206</td>
<td>170</td>
<td>185 (90%)</td>
<td>318</td>
</tr>
<tr>
<td>Makkovik</td>
<td>361</td>
<td>285</td>
<td>320 (89%)</td>
<td>342</td>
</tr>
<tr>
<td>Sheshatshit</td>
<td>1,314</td>
<td>830</td>
<td>1,280 (97%)</td>
<td>403</td>
</tr>
<tr>
<td>Happy Valley - Goose Bay</td>
<td>7,552</td>
<td>6,165</td>
<td>3,930 (52%)</td>
<td>413</td>
</tr>
<tr>
<td>Rigolet</td>
<td>306</td>
<td>160</td>
<td>270 (88%)</td>
<td>435</td>
</tr>
</tbody>
</table>

Source: Statistics Canada (2013).

Though Quest initiated meetings with some northern Aboriginal representatives as early as 2008, a series of presentations were rolled out in 2011-2013 to provide all key groups with similar levels of information and a comparable opportunity to ask questions and comment. For each key aboriginal community, at least one presentation was made to the main communities affected and at least two meetings were held with its leadership.
8 Occupations

8.1 Construction Phase

8.1.1 Labour Force and Occupations

The Project, through its construction will result in positive economic effects for the region. Employment opportunities will be realized during the construction of the Project where components of this work will be contracted to third parties.

The construction phase in Labrador will progress within Vale’s port site in Edward’s Cove and along the 162 km access road between the port and the mine (144 km of new road in Labrador and 18 km in Quebec). For each specific area, the period of construction, the labor type and the number of employees will vary.

8.1.2 Construction Activities

The main activities in Newfoundland and Labrador requiring labor are:

Port:

- Site preparation
- Ore storage building erection
- Fuel tank field erection
- Installation of truck refueling and tanker loading station
- Conveyor and transfer tower installation
- Modular Construction camp installation
- Camps services installation
- Excavation of a settling pond.

Access Road 144 km:

- Vegetation removal
- Development of sand/gravel pits and quarries
- Road surface preparation
- Bridge construction
- Culvert pipe installation
- Continuous construction maintenance, clearing, gravel stripping

8.1.3 Commitment and Contractual environment

Quest is committed to employment and gender equity in its hiring and contracting practices, and is committed to maximizing the use of the local workforce and Newfoundland and Labrador companies to the extent possible. Quest expects the same commitment from its contractors.

Project construction will be carried out on a contractual basis, with workers hired at the discretion of the contractor and in accordance with its own hiring practices and policies.
8.1.4 Construction Employment

An estimated average 200 workers will be required over the 21 first months of the project to perform construction activities related to the 162 km access road. The workers for this area will be mainly from civil background with some specialties (i.e. engineering supervision, environmental monitoring).

During the project, an estimated 70 workers will be required over 7 months of the project to perform construction activities related to the additional infrastructure to be implemented in the existing Vale Port. The workers for this area will be from the following disciplines: civil, steel structure, mechanical and electrical.

The following table indicates the average number of workers and supervisors required for the period of time in each specific area and the typical.

**Table 8-1 Occupations – Construction Phase**

<table>
<thead>
<tr>
<th>Area</th>
<th>Duration (month)</th>
<th>Number of employees</th>
<th>Disciplines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access Road</td>
<td>21</td>
<td>200</td>
<td>Civil</td>
</tr>
<tr>
<td>Port</td>
<td>7</td>
<td>70</td>
<td>mining civil, concrete, steel, Mechanical, electricity</td>
</tr>
</tbody>
</table>

8.2 Operations Phase

When operational, the Strange Lake road and port is expected to require at least 64 full time employees and contractors in relation to the road and port for the life of the project (Table 8-2).

Table 8-3 enumerates and breaks out each occupation by area according to the 2006 Occupational Classification, as required in Newfoundland and Labrador, for operation of the Road and the Port. The positions that will likely be contracted out are also indicated in the same table. A greater number of occupations are indicated because

**Table 8-2 Occupations – Operation Phase - Strange Lake Road and Port**

<table>
<thead>
<tr>
<th>Area of Work</th>
<th>Number of Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road Transportation</td>
<td>46</td>
</tr>
<tr>
<td>Road Maintenance</td>
<td>12</td>
</tr>
<tr>
<td>Maintenance - Generator / Conveyor / Tank Farm</td>
<td>6</td>
</tr>
<tr>
<td>Other (GA, supervisors/foremen)</td>
<td>5</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
</tr>
</tbody>
</table>
Table 8-3 Occupations – Operations phase – Road and Port in Newfoundland and Labrador (including NOS – National Occupational Classification)

<table>
<thead>
<tr>
<th>NOC Code 2006</th>
<th>NOC Title</th>
<th>Position</th>
<th>Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>1215</td>
<td>Supervisors, Recording, Distributing and Scheduling Occupications</td>
<td>Planner/Dispatcher/Inventory</td>
<td>2</td>
</tr>
<tr>
<td>1474</td>
<td>Purchasing and Inventory clerk</td>
<td>Clerk</td>
<td>2</td>
</tr>
<tr>
<td>1476</td>
<td>Transportation Route and Crew Schedulers</td>
<td>Clerks</td>
<td>2</td>
</tr>
<tr>
<td>2131</td>
<td>Civil Engineer</td>
<td>Environmental Engineer</td>
<td>1</td>
</tr>
<tr>
<td>2231</td>
<td>Civil Engineering Technologist</td>
<td>Environment Monitors / Inspectors / Radiation Techs (Mine &amp; Port)</td>
<td>2</td>
</tr>
<tr>
<td>7217</td>
<td>Contractors and Supervisors, Heavy Construction Equipment Crews</td>
<td>Transportation / Airport / Road Maintenance Foreman</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td><strong>Subtotal</strong></td>
<td></td>
<td><strong>13</strong></td>
</tr>
</tbody>
</table>

**Contractors**

<table>
<thead>
<tr>
<th>NOC Code 2006</th>
<th>NOC Title</th>
<th>Position</th>
<th>Number of Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td>7222</td>
<td>Supervisors, Motor Transport and Other Ground Transit Operators</td>
<td>Truck Trainers</td>
<td>1</td>
</tr>
<tr>
<td>7411</td>
<td>Truck Driver</td>
<td>Road Safety Drivers</td>
<td>2</td>
</tr>
<tr>
<td>7412</td>
<td>Bus Driver</td>
<td>Bus Driver / Ambulance Drivers</td>
<td>1</td>
</tr>
<tr>
<td>7411</td>
<td>Truck Driver</td>
<td>Road truckers</td>
<td>33</td>
</tr>
<tr>
<td>6262</td>
<td>Firefighter</td>
<td>Fire Captain (Port &amp; Mine)</td>
<td>1</td>
</tr>
<tr>
<td>7437</td>
<td>Air Transport Ramp Attendants</td>
<td>Airport Lead / Freight &amp; Passenger / Airport technician / signal</td>
<td>4</td>
</tr>
<tr>
<td>7542</td>
<td>Material Handlers</td>
<td>Equipment operator</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td><strong>Sub-total</strong></td>
<td></td>
<td><strong>56</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td></td>
<td><strong>69</strong></td>
</tr>
</tbody>
</table>

At the feasibility stage, detailed position descriptions will be created and used to develop an employment equity program.

### 8.2.1 Employment Opportunity Equity

Quest will develop and implement a Gender Equity Plan and a Diversity Plan in order to fulfill regulatory requirements, the provisions of a future Project Benefits Agreement (between the Province and Quest rare Minerals) and applicable Provincial policies. The two plans will also contribute to creating and delivering long-term sustainable benefits to local stakeholders and communities. Quest believes that supporting gender equity and diversity in the workplace has significant social and economic benefits and can contribute to a stable and prosperous operating environment.

Quest will also apply a hiring process that respects age equity. Quest will make sure that the hiring process is fair and equitable so that the qualifications of each candidate are the only criteria upon which a hiring or promotion decision is made, regardless of the age of the candidates. Moreover, employment equity means that candidates are not advantaged or disadvantaged because of age.
9  Funding

9.1  Grant

The project does not depend upon a grant or loan from a government agency.

9.2  Financial Capacity

Quest has a variety of options for financing all aspects of the project including the costs of the review, implementing the environmental protection plan and payment of the costs of closure and restoration. Examples of such financing options include issuing shares in the public markets, investment from strategic investors and support from the Quebec government. In addition, once the project is approved a portion of the financing can be done through banks and other institutions. And once the project is operational it will generate cash flow part of which will go to pay for the costs of closure and restoration. The company is confident in the strength of the project and in its ability to raise the required financing as the project progresses.
10  Cost Estimate

The estimated initial capital cost of the road and port access project in Labrador is Can$334million including direct costs, indirect costs, contingency and owners costs.
11 Project Related Documents

(The following constitutes a bibliography of all project-related documents already generated by or for the proponent; a copy of each report will be provided and/or made available to relevant government EIA jurisdictions).

AECOM 2012a, Biological Environment Baseline Surveys - Vegetation, 2011, Strange Lake B-Zone, Baseline Study Report, April 2012


AECOM 2012c, Desktop Review and Initial Site Reconnaissance – Biophysical, and Human Environment Memorandum, Mine, Road and Port, Strange Lake B-Zone Pre-feasibility Study, Technical Memorandum, December 2012


AECOM 2012f, Marine Baseline – Technical Memorandum, Strange Lake B-Zone, Marine Baseline, November 2, 2012

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Appendix 1
List of Permits and Approvals
### Table A-1: Concordance of Present Document with Environmental Assessment Registration under the Nunatsiavut Environmental Protection Act

<table>
<thead>
<tr>
<th>Nunatsiavut – Section 27 of the Regulations Regarding Environmental Reviews of Initiatives on Labrador Inuit Lands</th>
<th>Section in the Strange Lake Project Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of the project (initiative)</strong></td>
<td>Section 1.1</td>
</tr>
<tr>
<td><strong>Full and detailed information about the proponent including contact information</strong></td>
<td>Section 1.2</td>
</tr>
<tr>
<td><strong>Identification of each parcel of Labrador Inuit Lands on which a site will be located and each parcel of Labrador Inuit Lands that may be impacted by the initiative</strong></td>
<td>Refer to Appendices for Relevant Mapping</td>
</tr>
<tr>
<td><strong>Detailed sketch maps, survey plan or aerial photographs/satellite imagery of each site and its environs showing:</strong></td>
<td>LIL Parcel numbers and Sites of Interest – To Be Determined</td>
</tr>
<tr>
<td>• Site boundaries</td>
<td></td>
</tr>
<tr>
<td>• Existing infrastructures</td>
<td></td>
</tr>
<tr>
<td>• all natural features, including any body of Water and known subsurface Water</td>
<td></td>
</tr>
<tr>
<td>• the location and distance of all significant natural features in the environs of the site, including any permanent or seasonal body of Water</td>
<td></td>
</tr>
<tr>
<td>• the location of the site in relation to the nearest Inuit Community, Aulâsimavet, camps, cabins, houses, dwellings, roads and other existing infrastructure whether in seasonal or year-round use</td>
<td></td>
</tr>
<tr>
<td><strong>Provide maps showing:</strong></td>
<td>Refer to Appendices for Relevant Mapping</td>
</tr>
<tr>
<td>• site boundaries</td>
<td></td>
</tr>
<tr>
<td>• any existing infrastructure, developments or debris within the site</td>
<td></td>
</tr>
<tr>
<td>• all significant natural features within the site, including any body of Water and known subsurface Water</td>
<td></td>
</tr>
<tr>
<td>• the proposed location within the of the principal features of the initiative or where an activity, undertaking, structure, installation or facility is planned to be carried out or located for purposes of the initiative</td>
<td></td>
</tr>
<tr>
<td>• the proposed access to the site and its location in relation to existing Aulâsimavet, buildings, trails, wharves, airstrips, power lines or roads in the vicinity</td>
<td></td>
</tr>
<tr>
<td>• the location of the site in relation to the nearest Inuit Community, Aulâsimavet, camps, cabins, houses, dwellings, roads and other existing infrastructure whether in seasonal or year-round use</td>
<td></td>
</tr>
<tr>
<td><strong>Detailed information about the bio-physical environment of each site including a description of the nature and extent of Water and wetlands, vegetation and topsoil within the site boundaries and the species of Wildlife, Plants, Fish and Aquatic Plants for which the site provides habitat</strong></td>
<td>Sections 3, 4 &amp; 5</td>
</tr>
<tr>
<td><strong>Detailed information about the nature, scope, phases, and duration of the initiative and all activities associated with the initiative including:</strong></td>
<td>Sections 2 &amp; 8</td>
</tr>
<tr>
<td>• all infrastructure and facilities to be constructed and to be used and for purposes of servicing or accessing the site</td>
<td></td>
</tr>
<tr>
<td>• the nature and source or sources of energy to be used</td>
<td></td>
</tr>
<tr>
<td>• the source of all Water to be used at or for each site, including water to be used for transportation, and the geographic locations of the water</td>
<td></td>
</tr>
<tr>
<td>• a full description of all Water withdrawal and transmission facilities, discharge treatment and discharge facilities, and the place or places of Water discharge</td>
<td></td>
</tr>
<tr>
<td>• detailed information about the means of accessing the site</td>
<td></td>
</tr>
<tr>
<td>• identification and summary of any prior or continuing developments or undertakings, including Exploration and undertakings in existence prior to December 1, 2005, carried out at the site and of any prior or continuing permits, leases or grants of freehold issued by the Government of Newfoundland and Labrador or the Nunatsiavut Government in relation to any such developments or undertakings</td>
<td></td>
</tr>
<tr>
<td>• identification and composition of all consumable materials and supplies to be stockpiled or stored on site</td>
<td></td>
</tr>
<tr>
<td>• the size of the workforce to be employed at each site during each stage or phase</td>
<td></td>
</tr>
<tr>
<td>Section in the Strange Lake Project Registration</td>
<td>Nunatsiavut – Section 27 of the Regulations Regarding Environmental Reviews of Initiatives on Labrador Inuit Lands</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>together with the wages to be paid in respect of the workforce</td>
<td></td>
</tr>
<tr>
<td>• estimates of energy, resource and material consumption for each phase</td>
<td></td>
</tr>
<tr>
<td>• description of the natural resources to be used in the initiative and activities related to the initiative</td>
<td></td>
</tr>
<tr>
<td>Description of the Environmental Effects that may be caused by the initiative and all ecosystems</td>
<td>Section 6</td>
</tr>
<tr>
<td>• a description of the existing environment in each ecosystem</td>
<td></td>
</tr>
<tr>
<td>• a description of the biological diversity of each ecosystem</td>
<td></td>
</tr>
<tr>
<td>• an assessment of the carrying capacity of each ecosystem and description of the ways in which the initiative is in harmony with the carrying capacity of the ecosystems;</td>
<td></td>
</tr>
<tr>
<td>• Description of the wastes that will be produced by, and in relation to, the initiative and a description of the places where the wastes will be produced and how they will be managed and disposed of</td>
<td></td>
</tr>
<tr>
<td>• Description of pollution of the environment by and in relation to, the initiative</td>
<td></td>
</tr>
<tr>
<td>• Description of the effects of the initiative on the health and safety of the environment in each ecosystem affected by the initiative</td>
<td></td>
</tr>
<tr>
<td>• Identification of features and aspects of the initiative in which the precautionary principle has been applied</td>
<td></td>
</tr>
<tr>
<td>• a description of proposed measures and arrangements in relation to the initiative that will serve the purpose of the Act as set in section 1.3 of the Act</td>
<td></td>
</tr>
<tr>
<td>Description of alternatives to the initiative and a description of the advantages and disadvantages to a safe and healthy environment in each ecosystem in which Environmental Effects of each alternative are likely to occur</td>
<td>Section 2.2</td>
</tr>
<tr>
<td>Description of proposed measures</td>
<td></td>
</tr>
<tr>
<td>Description of measures that will be taken to avoid, prevent and mitigate the Environmental Effects</td>
<td>Sections 6.3 (Mitigation) and 2.7 (Closure)</td>
</tr>
<tr>
<td>Detailed environmental protection plan</td>
<td>EPP and Closure Plan Concept to be provided with Final Version</td>
</tr>
<tr>
<td>Plans for the monitoring and evaluation of Environmental Effects</td>
<td></td>
</tr>
<tr>
<td>Reclamation and closure plan including, where appropriate, a plan for progressive reclamation of the site</td>
<td></td>
</tr>
<tr>
<td>Identification and description of the cumulative Environmental Effects</td>
<td>To be provided with Final Version</td>
</tr>
<tr>
<td>Description of the financial measures and securities available to guarantee payment of the costs of the review of the initiative, implementation of the environmental protection plan and payment of the costs of abandonment, closure and restoration of each site</td>
<td>Section 2.7</td>
</tr>
<tr>
<td>A statement of the costs of the initiative including capital and operating costs and a comparative estimate of the GST, HST, income tax and royalty revenues, that will accrue to the federal, provincial and Nunatsiavut Governments</td>
<td>Section 10</td>
</tr>
</tbody>
</table>

1 That will serve the purpose of the section 1.3 of the Nunatsiavut Environmental Protection Act;
<table>
<thead>
<tr>
<th>Nunatsiavut – Section 27 of the Regulations Regarding Environmental Reviews of Initiatives on Labrador Inuit Lands</th>
<th>Section in the Strange Lake Project Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>A copy of all reports and studies carried out in order to satisfy these registration requirements</td>
<td>Section 11</td>
</tr>
<tr>
<td>A list with full citations for all sources of information relied on in the registration</td>
<td>References</td>
</tr>
<tr>
<td>An outline of the design of studies not yet undertaken or that are necessary to provide additional information for purposes of the environmental review of the initiative</td>
<td></td>
</tr>
<tr>
<td>Summary in English and Inuktitut of the information included in the registration</td>
<td>To be provided with Final Version</td>
</tr>
<tr>
<td>Listing of factors and indicating the section or sections or the page or pages where the matter is addressed in the registration and, if a factor referred to in the schedule to the Nunatsiavut Environmental Protection Act is not addressed in the registration, provide the reasons why not.</td>
<td>Present Table A-1</td>
</tr>
</tbody>
</table>
Table A-2: Concordance of Present Document with Environmental Assessment Registration Requirements under the Newfoundland and Labrador Environmental Protection Act

<table>
<thead>
<tr>
<th>Newfoundland and Labrador Project Registration Requirement</th>
<th>Section in the Strange Lake Project Registration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of undertaking</td>
<td>Section 1.1</td>
</tr>
<tr>
<td><strong>Proponent:</strong></td>
<td>Section 1.2</td>
</tr>
<tr>
<td>Name of proponent</td>
<td></td>
</tr>
<tr>
<td>Address</td>
<td></td>
</tr>
<tr>
<td>Chief Executive Officer (name, official title, email address and telephone number)</td>
<td></td>
</tr>
<tr>
<td>Principal Contact Person (for EA) (name, official title, email address and telephone number)</td>
<td></td>
</tr>
<tr>
<td>List the main permits, licences, approvals and other forms of authorization required with the names of the authorities responsible</td>
<td>Appendix 2</td>
</tr>
<tr>
<td><strong>The undertaking:</strong></td>
<td>Section 2.1.1</td>
</tr>
<tr>
<td>Name of undertaking</td>
<td></td>
</tr>
<tr>
<td>Purpose/Rationale/Need for the project</td>
<td></td>
</tr>
<tr>
<td><strong>Description of the Undertaking</strong></td>
<td>Chapter 2</td>
</tr>
<tr>
<td>Provide complete information concerning the preferred choice of location, design, etc., together with additional information on any alternatives which may have been considered and rejected, but which may still be regarded as viable. Reasons for the rejection of those alternatives should be included.</td>
<td></td>
</tr>
<tr>
<td><strong>Geographical Location</strong></td>
<td>Section 2.3</td>
</tr>
<tr>
<td>Description of the proposed site, including boundaries</td>
<td>Idem.</td>
</tr>
<tr>
<td>Large scale (e.g. 1:12,500) original base map(s)</td>
<td></td>
</tr>
<tr>
<td>Recent air photos clearly indicating the site location relative to existing communities and transportation facilities, and showing the proposed route of access</td>
<td></td>
</tr>
<tr>
<td><strong>Physical features</strong></td>
<td>Section 2.4</td>
</tr>
<tr>
<td>Description of major physical features including buildings, other large structures, roads, pipelines, transmission lines, marine facilities, etc.</td>
<td></td>
</tr>
<tr>
<td>Provide the size of the area to be affected by the project</td>
<td></td>
</tr>
<tr>
<td>Artist conceptual drawing</td>
<td></td>
</tr>
<tr>
<td>Description of the physical environment within the area potentially affected by the project, e.g. topography, water bodies, etc.</td>
<td>Idem.</td>
</tr>
<tr>
<td>Description of biological environment within the area potentially affected by the project, e.g. vegetation, wildlife species, fish etc.</td>
<td>Idem.</td>
</tr>
<tr>
<td><strong>Construction</strong></td>
<td>Section 2.5</td>
</tr>
<tr>
<td>Provide the approximate total construction period – if staged, list each stage and its approximate duration</td>
<td></td>
</tr>
<tr>
<td>Proposed date of first physical construction on site</td>
<td></td>
</tr>
<tr>
<td>Description of any potential causes of resource conflicts</td>
<td>Section 2.5.5</td>
</tr>
<tr>
<td><strong>Newfoundland and Labrador Project Registration Requirement</strong></td>
<td><strong>Section in the Strange Lake Project Registration</strong></td>
</tr>
<tr>
<td>-------------------------------------------------------------</td>
<td>-------------------------------------------------</td>
</tr>
<tr>
<td><strong>Operations Phase</strong> Describe how the project will operate</td>
<td>Sections 2.6</td>
</tr>
<tr>
<td>Estimated period of operation (if not a permanent facility)</td>
<td></td>
</tr>
<tr>
<td>Describe any potential causes of resource conflicts</td>
<td>Section 2.6.4</td>
</tr>
<tr>
<td><strong>Environmental Discharges - Construction and operations phases:</strong></td>
<td>Section 2.6.4</td>
</tr>
<tr>
<td>Description of the potential sources of pollutants during the construction period(s) - airborne emissions, liquid effluents and solid waste materials</td>
<td></td>
</tr>
<tr>
<td><strong>Occupations</strong> Number of employees required for the construction and operation and expected duration of employment</td>
<td>Section 8</td>
</tr>
<tr>
<td>Enumeration and breakdown of occupations anticipated according to the National Occupational Classification 2006&lt;sup&gt;2&lt;/sup&gt;</td>
<td></td>
</tr>
<tr>
<td>Identify what work will be carried out by direct hiring and/or contracting out</td>
<td></td>
</tr>
<tr>
<td>Identify how employment equity will be addressed relative to age and gender</td>
<td></td>
</tr>
<tr>
<td><strong>Approval of the Undertaking</strong></td>
<td>Appendix 2</td>
</tr>
<tr>
<td>List the main permits, licences, approvals and other forms of authorization required with the names of the authorities responsible</td>
<td></td>
</tr>
<tr>
<td><strong>Schedule:</strong> Indicate the earliest and latest dates when project construction could commence - state the reasons for the selection of these dates</td>
<td>Section 2.5.3</td>
</tr>
<tr>
<td><strong>Funding:</strong> If the project depends upon a grant or loan of capital funds from a government agency – provide the name and address of the department or agency</td>
<td>Section 9</td>
</tr>
<tr>
<td>Provide an estimate of the capital costs of the project&lt;sup&gt;3&lt;/sup&gt;</td>
<td>Section 10</td>
</tr>
<tr>
<td><strong>Project Related Documents:</strong> Provide a bibliography of all project-related documents already generated by or for the proponent</td>
<td>Section 11</td>
</tr>
<tr>
<td><strong>Provide one copy</strong> of any reports on environmental work already performed by or for the proponent</td>
<td>Report Copies to be provided with Final Registration</td>
</tr>
</tbody>
</table>

---

<sup>2</sup> This information is used to determine if any hazardous occupations are involved.

<sup>3</sup> Newfoundland and Labrador - Projects having capital costs in excess of $15 million will be subject to applicable cost recovery fees.
Appendix 2
Tables of Concordance with EA Registration Requirements
### Appendix 2

**Summary List of Permits and Approvals –**

**Strange Lake Road and Port Access, Northern Labrador**

<table>
<thead>
<tr>
<th>Permit/Authorization</th>
<th>Law / Regulations</th>
<th>Section</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Government of Nunatsiavut</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release from Environmental Assessment</td>
<td>Regulations Regarding Environmental Reviews of Initiatives on Labrador Inuit Lands</td>
<td>106</td>
<td>Proceed to permitting stage – Road construction</td>
</tr>
<tr>
<td><strong>Other approvals, permits and leases</strong></td>
<td>Regulations Regarding Environmental Reviews of Initiatives on Labrador Inuit Lands (Other Regulations – To Be Determined)</td>
<td>108</td>
<td>Construction of Road and Port Infrastructure</td>
</tr>
<tr>
<td><strong>Government of Newfoundland and Labrador</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Release from Environmental Assessment</td>
<td>Environmental Protection Act and Environmental Assessment Regulations</td>
<td>Various</td>
<td>Proceed to permitting stage – Road construction</td>
</tr>
<tr>
<td>Licence to occupy Crown Land</td>
<td>Lands Act</td>
<td>8</td>
<td>All infrastructure on Crown Lands</td>
</tr>
<tr>
<td>Quarry Permit</td>
<td>Quarry minerals Act, Quarry Materials Regulations</td>
<td>5</td>
<td>Quarry for construction materials</td>
</tr>
<tr>
<td>Water Use Licence</td>
<td>Water Resources Act</td>
<td>14/48</td>
<td>Extract potable water (Port)</td>
</tr>
<tr>
<td>Permit to Construct Waterworks</td>
<td>Water Resources Act</td>
<td>37</td>
<td>Potable water system (Port)</td>
</tr>
<tr>
<td>Certificate of Approval</td>
<td>Environmental Protection Act</td>
<td>7(1)</td>
<td>All discharges to the environment</td>
</tr>
<tr>
<td>Approval for waste disposal (landfill)</td>
<td>Environmental Protection Act</td>
<td>16 &amp; 78</td>
<td>Waste management/disposal</td>
</tr>
<tr>
<td>Permit to construct sewage works</td>
<td>Sanitation Regulations</td>
<td>4(3)</td>
<td>Sewage treatment plant/septic system</td>
</tr>
<tr>
<td>Permit to construct sewage works</td>
<td>Water Resources Act</td>
<td>36</td>
<td>Sewage treatment plant/septic system</td>
</tr>
<tr>
<td>Certificate of Registration</td>
<td>Storage and Handling of Gasoline and Associated Products</td>
<td>13</td>
<td>Petroleum products storage</td>
</tr>
<tr>
<td>Certificate of Registration</td>
<td>Heating Oil Storage Tank System, Regulations 2003</td>
<td>8</td>
<td>Heating oil storage</td>
</tr>
<tr>
<td>Permit for flammable and combustible liquid storage</td>
<td>Fire Prevention Services Regulations</td>
<td></td>
<td>Bulk fuel storage</td>
</tr>
<tr>
<td>Permit to operate a used oil furnace</td>
<td>Used Oil Control Regulation; Air Pollution Control Regulation</td>
<td>6(2)</td>
<td>To burn used oil</td>
</tr>
<tr>
<td>Certificate of Approval</td>
<td>Used Oil Control Regulation;</td>
<td>18, 19</td>
<td>To store used oil</td>
</tr>
<tr>
<td>Certificate of Approval - Generators</td>
<td>Environmental Protection Act</td>
<td>22</td>
<td>Large, permanent generators &gt;100 kW</td>
</tr>
<tr>
<td>Occupancy Permit/Accessibility Registration</td>
<td>Buildings Accessibility Act and Regulations</td>
<td>various</td>
<td>Occupy buildings</td>
</tr>
<tr>
<td>Food Establishment Licence</td>
<td>Health and Community Act, Food and Drug Act, Food Premises Regulations</td>
<td>various</td>
<td>Kitchens at workers’ camps</td>
</tr>
<tr>
<td>Permit to Alter a Watercourse</td>
<td>Water Resources Act</td>
<td>48</td>
<td>Alterations to a body of water: Infilling wetlands, culverts, bridges, etc.</td>
</tr>
<tr>
<td>Permit to install a non-domestic well</td>
<td>Water Resources Act</td>
<td>58</td>
<td>Potable water or other wells</td>
</tr>
<tr>
<td>Permission to shoot or trap nuisance wildlife</td>
<td>Wildlife regulations</td>
<td>88</td>
<td>Shoot or trap nuisance wildlife</td>
</tr>
<tr>
<td>Fuel Cache Approval</td>
<td>Guidelines for Drum-Based</td>
<td></td>
<td>Establish fuel cache at remote sites</td>
</tr>
<tr>
<td>Permit/Authorization</td>
<td>Law / Regulations</td>
<td>Section</td>
<td>Activity</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------------------</td>
<td>---------</td>
<td>------------------------------------------------------------</td>
</tr>
<tr>
<td>Petroleum Products Storage and Operation At Remote Sites</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Government of Canada</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radio Station Licence</td>
<td>Radio Communications Act</td>
<td>5</td>
<td>Install and operate radio station</td>
</tr>
<tr>
<td>Permit for construction of structures in or near water bodies</td>
<td>Navigable Water Protection Act</td>
<td>5</td>
<td>Effluent outfall, wastewater discharge, wastewater outfall, wharf construction, stream crossings</td>
</tr>
<tr>
<td>Permit for approval of harmful alteration, disruption or destruction of fish or fish habitat</td>
<td>Fisheries Act</td>
<td>35(2)</td>
<td>Effluent outfall, wastewater discharge, wastewater outfall, wharf construction, stream crossings</td>
</tr>
<tr>
<td>Permit to transport explosives</td>
<td>Explosives Act</td>
<td>7</td>
<td>Transportation of explosives</td>
</tr>
<tr>
<td>ERAP Approval</td>
<td>Transportation of Dangerous Goods Act</td>
<td>7 &amp; 31</td>
<td>Emergency response assistance plan (ERAP) and permit demonstrating equivalent level of safety</td>
</tr>
<tr>
<td>Licence for explosive magazines</td>
<td>Explosives Act</td>
<td>7</td>
<td>Utilize explosives</td>
</tr>
</tbody>
</table>
Appendix 3
Map – Road Corridor
Appendix 4
Map – Port Area Detail
Binder 4
Hi,

With respect to the questions re the Note on Strange Lake:

1. The proponent has indicated the following:
   a. “The entire project consists of three components as presented in three separate project descriptions: the rare earth mineral mine development at Strange Lake in Northern Quebec, the road and port construction project in Labrador, and the industrial processing of rare earth in Southern Quebec at Becancour industrial park.”

2. The BAPE procedure does not apply in this area in Quebec. This area falls under section 23 of the James Bay and Northern Quebec Agreement.

3. The meeting on the 5th is to explore areas where harmonization can occur. No decisions will be made re a formalized vs non-formalized agreement. Further information will be available post meeting.

4. I believe both Brian Harvey and Chris Appleby from LAAO will be present on the 5th for part or all of the meetings.

5. The NG will also have their legal counsel in attendance, Mr. Mark Gillette.

6. An agenda is attached. See email re Tripartite Teleconf

Let me know if you have any questions.

Ivy

I presume that since the projects are linked then CEAA would see as one project.

BAPE is not triggered due to this being above certain parallel and trigger’s James Bay agreement?
From: Chippett, Jamie  
Sent: Wednesday, February 04, 2015 9:01 AM  
To: Cleary, Bas  
Subject: Fw: Strange Lake information note

Fyi

Jamie Chippett  
Deputy Minister  
Environment and Conservation

From: Dutton, Sean  
Sent: Tuesday, February 03, 2015 05:22 PM  
To: Bown, Charles W.; Chippett, Jamie; Gover, Aubrey  
Cc: Liverman, Dave; Scott, Paul G.  
Subject: Re: Strange Lake information note

As the Innu only have an AIP they would presumably be consulted but would not act as a regulator like the NG.

Section 29(1)(a)

Section 35(1)(f)

What would be the role of BAPE in QC, given parts of the components are in QC?

Section 29(1)(a)

Sean

From: Bown, Charles W.  
Sent: Tuesday, February 03, 2015 02:51 PM  
To: Chippett, Jamie; Dutton, Sean; Gover, Aubrey  
Cc: Liverman, Dave  
Subject: RE: Strange Lake information note

As this road will cross the Voisey's Bay Area (which is defined in the NG and Innu agreements) is there anything in the Innu agreement that will require their participation in the EA? Innu was a participant in the VB project.

Section 29(1)(a)

From: Chippett, Jamie  
Sent: February-03-15 2:38 PM  
To: Dutton, Sean; Bown, Charles W.; Gover, Aubrey  
Cc: Liverman, Dave  
Subject: FW: Strange Lake information note

Gentlemen,

Could I have your views on the attached note please as pertains to means of proceeding with an EA assessment of the above project given it triggers, provincial, federal, and NG assessments? I'm copying in Dave in event Charles is still off.
Meeting is to be held on Thursday

Jamie

From: Cleary, Bas
Sent: Tuesday, February 03, 2015 2:13 PM
To: Chippett, Jamie; Goebel, Martin
Cc: Stone, Ivy
Subject: Strange Lake information note

Jamie and Martin,

Attached is an information note on the proposed project. There is a face-to-face meeting proposed for this Thursday weather permitting. 

Bas

Section 29(1)(a)
Good morning everyone,

I hope the weather is good for everyone to travel. It's okay (for now) in Labrador!

Ivy has booked a meeting room in the Confederation Building in St. John's for our meeting tomorrow (February 5th). We will be meeting in the Collective Bargaining Boardroom in the East Block of the Confederation Building. Ivy says, "When you come in the main doors of the East Block, you have to sign in. Security can direct you to the Boardroom." She will likely be there to accompany us. There will be coffee and tea in the boardroom and there is a cafeteria in the building when we break for lunch.

We will start at 9 am and the tentative agenda is:

1. presentations from each of the governments on their EA process
   1. CEAA
   2. Province
   3. Nunatsiavut Government
2. discussion re: priorities, flexibilities, and non-negotiables
3. next steps

This is obviously pretty general, so we can see where things go. I have a short powerpoint presentation about Nunatsiavut's EA process. Ivy will ensure there is a projector in the room.

Looking forward to seeing everyone tomorrow morning,

Andrea

Andrea Hoyt

Environmental Assessment Manager
Nunatsiavut Government, Department of Lands and Natural Resources
Box 92, Makkovik, NL A0P 1J0
Phone: (709) 923-2006
On 21 January 2015 at 11:05, andrea_hoyt@nunatsiavut.com <andrea_hoyt@nunatsiavut.com> wrote:

Agenda:
- project updates
- plan for Feb. 5 face-to-face

Call in #: **1-855-392-2519**
Access code: 2868191

---

**Tripartite Teleconf re: Strange Lake harmonisation**

Call in: **1-855-392-2519**
Access: 2868191

When  
Mon Jan 26, 2015 2pm – 3pm Atlantic Time - Halifax

Where  
Tripartite teleconference: Strange Lake EA (map)

Video call  
https://plus.google.com/hangouts/ /nunatsiavut.com/andrea

Who  
- Andrea Hoyt - organizer
  - clearyb@gov.nl.ca
  - andree.chevrier@ceaa-acee.gc.ca
  - ivystone@gov.nl.ca
  - Tom Sheldon
  - betty.cougle@ceaa-acee.gc.ca
  - jeanphilippe.croteau@ceaa-acee.gc.ca
  - raymond.chabot@ceaa-acee.gc.ca
  - Rodd Laing
  - sylvain.ouellet@ceaa-acee.gc.ca
<table>
<thead>
<tr>
<th>From:</th>
<th>Harvey, Brian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sent:</td>
<td>Wednesday, April 06, 2016 10:25 AM</td>
</tr>
<tr>
<td>To:</td>
<td>Appleby, Christopher</td>
</tr>
<tr>
<td>Subject:</td>
<td>FW: Strange Lake information note</td>
</tr>
</tbody>
</table>

Categories: Quest / Strange Lake

Responsive?

Brian RM. Harvey
Director - Aboriginal Affairs
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

From: Gover, Aubrey
Sent: Wednesday, February 04, 2015 11:30 AM
To: Harvey, Brian
Subject: RE: Strange Lake information note

Aubrey Gover
Deputy Minister
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador

This email is PRIVILEGED and contains confidential information intended only for the person(s) named above. Any other distribution, copying or disclosure is strictly prohibited. If you have received this email in error, please notify us immediately by return email and delete the original message.

From: Harvey, Brian
Sent: Wednesday, February 04, 2015 11:22 AM
To: Gover, Aubrey
Subject: Re: Strange Lake information note

Section 29(1)(a)

Non-Responsive
Sent from my BlackBerry.

Brian RM. Harvey
Director - Aboriginal Affairs
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

From: Gover, Aubrey
Sent: Wednesday, February 4, 2015 11:16
To: Harvey, Brian
Subject: FW: Strange Lake information note

Here is the note. Please see this bullet.

Also, the note on the agreement aspect does not fulsomely set out the LILCA considerations noted in my comments which are at the heart of this issue.

Aubrey Gover
Deputy Minister
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador

This email is PRIVILEGED and contains confidential information intended only for the person(s) named above. Any other distribution, copying or disclosure is strictly prohibited. If you have received this email in error, please notify us immediately by return email and delete the original message.

From: Chippett, Jamie
Sent: Tuesday, February 03, 2015 2:38 PM
To: Dutton, Sean; Bown, Charles W.; Gover, Aubrey
Cc: Liverman, Dave
Subject: FW: Strange Lake information note

Gentlemen,

Could I have your views on the attached note please as pertains to means of proceeding with an EA assessment of the above project given it triggers, provincial, federal, and NG assessments? I’m copying in Dave in event Charles is still off.

Meeting is to be held on Thursday

Jamie

From: Cleary, Bas
Sent: Tuesday, February 03, 2015 2:13 PM
To: Chippett, Jamie; Goebel, Martin
Cc: Stone, Ivy
Subject: Strange Lake information note

Jamie and Martin,
Attached is an information note on the proposed project. There is a face-to-face meeting proposed for this Thursday weather permitting.

Bas
MeHndy, Shawn D.

From: Harvey, Brian
Sent: Wednesday, April 06, 2016 10:25 AM
To: Appleby, Christopher
Subject: FW: Strange Lake information note

Categories: Quest / Strange Lake

Responsive?

Brian RM. Harvey
Director - Aboriginal Affairs
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

From: Gover, Aubrey
Sent: Wednesday, February 04, 2015 10:48 AM
To: Bowles, Ron; Harvey, Brian
Subject: FW: Strange Lake information note

Aubrey Gover
Deputy Minister
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador

Non-Responsive

This email is PRIVILEGED and contains confidential information intended only for the person(s) named above. Any other distribution, copying or disclosure is strictly prohibited. If you have received this email in error, please notify us immediately by return email and delete the original message.

From: Chippett, Jamie
Sent: Wednesday, February 04, 2015 10:45 AM
To: Gover, Aubrey; Dutton, Sean; Bown, Charles W.
Cc: Liverman, Dave
Subject: Re: Strange Lake information note

Thanks for this. The mtg tomorrow will be exploratory in nature and we'll use you feedback and refinement of positioning of cesa and NG to update/revise note and forward back to you for comments/consideration.

Jamie

Jamie Chippett
Deputy Minister
Environment and Conservation

From: Gover, Aubrey
Sent: Wednesday, February 04, 2015 09:04 AM
To: Chippett, Jamie; Dutton, Sean; Bown, Charles W.
Cc: Liverman, Dave

Non-Responsive
Subject: RE: Strange Lake information note

Aubrey Gover
Deputy Minister
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador

This email is PRIVILEGED and contains confidential information intended only for the person(s) named above. Any other distribution, copying or disclosure is strictly prohibited. If you have received this email in error, please notify us immediately by return email and delete the original message.

From: Chippett, Jamie
Sent: Tuesday, February 03, 2015 2:38 PM
To: Dutton, Sean; Bown, Charles W.; Gover, Aubrey
Cc: Liverman, Dave
Subject: FW: Strange Lake information note

Gentlemen,

Could I have your views on the attached note please as pertains to means of proceeding with an EA assessment of the above project given it triggers, provincial, federal, and NG assessments? I’m copying in Dave in event Charles is still off.

Meeting is to be held on Thursday

Jamie

From: Cleary, Bas
Sent: Tuesday, February 03, 2015 2:13 PM
To: Chippett, Jamie; Goebel, Martin
Cc: Stone, Ivy
Subject: Strange Lake information note

Jamie and Martin,

Attached is an information note on the proposed project. There is a face-to-face meeting proposed for this Thursday weather permitting.

Bas
Hi,

Some points to consider for tomorrow's meeting:

1. 

2. 

3. The NG will be looking for examples of previous 'formal' or informal agreements between the province and Canada. Have we had any formal agreements with Canada? Generation?

4. What did those harmonization efforts or 'agreements' look like? How did they work?

5. We will be asked where we have flexibility in our processes. 

6. Where are we able to streamline?

7. 

8. In election years, there are additional delays to consider.

9. 

10. Each jurisdiction will present their EA process and a discussion of harmonization principles will likely follow.

11. See second page of Excel spreadsheet with comments by the NG.

Ivy Stone, M.Sc.
Environmental Scientist
Environmental Assessment Division
Department of Environment and Conservation
4th Floor, West Block, Confederation Building
St. John's, NL, A1B 4J6
Phone: (709)729-0090
Fax: (709)729-5518
E-Mail: ivystone@gov.nl.ca
Information Note
Department of Environment and Conservation (ENVC)

Title: Considerations relative to the upcoming environmental assessment of the proposed Strange Lake Road & Port Access Project (the project) in Northern Labrador

Issue: This proposed project, by Quest Rare Minerals Ltd. (Quest), will trigger environmental assessment legislation with the government of Newfoundland & Labrador (NL), the Nunatsiavut Government (NG) and the Canadian Environmental Assessment Agency (CEAA). The challenge is to carry out an efficient EA review in all three jurisdictions with as little overlap and duplication as possible. Some level of harmonization (formalized or not) among the three jurisdictions will be required to ensure this occurs.

Background and Current Status:

- Quest is proposing a mining project comprising three components:
  1. the Strange Lake Rare Earth Element (REE) mining project (in Quebec), roughly 235 km northeast of Schefferville, Quebec;
  2. a private road from the mine in Quebec to a port facility at Voisey’s Bay, on the Labrador coast;
  3. a shipping and processing facility in southern Quebec.

- Part III of the NL Environmental Assessment Regulations, 2003 lists designated undertakings that must be registered with the Department of Environment and Conservation, according to the Newfoundland and Labrador Environmental Protection Act, SNL 2002 (EPA). This list includes “construction projects other than buildings that involve the construction of roads … where a portion of the road will be more than 500 metres from an existing right of way” (paragraph 35 (1)(b)).

- Federal involvement, via CEAA, would be due to the proposed construction of a port facility at the Voisey’s Bay site, not far from the existing Vale port facility.

- According to Section 4.5.4 of the Nunatsiavut Environmental Protection Act, “the commencement of a summary assessment under federal or provincial law”, constitutes a trigger to proceed to a review under the Nunatsiavut Environmental Protection Act.

- Also, in Schedule D of the Regulations Regarding Environmental Reviews of Initiatives on Labrador Inuit Lands, there is a list of projects requiring a detailed review that includes the following: “mines, mills and facilities, including roads and rights of way, related to the mining, production, concentration, milling, transportation, shipment, smelting or refining of Subsurface Resources”.

- This is the first proposed project that will trigger both NG and provincial EA legislation.

- Officials from the EA Division and LAAO met via a teleconference call on January 26, 2015 with CEAA and officials from the NG in preparation for a face-to-face meeting scheduled for February 5, 2015 in St. John’s.
Section 72 of the EPA provides the authority to enter into such an agreement as follows:

72. (2) Notwithstanding section 47, the minister may, with the approval of the Lieutenant-Governor in Council, enter into an agreement with the government of another province or territory, of Canada, or with a combination of them, with respect to the conduct of environmental assessments in accordance with a uniformly applied process.

(3) Where an agreement is entered into under this section, this Part, a provision of this Part or regulations made with respect to this Part shall apply in accordance with the agreement only and the process established by that agreement shall be considered to satisfy the requirements of this Part or regulations made with respect to this Part.

EA Division met with Quest officials in St. John’s on January 29th, 2015. At that meeting, Quest indicated they would be ready to submit a revised project description by March 31st, 2015.

Examples were provided where such a principled approach was used and was successful in minimizing duplication and improving efficiencies without formalized agreements for such projects as the Maritime Link Project, LITL Project, Kami Project and the Howse Project.

All parties agreed to examine their processes and to be prepared to discuss measures and means possible to harmonize processes to the extent possible at the February 5th meeting.

A spreadsheet was prepared that outlines the three processes and timelines and will be used to facilitate discussions concerning harmonization measures that can be adopted.

A comparison of ‘government time’ to complete an EA indicates that NL requires 332 days, the CEA Agency, 365 and the NG, 520 days.
Action Being Taken:

- The Province should consider other measures to promote

- ENVC officials will report back after the face-to-face meeting with CEAA and the NG.

Prepared / Approved by:  I. Stone, EA Scientist/B. Cleary, Director/ M. Goebel/ADM
February 3, 2015
The Environmental Assessment Process in Newfoundland & Labrador

Bas Cleary, Director
EA Division

February 5, 2015
Overview

- EA Legislation
- Goals of EA in Newfoundland & Labrador
- EA Application & Process
- Consultation
- Government Review
- Harmonization & Agreements
• Environmental Protection Act 2002
  – Environmental Assessment (Part X)

• Environmental Assessment Regulations 2003
To ensure that when development proceeds, it does so in an environmentally acceptable manner
Goals of Environmental Assessment in NL

- Promote environmentally acceptable development
- Engagement early in project planning
- Assist proponents to meet legislative requirements
- Ensure environmental protection is priority
- Allow input by gov’t agencies, Aboriginal groups and the public
- Ensure informed decision-making
The Process

Project Registration Screening

- Project Released
- Project Rejected

EPR Required
- EA Committee Appointed
- Guidelines Issued
- EPR Submitted
- Recommendation & Decision
- Release
- EIS Required

EIS Required
- EA Committee Appointed
- Guidelines Reviewed Issued
- Component/Baseline Studies
- EIS Submitted
- Recommendation & Decision
  - Project Rejected
  - Project Released
EA Process Overview

Project Registered

Registration Review Periods
- 21 Day Agency Review Period
- 35 Day Public Review Period

Minister's Decision
Due 45 Days from Registration Date.
4 Options:

- Environmental Preview Report (EPR) is required
- Environmental Impact Statement (EIS) is required

Registration Released

Registration Rejected (requires Cabinet Approval)
Public Consultation

- Early engagement of communities that may be affected within project area
- Provide all EA documents to the public
- Ample opportunity and forum to engage public and address concerns
Aboriginal Consultation

Review by Government Regulators

- Wide distribution to government screening committee (provincial & federal)
- Provide appropriate time to conduct review
- Discuss the nature of comments with agencies during the review
- Provide committee comments, contact information, permitting information, legislation source and rationale for advice and requirements
Harmonization with Other Jurisdictions

Advantages
- To avoid duplication, delays and costs to proponents
- Done whenever possible & practical
e.g., LITL, Maritime Link, Kami (with CEAA)

Challenges
- Timelines do not match
- Decision steps do not match
- Information requirements vary
Harmonization with Other Jurisdictions

E.g., Labrador-Island Transmission Link Project*
- Common EIS Guidelines
- Common Aboriginal Consultation Guidelines
- Joint responses to Aboriginal submissions*
- Coordinated announcements (where possible)*
- Section 72 not triggered of *EPA not triggered

- *CEAA 2012 came into force prior to release from EA
72. (2) Notwithstanding section 47, the minister may, with the approval of the Lieutenant-Governor in Council, enter into an agreement with the government of another province or territory, of Canada, or with a combination of them, with respect to the conduct of environmental assessments in accordance with a uniformly applied process.

(3) Where an agreement is entered into under this section, this Part, a provision of this Part or regulations made with respect to this Part shall apply in accordance with the agreement only and the process established by that agreement shall be considered to satisfy the requirements of this Part or regulations made with respect to this Part.
(4) The Lieutenant-Governor in Council may
   (a) release an undertaking that is the subject of an agreement made under this section subject to terms and conditions that the Lieutenant-Governor in Council considers necessary; or
   (b) direct that the undertaking not proceed.

(5) Where an agreement is entered into under this section, an undertaking that is subject to that agreement shall not proceed unless the Lieutenant-Governor in Council has released that undertaking.

*Environmental Protection Act, 2002 cE-14.2 s72*
Please assess these and formulate LAAO views as needed. Try and send me key points before the 9am start. A lot of this seems germane to EA but there will be roles for us. You may wish to track down copies of the Generation agreements that spoke to Panel creation, terms of ref, composition, etc.

Sent from my BlackBerry.

Brian RM. Harvey
Director - Aboriginal Affairs
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

From: Stone, Ivy
Sent: Wednesday, February 4, 2015 15:34
To: Cleary, Bas; Harvey, Brian; Appleby, Christopher
Subject: Info re Feb 5th meeting

Hi,

Some points to consider for tomorrow’s meeting:

1.
2. 
3. 
4. What did those harmonization efforts or ‘agreements’ look like? How did they work?
5. We will be asked where we have flexibility in our processes.
6. Where are we able to streamline?
7. 
8. In election years, there are additional delays to consider.
9. 
10. Each jurisdiction will present their EA process and a discussion of harmonization principles will likely follow.
11. See second page of Excel spreadsheet with comments by the NG.

Ivy Stone, M.Sc.
Environmental Scientist
Environmental Assessment Division
Department of Environment and Conservation
4th Floor, West Block, Confederation Building
St. John's, NL, A1B 4J6
Phone: (709)729-0090
Fax: (709)729-5518
E-Mail: ivystone@gov.nl.ca
Melindy, Shawn D.

From: Stone, Ivy
Sent: Wednesday, February 04, 2015 3:09 PM
To: Appleby, Christopher
Subject: FW: Strange Lake information note
Categories: Quest / Strange Lake

fyi

From: Cleary, Bas
Sent: Wednesday, February 04, 2015 10:05 AM
To: Stone, Ivy
Subject: FW: Strange Lake information note

These points need to be considered in our discussions.

From: Chippett, Jamie
Sent: Wednesday, February 04, 2015 10:02 AM
To: Cleary, Bas
Subject: Fw: Strange Lake information note

Fyi

Jamie Chippett
Deputy Minister
Environment and Conservation

From: Gover, Aubrey
Sent: Wednesday, February 04, 2015 09:04 AM
To: Chippett, Jamie; Dutton, Sean; Bown, Charles W.
Cc: Liverman, Dave
Subject: RE: Strange Lake information note

Section 29(1)(a), Section 35(1)(f), Section 35(1)(g)
From: Chippett, Jamie  
Sent: Tuesday, February 03, 2015 2:38 PM  
To: Dutton, Sean; Bown, Charles W.; Gover, Aubrey  
Cc: Liverman, Dave  
Subject: FW: Strange Lake information note

Gentlemen,

Could I have your views on the attached note please as pertains to means of proceeding with an EA assessment of the above project given it triggers, provincial, federal, and NG assessments? I'm copying in Dave in event Charles is still off.

Meeting is to be held on Thursday

Jamie

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Sent: Tuesday, February 03, 2015 2:13 PM  
To: Chippett, Jamie; Goebel, Martin  
Cc: Stone, Ivy  
Subject: Strange Lake information note

Jamie and Martin,

Attached is an information note on the proposed project. There is a face-to-face meeting proposed for this Thursday weather permitting.

Bas
Thanks very much for this Chris. Good work.

Would you please print me one copy of all materials? So that would include, I think, the various attachments and emails Ivy has sent in the last week, as well as a copy of our Act and regs and the NG Act and regs?

NB. I care not about CEAA, no need to print that Act.

If I have not made it to the office by the time you are departing for the meeting, please being my copies to the meeting and I will meet you there.

Thanks Chris. Lisa or Karen could help as needed.

Sent from my BlackBerry.

Brian RM. Harvey
Director - Aboriginal Affairs
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

Hi Brian,

This is mainly germane to the ENVC process however there are a few things to note from the quick review I’ve done of the information that Ivy sent and offer the following comments:

As you know the project crosses LISA and LIL.

However, according to LILCA 11.2.2 and 11.2.3 a formalized agreement is required outlines that parties agree to “jointly take appropriate measures to avoid unnecessary overlap” for an EA and that the “relevant authority [GoC and GNL] negotiate an agreement or arrangement for the coordination and harmonization of the applicable EA."

LILCA 11.2.4 notes that each authority retains the capacity to take actions and make decisions in relation to a project, to fund the project and to issue permits licences and other authorizations in relation to a project within its legislative
authority / jurisdiction. LILCA 11.3.4 has provisions in respect to conflict regarding NG jurisdiction with CEAA/NL EPA and Inuit EA law – Provincial or Federal law prevails.

I was not able to determine if the three parties [NG, GNL and GoC] have ever done this in the past. I’m guessing not.

As you know Generation project had a joint review panel agreement that set out how the panel was established, the constitution of the panel and the rules associated with who could be on the panel etc. The agreement also notes the terms of reference for the panel/ scope of the assessment. This is the only one agreement that I could find on short notice. I’m not sure if LITL had a similar agreement of not.

Regarding ENVCs power point - Consultation is only references the ACP and should also consider the LILCA definition of Consultation.

See you in the morning. Cheers

Chris
Hi Tom,

As indicated before and demonstrated by actions taken so far, the Agency is committed to harmonization so as to avoid unnecessary overlap and duplication, in accordance with Part 11.2 of the Labrador Inuit Land Claims Agreement.

Section 18 of CEAA 2012 prescribes that the Agency must offer to consult and cooperate with the Nunatsiavut Government—a “jurisdiction” within the meaning of paragraph (e) of the definition of “jurisdiction” in subsection 2(1). CEAA 2012 provides significant flexibility and broad discretion to the Agency regarding the conduct of an environmental assessment, including with respect to:

- the factors to be considered and the scope of these factors—-with respect to the components of the designated project subject to CEAA 2012 to be located in the Labrador Inuit Settlement Area (i.e. a “Project” under the Labrador Inuit Land Claims Agreement), this flexibility allows for the consideration of the matters identified in section 11.2.10 of the Labrador Inuit Land Claims Agreement and in the Schedule to the Nunatsiavut Environmental Protection Act;
- opportunities for the Inuit Communities potentially affected by the project to participate in the EA; and
- consultation with the Nunatsiavut Government in accordance with Parts 11.2 and 11.6 of the Labrador Inuit Land Claims Agreement.

While CEAA 2012 does not prescribe the form an harmonization arrangement or agreement with another jurisdiction should take, we have once again significant flexibility in this regard both in an informal and formal manner (e.g., MOU, exchange of letters, etc.). We also note that Part 4.14 of the Nunatsiavut Environmental Protection Act also provides flexibility for the Nunatsiavut Government to harmonize its EA responsibilities with other jurisdictions.

Under CEAA 2012, a single EA of the designated project must be conducted on the “designated project” as prescribed under item 16(c) of the Schedule to the Regulations) as well as other activities that are incidental to the mine (e.g., the road and the port). The extent/scope of the EA under CEAA 2012 is part of what the Agency wants to discuss with the Nunatsiavut Government. The Agency is committed to fulfilling the requirements of sections 11.2.9 and 11.6.1 in this regard.

In short, the Agency is committed to ensuring that, as appropriate, harmonization measures are in place so as to avoid unnecessary overlap and duplication with respect to any components of the designated project subject to CEAA 2012 that will also require an EA by another jurisdiction—including in the case of the Nunatsiavut Government any and all proposed infrastructure and activities that will be carried out in Labrador Inuit Lands.
designated project subject to CEAA 2012 that will also require an EA by another jurisdiction—including in the case of the Nunatsiavut Government any and all proposed infrastructure and activities that will be carried out in Labrador Inuit Lands.

Now that our staff have identified specifics on key steps to harmonize processes, this sets the stage for us to discuss options to best meeting our respective interests.

Thank you and have a great weekend.

Sylvain

---

From: Tom Sheldon [mailto:tom_sheldon@nunatsiavut.com]
Sent: Friday, March 20, 2015 01:52 PM
To: Ouellet, Sylvain [CEAA]
Cc: Cleary, Bas <clearyb@gov.nl.ca>; Stone, Ivy <ivystone@gov.nl.ca>; Andrea Hoyt <andrea_hoyt@nunatsiavut.com>; Chabot, Raymond [CEAA]; Chevrier, Andree [CEAA]; Boulanger, Francois [CEAA]; Croteau, Jean-Philippe [CEAA]; Gaudet, Anne-Marie [CEAA]; Kirstein, Friederike [CEAA]; Ricken, Lindsey [CEAA]; Farrell, Michael [CEAA]; Cougle, Betty Ann [CEAA]
Subject: Re: Strange Lake - Draft Roadmap

Good afternoon Sylvain,

Thank you for this potential option as a way forward to coordinate three separate environmental assessment processes. As we indicated in our face to face meeting in St. John's on February 5, 2015, and in several teleconferences, the Nunatsiavut Government is committed to a formal harmonization agreement resulting in a single, joint, efficient environmental assessment associated with the proposed Quest development (for the many reasons outlined during our face to face meeting).

It is my understanding that the last meeting of our staff occurred on February 25, 2015. Although useful, the focus of the discussion limited possibilities to some coordination of deliverables for certain steps of three separate EA processes. We suggest building on these discussions, including the content of the attachment you circulated, to now pursue a single, joint, efficient environmental assessment process associated with the development.

With this goal in mind, we have the following questions. Itemizing your responses A through D would be helpful for clarity and our understanding.

a) Is there a mechanism within CEAA 2012 to formally harmonize a standard EA through the Agency? If so, please point us to the appropriate section(s) of the Act indicating this?

b) Is a single JRP process for the whole project (mine, road, port) possible under CEAA 2012? Would you please advise whether a JRP process involving the JBNQA parties would be possible as was done in relation to the environmental assessment of low level flying in the past.

c) If the answer to (b) is no, how would a JRP for the road and port work?
On Fri, Mar 20, 2015 at 1:55 PM, Ouellet, Sylvain [CEAA] <Sylvain.Ouellet@ceaa-acee.gc.ca> wrote:

Tom, Bas,

I understand that Andrea, Ivy and Raymond, have had constructive discussions on options to harmonize the assessment processes for the Strange Lake process. Please find attached a draft paper that Raymond developed pursuant to these discussions. As a next step, I'd propose that we have a conference call within a week or so to discuss where we are and options going forward. Carole in my office will follow-up with your office to find time that works for all. Each of us has had a bilateral discussion with the proponent and we should also consider a collective call or meeting with the proponent in April to speak to what we are considering. Thank you.

Sylvain Ouellet

DG, Regional Operations / Opérations régionales

Canadian Environmental Assessment Agency / Agence canadienne d’évaluation environnementale

Tel. : 613-948-2663

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Tom Sheldon
Director of Environment
Nunatsiavut Government
P.O. Box 70
Nain, NL A0P 1L0
Tel: (709) 922-2588 or (709) 922-2380
Fax: (709) 922-1040
From: Ouellet, Sylvain [mailto:Sylvain.Ouellet@ceaa-acee.qc.ca]
Sent: Friday, March 20, 2015 2:25 PM
To: tom.sheldon@nunatsiavut.com; Cleary, Bas; Stone, Ivy; andrea.hoyt@nunatsiavut.com
Cc: Chabot, Raymond [CEAA]; Chevrier, Andree [CEAA]; Boulanger, Francois [CEAA]; Croteau, Jean-Philippe [CEAA]; Gaudet, Anne-Marie [CEAA]; Kirstein, Friederike [CEAA]; Rickan, Lindsey [CEAA]; Farrell, Michael [CEAA]
Subject: Strange Lake - Draft Roadmap

Tom, Bas,
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Sylvain Ouellet
DG, Regional Operations / Opérations régionales
Canadian Environmental Assessment Agency / Agence canadienne d’évaluation environnementale
Tel.: 613-948-2663
Strange Lake Mining Project
Road map for a collaborative environmental assessment review

Considerations
One of the purposes of the Canadian Environmental Assessment Act (the Act) is to promote cooperation between federal and other governments with respect to EA. As such, the Act provides authority to enter into agreements with governmental jurisdiction for the purpose of coordinating EAs. Cooperation between jurisdictions may contribute to minimize duplication while respecting the legal responsibilities of each government. It also means that the expertise, scientific capacity, experience and resources of governments can be shared to address the challenges associated with a specific EA. Coordination can also result in a better integration of consultations and therefore optimize public and aboriginal participation.

Roadmap for collaborative EA
After discussions with representatives from the Nunatsiavut (NG) and Newfoundland and Labrador (N-L) governments, the Agency is proposing a roadmap to highlight the opportunities of collaborative work. This roadmap is presented according to the deliverables relative to the environmental assessment of the Strange Lake project, namely the guidelines, the environmental impact study (EIS) review, the environmental assessment (EA) report and the EA decision (table 1).

EIS guidelines coordination (diagram 1)
The first occasion to harmonize the three processes is during the screening phase of the project. There is a possibility to coordinate the timing of the submission of the project descriptions (project registration) with the collaboration of the proponent (diagram 1). This would enable us to exchange on our guidelines to ensure certain cohesion on environmental issues of common interest and to send the guidelines to the proponent at the same time. Discussion happened on the possibility of drafting common guidelines with specific requirement in appendices. An alternative would be to draft three separate guidelines and submit them at the same time to the proponent. The three jurisdictions agreed to exchange draft guidelines during this phase.

EIS review coordination (diagram 2)
The second opportunity would be after the proponent submits his EIS report. Because of different timelines, the proponent could send his report to NG before the two other jurisdictions. The adequacy phase of the EIS review can extend for 145 days or more and this stage can be repeated until the EIS is judged sufficient for the analysis and the public consultation. With the collaboration of the proponent, the EIS could be submitted later to N-L and CEAA when the NG announces the beginning of the public consultation of the EIS (diagram 2).
During the adequacy review by NG, N-L and CEAA are willing to work jointly to identify gaps and deficiencies so when the proponent submits his final EIS, it will improve the quality of that document with less risk of amendments or complementary studies. N-L and CEAA may send their concordance table to NG to help and share expertise. CEAA emphasized on their willingness to share any information either form experts or from the proponent. Technical meeting with the federal comity could also be organised with technical staff from NG.

This phase is also the occasion to align the consultation period in order to optimize the public and aboriginal participation in the EIS. CEAA is open to extend its 30 days consultation period to 50-60 days for instance. The three jurisdictions agree to aim at having coordinated public meetings. For instance, in Nunatsiavut, the CEAA and the federal comity could attend public meeting with the help of NG.

**EA report and EA decision (diagram 3)**

During the drafting of the EA report, the collaboration that could be considered is the sharing of information (either on the process or the content of the assessment) and the possibility to organise meetings with or without experts on specific issues. As for the decision phase, CEAA will inform the two other jurisdictions of its timeline. The three decisions could be delivered in a timeframe that is not out of sync because of the earlier collaborative work.
Diagram 1. Coordination of the timelines from project registration (project description) to the final guidelines.

A NG project registration at the beginning of April has been hypothetically introduced in the diagram to illustrate how the guidelines could be sent at the same time at the beginning of November.

*NG Guidelines timeline has 2 undefined periods. For the exercise we included a 30 days drafting GL and a 30 days for the issuance by the Minister in addition to the 70 days consultation period on the GL.

**N-L timeline: 20% time was added for both consultation periods (on registration and on draft GL)
Diagram 2. Coordination for the submission of the EIS and the consultation

NG

Adequacy review of the EIS

+ 145 days
(potentially repeated)*

Consultation on the EIS

(60-120 days)

CEAA

Submission of EIS (delay**)

Consultation (+ 50 days)

CEAA

Submission of EIS (delay **)

Consultation (30 days***)

*NG timeline has an undefined period for the decision on adequacy of EIS that adds to the 145 days

** The delay of submission of the EIS by the proponent could be after the adequacy review by NG and the announcement period for the consultation

*** CEAA 30 days consultation could be extended to 50 days to coordinate with N-L and NG)
Diagram 3  Comparison of the timelines from EIS consultation to EA decision

EIS consultation (60-120 days) → EIS consultation and analysis *(+50 days)* → EIS decision* (20 days) → EA report submitted to Cabinet (30-60 days) → EA report draft and consultation (105 days) → Final report (75 days) → Final report submitted to Assembly (120 days) → Assembly decision (undefined timeline)

*These 2 phases might be repeated until EIS is judged satisfactory by the Minister

**Consultation could be extended to 50-60 days; the analysis of EIS is performed simultaneously and could last 90 days
Table 1. Roadmap for collaborative EA processes.

<table>
<thead>
<tr>
<th>GUIDELINES</th>
<th>EIS REVIEW</th>
<th>EA REPORT</th>
<th>EA DECISION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input</td>
<td>Project description (CEAA) Project registration (NG and N-L)</td>
<td>Single environmental impact study report for the 3 jurisdictions</td>
<td>EA reports from each jurisdiction</td>
</tr>
<tr>
<td>Activities</td>
<td>• Guidelines drafting</td>
<td>• Adequacy review of EIS</td>
<td>• Drafting of report</td>
</tr>
<tr>
<td></td>
<td>• Public and FN Consultation on GL</td>
<td>• Public and FN Consultation on EIS</td>
<td>• Consultation on draft report (CEAA only)</td>
</tr>
<tr>
<td></td>
<td>• Analysis of EIS(comities)</td>
<td></td>
<td>Prepare decision documents</td>
</tr>
<tr>
<td>Common ground</td>
<td>• Information Requirements overlap in guidelines (CEAA and N-L)</td>
<td>• Consultation coordination (could extend timeline of federal consultation to align with N-L and NG)</td>
<td>Exchange of information between the 3 jurisdictions</td>
</tr>
<tr>
<td></td>
<td>• History of joint guidelines pre CEAA 2012 (CEAA –N-L)</td>
<td>• Explore possible organisational optimization of public meetings</td>
<td>Exchange of information between the 3 jurisdictions.</td>
</tr>
<tr>
<td></td>
<td>• NG open to this joint GL opportunity (GL must consider importance of aboriginal knowledge)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limitation</td>
<td>Collaborative work</td>
<td>Output</td>
<td></td>
</tr>
<tr>
<td>------------</td>
<td>--------------------</td>
<td>--------</td>
<td></td>
</tr>
</tbody>
</table>
| • Timelines (registration and consultation for NG and N-L longer than CEAA)  
• NG assembly limited sessions (EA decision)  
• Undefined timeline for certain steps | • Coordination of the project registration/description submission (need collaboration from the proponent)  
See diagram 1  
• Exchange of draft guidelines | Possibility of common requirements core document and specifics in |
| | • Coordination of the EIS submission (need collaboration from proponent) See diagram 2  
• Exchange of information  
• Technical expertise meetings on specific issues  
• Aim to organise common public meetings | • Coordination of consultation period and public |
| | • Exchange of general and expert information  
• Meeting and teleconference opportunities on specific issues | 3 different reports submitted to government |
| | • CEAA will inform the other jurisdictions of its timeline for the decision.  
• NG and NL share what is possible as for the timing of decision announcement | 3 EA decisions not out of sync because of earlier collaborative |
<table>
<thead>
<tr>
<th>appendices</th>
<th>meetings</th>
<th>potentially during the same quarter</th>
<th>work</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Thorough analysis based on shared information from experts</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Deliverables**

| Different guidelines sent to the proponent at the same time or single guidelines document delivered to the proponent* | EIS analysis and consultation report | Each jurisdiction sends a report to its government for an EA decision | EA decision |

---

1 Timing of submission of EA report is difficult to coordinate depending of the frequency of information requirement sent to the proponent* and consultation period that is attached to it.
Background
Quest Rare Minerals Inc. is proposing the construction, operation and decommissioning of a rare earth mine open pit, located about 225 kilometers northeast of Schefferville, Quebec. In addition to the pit, facilities also include a crusher, flotation unit for ore concentration, a tailings impoundment area and associated buildings. The mine and its facilities are located on the Inuit territory governed by the Convention of the James Bay and Northern Quebec Agreement (JBNQA).

The project also includes a road between the mine in Quebec and port in Labrador over a distance of about 162 kilometers (18 miles Quebec and Labrador 144 km). Furthermore, the proponent plans to build and operate an ore processing plant and associated infrastructure in the industrial park of Bécancour, southern Quebec.

This project requires five different environmental assessment processes. In Labrador, a federal, a provincial and an aboriginal government environmental assessment (EA) will be mandatory.

The three jurisdictions are developing a common approach to best coordinate the conducting of the EA under CEAA 2012 and the two other applicable EA regimes (Nunatsiavut, N-L) for the components of the Strange Lake process that is located in Labrador. In Atlantic Canada, project-specific arrangements have been used to promote cooperation because there are no formal bilateral agreements in place. Furthermore, Nunatsiavut environmental regulation seeks to harmonize their EA process with that of other jurisdictions.
Hi:

Do you have any comments on this given you recently attended a meeting on it.

Ruby

-----Original Message-----
From: Gover, Aubrey
Sent: Thursday, April 09, 2015 4:23 PM
To: Carter, Ruby
Subject: FW: HP TRIM Briefing Note : BN-2015-19 : Information Note - DRAFT Strange Lake EA Update

Any comments?

Aubrey Gover
Deputy Minister
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador

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-----Original Message-----
From: Cleary, Bas
Sent: Thursday, April 09, 2015 12:26 PM
To: Bown, Charles W.; Gover, Aubrey; Dutton, Sean
Cc: Hoddinott, Fanny; Chippett, Jamie; Goebel, Martin
Subject: HP TRIM Briefing Note : BN-2015-19 : Information Note - DRAFT Strange Lake EA Update

Good day,

The attached note is sent on behalf of Jamie for your review. It is intended to arrange a meeting with you to discuss further. I have copied Fanny so she can arrange such a meeting in consultation with your office.

All the best, Bas

------< HP TRIM Record Information >------
Record Number: BN-2015-19
Title: Information Note - DRAFT Strange Lake EA Update
Information Note
Department of Environment and Conservation (ENVC)

Title: Tripartite harmonization of EA processes for the proposed Strange Lake Road & Port Access Project (the project) in Northern Labrador.

Issue: Update of efforts to harmonize environmental assessment review of the proposed Strange Lake Road & Port Access Project (the project) in Northern Labrador.

Background and Current Status:
- Quest Rare Minerals Ltd. (Quest) is proposing a mining project comprising three components:
  - the Strange Lake Rare Earth Element (REE) mining project (in Quebec), roughly 235 km northeast of Schefferville, Québec;
  - a private road from the mine in Quebec to a port facility at Voisey’s Bay, on the Labrador coast;
  - A shipping and processing facility in Bécancour, southern Quebec.

- This proposed project will trigger environmental assessment legislation with the government of Newfoundland & Labrador (NL), the Nunatsiavut Government (NG) and the Canadian Environmental Assessment Agency (CEAA).

- The EA Division had a number of working level meetings with the CEA Agency and NG representatives over a month long period and subsequent to a face-to-face meeting held on February 5, 2015 in St. John’s. The objective of those meetings was to determine to what extent the three EA processes could be harmonized in order to avoid overlap, high costs and duplication for the three jurisdictions as well as for the proponent.

- EA Division met with Quest officials in St. John’s on March 19, 2015. At that meeting Quest provided updated information relative to their revised Port facilities and spoke of their recent meetings with the Innu Nation (IN) and the NG.

- Quest also provided information on company restructuring and background information on REEs and why they feel this deposit will be considered world class should it be developed.

- Quest advised the EA Division that at recent meetings, the

Analysis:
- Following the meeting with Quest, the EA Division had a conversation with the CEA Agency and both parties agreed that a roadmap outlining results should be presented soon to the NG.
• On March 20, the CEA Agency forwarded a roadmap to the EA Division and to the NG.

• The proponent has indicated that shareholders may not be interested in supporting a project that may be subject to an expensive and lengthy review process.

**Action Being Taken:**

• The EA Division will continue to participate in a working group comprised of both NG and CEAA officials if there are specific tasks identified beyond the roadmap designed by the CEA Agency.

• The EA Division will provide feedback to the CEA Agency relative to a roadmap designed by the CEA Agency and the result of working group meetings between the EA Division, the NG and the Agency.

**Prepared/Approved by:** I. Stone/B. Cleary/J. Chippett, DM  
**Approved by:**  
**Date:** March 27, 2015
Please consolidate comments.

Sent from my BlackBerry 10 smartphone on the Bell network.

Original Message
From: Appleby, Christopher
Sent: Friday, April 10, 2015 11:15 AM
To: Carter, Ruby; Gover, Aubrey
Subject: RE: HP TRIM Briefing Note: BN-2015-19: Information Note - DRAFT Strange Lake EA Update

Aubrey / Ruby...
As Ruby notes, the note does not identify that the proposed road crosses both LIL and LISA. This however was identified by LAAO at a face-to-face meeting in March 2015 where it was noted that the consultation will follow the process outlined in LILCA.

I'm not sure if ENV captured all of the comments of the conference call. Here is some additional information:

- At meetings end, the agreed to path forward was that the NG would provide possible scenarios for the parties to review.

In a CEEA email to Tom Sheldon (NG) they noted

"We also note that Part 4.14 of the Nunatsiavut Environmental Protection Act also provides flexibility for the Nunatsiavut Government to harmonize its EA responsibilities with other jurisdictions."

Hope this helps.

-----Original Message-----
From: Carter, Ruby
Sent: Friday, April 10, 2015 11:02 AM
To: Gover, Aubrey
Cc: Appleby, Christopher
Subject: RE: HP TRIM Briefing Note: BN-2015-19: Information Note - DRAFT Strange Lake EA Update
My thoughts are as follows:

Might want to explain the NG jurisdiction/decision only applies to LIL. NG would need to be involved/consulted in LISA outside LIL.

It is not clear what a "road map outlining results" is referring to. Perhaps should mention that the Strange Lake deposit on the Labrador side is within LIL.

I also shared the draft note with Chris for his input as he attended a recent meeting with CEAA and NG on it. He will get back to you on it via separate email.

Ruby

-----Original Message-----
From: Gover, Aubrey
Sent: Friday, April 10, 2015 10:46 AM
To: Carter, Ruby
Subject: FW: HP TRIM Briefing Note: BN-2015-19: Information Note - DRAFT Strange Lake EA Update

Any comments?

Aubrey Gover
Deputy Minister
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador

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Cc: Hoddinott, Fanny; Chippett, Jamie; Goebel, Martin
Subject: HP TRIM Briefing Note: BN-2015-19: Information Note - DRAFT Strange Lake EA Update

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All the best, Bas

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From: Gover, Aubrey
Sent: Friday, April 10, 2015 4:56 PM
To: Cleary, Bas
Subject: RE: HP TRIM Briefing Note: BN-2015-19: Information Note - DRAFT Strange Lake EA Update

A few comments: Section 34(1)(a)(i), Section 34(1)(a)(v), Section 29(1)(a)

Under Part 11.2 of the Environmental Assessment chapter of the Labrador Inuit Land Claims Agreement (LILCA), no project in LIL can commence until an EA has been completed and all necessary permits / licenses have been issued by the authorities, including the Nunatsiavut Government. Section 29(1)(a)

11.2.3 of the LILCA notes “If a Project is subject to more than one Environmental Assessment, the relevant Authority and the Nunatsiavut Government shall, having regard to any harmonization measures that may have been established pursuant to section 11.2.2, negotiate an agreement or arrangement for the coordination and harmonization of the applicable Environmental Assessment processes so as to avoid unnecessary overlap and duplication while also meeting their respective decision-making needs with respect to the Project.” Section 29(1)(a)

Moreover, NG can ultimately determine if the project proceeds as LILCA essentially provides the NG control over development on LIL through IBAs, land title, etc.
This however was identified by LAAO at a face-to-face meeting in March 2015 where it was noted that treaty obligations to consult will be followed as outlined in LitLCA.

During a recent conference call with CEEA, NG and GNL, the

It would be also prudent to note that while CEAA 2012 does not prescribe the form a harmonization arrangement or agreement with another jurisdiction should take, CEAA 2012 has significant flexibility how informal / formal an agreement could be created (e.g., MOU, exchange of letters, etc.). Under Part 4.14 of the Nunatsiavut Environmental Protection Act, the NG also has flexibility to harmonize its EA responsibilities with other jurisdictions.”

Under Actions being taken,

Aubrey Gover
Deputy Minister
Labrador and Aboriginal Affairs Office
Government of Newfoundland and Labrador

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All the best, Bas

-----< HP TRIM Record Information >-----

Record Number : BN-2015-19
Title : Information Note - DRAFT Strange Lake EA Update
Aubrey,

Here is the latest DRAFT of the note. Ivy plans to update this after today’s meeting. Highlighted sections are the new bullets that have been added – per your email to Bas last Friday.

Cheers

Chris

Chris,

Here is a draft note re SL as well. It will be updated to reflect outcomes of today’s meeting before being placed in trim. The highlighted pieces reflect commentary from LAAO. Thanks.

Ivy

Hi Chris,

As you are aware, the EAD, CEAA and the NG have been meeting for some weeks now to try to develop a means of harmonizing our three EA processes relative to the proposed Strange Lake Port and Road in northern Labrador. A ‘roadmap’ was drafted by CEAA to outline where the processes lined up and what actions could be done to ensure unnecessary overlap and duplication, for the regulators and for the proponent.

“…coordination and harmonization of the applicable Environmental Assessment processes so as to avoid unnecessary overlap and duplication while also meeting their respective decision-making needs with respect to the Project.”
There is a meeting planned today (CEAA, NL, NG and the proponent). The proponent has been waiting for the parties to sort out the processes and we feel an update is due to them.

The NG and the proponent will also express their points of view.

If the proponent decides to submit a project description (PD) in the next few weeks, days etc., that is their discretion.

Let me know if you have any questions.

Ivy

---

**From:** Appleby, Christopher  
**Sent:** Friday, April 17, 2015 8:36 AM  
**To:** Stone, Ivy  
**Subject:** RE: can you give me a shout? thx

Ivy,

Can you please send me a quick note on what NL proposes to say to the NG. Thanks

Chris

---

**From:** Appleby, Christopher  
**Sent:** Friday, April 17, 2015 8:17 AM  
**To:** Stone, Ivy  
**Subject:** RE: can you give me a shout? thx

Hi Ivy

Can you give me a call when you get in. I want to better understand what is being said to the NG today. 11.2.3 is very clear on harmonization.

Thanks

Chris
From: Stone, Ivy  
Sent: Thursday, April 16, 2015 2:01 PM  
To: Appleby, Christopher  
Subject: can you give me a shout? thx

---

From: Stone, Ivy  
Sent: Thursday, April 16, 2015 11:13 AM  
To: Appleby, Christopher  
Subject: RE: Strange Lake

Chris,

If you want to have another person attend from LAAO that would be fine and maybe a good idea. Thanks.

ivy

---

From: Stone, Ivy  
Sent: Tuesday, April 14, 2015 10:42 AM  
To: Appleby, Christopher  
Subject: RE: Strange Lake

Sorry. I think the meeting has been set and agreed to by the other parties. I was late getting the info unfortunately. I will report back. 😊

---

From: Appleby, Christopher  
Sent: Tuesday, April 14, 2015 10:41 AM  
To: Stone, Ivy  
Subject: Re: Strange Lake

I am free in the morning. Or in the afternoon at 130.

Sent from my BlackBerry 10 smartphone on the Bell network.

---

From: Stone, Ivy  
Sent: Tuesday, April 14, 2015 9:34 AM  
To: Appleby, Christopher  
Subject: RE: Strange Lake

Chris,

There is a telecon set up for 12:30 this Friday. Are you available? Thanks.

Ivy

---

From: Stone, Ivy  
Sent: Monday, April 13, 2015 3:50 PM  
To: Appleby, Christopher  
Subject: FW: Strange Lake

fyi

---

From: Cleary, Bas  
Sent: Monday, April 13, 2015 3:27 PM
Hi Sylvain,

We still believe it may be premature to meet with the proponent given that there is no agreement. However, we would be willing to have this meeting to alert the proponent as to the differences between the parties and the possibility/likelihood that there will be 4-5 separate environmental assessment processes associated with the development.

I have windows of availability on Wednesday and Thursday afternoons next week as well as all day Friday. If these windows don't work for others, it is possible that I could juggle around my schedule to accommodate other's availability. Please let me know if this is the case and I will do my best.

Thank you,
Tom

On Wed, Apr 8, 2015 at 1:10 PM, Ouellet, Sylvain [CEAA] <Sylvain.Ouellet@ceaa-acee.gc.ca> wrote:
Hi Bas, Tom,
As discussed last week, we should be having a call with the proponent next week. Could you please provide me some dates and time windows that work for you so my office can set up the call? Thx and have a great day.

Sylvain
**Information Note**

**Department of Environment and Conservation (ENVC)**

**Title:** Tripartite harmonization of EA processes for the proposed Strange Lake Road & Port Access Project (the project) in Northern Labrador.

**Issue:** Update of efforts to harmonize environmental assessment review of the proposed Strange Lake Road & Port Access Project in Northern Labrador.

**Background and Current Status:**
- Quest Rare Minerals Ltd. (Quest) is proposing a mining project comprising three components:
  - the Strange Lake Rare Earth Element (REE) mining project (in Quebec), roughly 235 km northeast of Schefferville, Quebec;
  - a private road from the mine in Quebec to a port facility at Voisey’s Bay, on the Labrador coast;
  - a shipping and processing facility in Bécancour, southern Quebec.

- This proposed project will trigger environmental assessment legislation with the government of Newfoundland & Labrador (NL), the Nunatsiavut Government (NG) and the Canadian Environmental Assessment Agency (CEAA).

- The road portion of the proposed project crosses both Labrador Inuit Lands (LIL) and Labrador Inuit Settlement Area (LISA) outside LIL.

- Under Part 11.2 of the Environmental Assessment chapter of the Labrador Inuit Land Claims Agreement (LILCA), no project in LIL can commence until an EA has been completed and all necessary permits/licenses have been issued by the authorities, including the NG.

- Section 11.2.3 of the LILCA notes “If a Project is subject to more than one Environmental Assessment, the relevant Authority and the Nunatsiavut Government shall, having regard to any harmonization measures that may have been established pursuant to section 11.2.2, negotiate an agreement or arrangement for the coordination and harmonization of the applicable Environmental Assessment processes so as to avoid unnecessary overlap and duplication while also meeting their respective decision-making needs with respect to the Project.”

- The EA Division had a number of working level meetings with the CEA Agency and NG representatives over a month long period and subsequent to a face-to-face meeting held on February 5, 2015 in St. John’s. The objective of those meetings was to determine to what extent the three EA processes could be harmonized in order to avoid overlap, high costs and duplication for the three jurisdictions as well as for the proponent.
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The NG can ultimately determine if the project proceeds as LILCA provides the NG control over development on LIL through IBAs, land title, etc.

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Following the meeting with Quest on March 19, 2015, the EA Division had a conversation with the CEA Agency and both parties agreed that a roadmap outlining results should be presented soon to the NG.

On March 20, the CEA Agency forwarded a roadmap to the EA Division and to the NG.
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The proponent has indicated that shareholders may not be interested in supporting a project that may be subject to an expensive and lengthy review process.

**Action Being Taken:**
- The EA Division will continue to participate in a working group comprised of both NG and CEAA officials if there are specific tasks identified beyond the roadmap designed by the CEA Agency.
- The EA Division will provide feedback to the CEA Agency relative to a roadmap designed by the CEA Agency and the result of working group meetings between the EA Division, the NG and the Agency.
- Include update form April 17 teleconference

**Prepared by:** I. Stone/B. Cleary
April 15, 2015
From: Gover, Aubrey
Sent: Friday, April 17, 2015 10:04 AM
To: Appleby, Christopher
Subject: Re: STrange Lake

Sent from my BlackBerry 10 smartphone on the Bell network.

From: Appleby, Christopher
Sent: Friday, April 17, 2015 9:46 AM
To: Gover, Aubrey
Cc: Bowles, Ron
Subject: FW: STrange Lake

Hi Aubrey,

This is what is planned for today’s meeting. This ENVC approach seems to be fine. Thoughts?

Chris

From: Stone, Ivy
Sent: Friday, April 17, 2015 9:18 AM
To: Appleby, Christopher
Cc: Cleary, Bas
Subject: STrange Lake

Hi Chris,

As you are aware, the EAD, CEAA and the NG have been meeting for some weeks now to try to develop a means of harmonizing our three EA processes relative to the proposed Strange Lake Port and Road in northern Labrador. A ‘roadmap’ was drafted by CEAA to outline where the processes lined up and what actions could be done to ensure unnecessary overlap and duplication, for the regulators and for the proponent.

“...coordination and harmonization of the applicable Environmental Assessment processes so as to avoid unnecessary overlap and duplication while also meeting their respective decision-making needs with respect to the Project.”
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The NG and the proponent will also express their points of view.

If the proponent decides to submit a project description (PD) in the next few weeks, days etc., that is their discretion.

Let me know if you have any questions.

Ivy

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**From:** Appleby, Christopher  
**Sent:** Friday, April 17, 2015 8:36 AM  
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**Subject:** RE: can you give me a shout? thx

Ivy,

Can you please send me a quick note on what NL proposes to say to the NG. Thanks

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**From:** Appleby, Christopher  
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Can you give me a call when you get in. I want to better understand what is being said to the NG today. 11.2.3 is very clear on harmonization.

Thanks
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ivy

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Sent: Tuesday, April 14, 2015 10:41 AM
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I am free in the morning. Or in the afternoon at 130.

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Chris,
There is a telecon set up for 12:30 this Friday. Are you available? Thanks.

Ivy

From: Stone, Ivy
Sent: Monday, April 13, 2015 3:50 PM
To: Appleby, Christopher
Subject: FW: Strange Lake

fye

From: Cleary, Bas
Sent: Monday, April 13, 2015 3:27 PM
Hi Sylvain,

We still believe it may be premature to meet with the proponent given that there is no agreement. However, we would be willing to have this meeting to alert the proponent as to the differences between the parties and the possibility/likelihood that there will be 4-5 separate environmental assessment processes associated with the development.

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Thank you,
Tom

On Wed, Apr 8, 2015 at 1:10 PM, Ouellet,Sylvain [CEAA] <Sylvain.Ouellet@ceaa-acee.gc.ca> wrote:
Hi Bas, Tom,
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Sylvain

--
Tom Sheldon
Director of Environment
Nunatsiavut Government
P.O. Box 70
Nain, NL A0P 1L0
Tel: (709) 922-2588 or (709) 922-2380
Fax: (709) 922-1040
Aubrey Gover, Deputy Minister, Labrador and Aboriginal Affairs Office
Sent from my iPad

On 2015-04-17, at 9:50 AM, "Appleby, Christopher" <applebyc@gov.nl.ca> wrote:

Aubrey,

Here is the latest DRAFT of the note. Ivy plans to update this after today's meeting. Highlighted sections are the new bullets that have been added – per your email to Bas last Friday.

Cheers

Chris

From: Stone, Ivy
Sent: Friday, April 17, 2015 9:25 AM
To: Appleby, Christopher
Cc: Cleary, Bas
Subject: RE: STrange Lake

Chris,
Here is a draft note re SL as well. It will be updated to reflect outcomes of today's meeting before being placed in trim. The highlighted pieces reflect commentary from LAAO. Thanks.
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fyi

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From: Tom Sheldon [mailto:tom_sheldon@nunatsiavut.com]
Sent: Thursday, April 09, 2015 9:15 AM
To: Ouellet,Sylvain [CEAA]
Cc: Cleary, Bas; Rickan,Lindsey [CEAA]; Chabot,Raymond [CEAA]; Croteau,Jean-Philippe [CEAA]; Andrea Hoyt; Cougle,Betty Ann [CEAA]
Subject: Re: Strange Lake

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Nunatsiavut Government
P.O. Box 70
Nain, NL A0P 1L0
Tel: (709) 922-2588 or (709) 922-2380
Fax: (709) 922-1040

<Information Note - DRAFT Strange Lake EAD - 16April.doc>
Merind, Shawn D.

From: Stone, Ivy
Sent: Friday, April 17, 2015 10:34 AM
To: Appleby, Christopher
Subject: RE: Strange Lake

Categories: Quest / Strange Lake

I'm not sure that there is a ruling. That's all.

Maybe that piece should be taken out of the note?

From: Appleby, Christopher
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Re the QC issue. What was the past ruling?? Do you know the case? Or are you referring to the James Bay Northern Quebec Agreement? Article 2.6

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This is still DRAFT. Please review and make any revisions you feel necessary. Please note the comment re “the EAD speculates.. “

Thanks and have a great weekend.

ivy
Information Note
Department of Environment and Conservation (ENVC)

Title: Tripartite harmonization of EA processes for the proposed Strange Lake Road & Port Access Project (the project) in Northern Labrador.

Issue: Update of efforts to harmonize environmental assessment review of the proposed Strange Lake Road & Port Access Project in Northern Labrador.

Background and Current Status:
- Quest Rare Minerals Ltd. (Quest) is proposing a mining project comprising three components:
  - the Strange Lake Rare Earth Element (REE) mining project (in Quebec), roughly 235 km northeast of Schefferville, Québec;
  - a private road from the mine in Quebec to a port facility at Voisey’s Bay, on the Labrador coast;
  - A shipping and processing facility in Bécancour, southern Quebec.
- This proposed project will trigger environmental assessment legislation with the government of Newfoundland & Labrador (NL), the Nunatsiavut Government (NG) and the Canadian Environmental Assessment Agency (CEAA).
- The road portion of the proposed project crosses both Labrador Inuit Lands (LIL) and Labrador Inuit Settlement Area (LISA) outside LIL.
- Under Part 11.2 of the Environmental Assessment chapter of the Labrador Inuit Land Claims Agreement (LILCA), no project in LIL can commence until an EA has been completed and all necessary permits/licenses have been issued by the authorities, including the NG.
- Section 11.2.3 of the LILCA notes “If a Project is subject to more than one Environmental Assessment, the relevant Authority and the Nunatsiavut Government shall, having regard to any harmonization measures that may have been established pursuant to section 11.2.2, negotiate an agreement or arrangement for the coordination and harmonization of the applicable Environmental Assessment processes so as to avoid unnecessary overlap and duplication while also meeting their respective decision-making needs with respect to the Project.”

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The proponent has indicated that shareholders may not be interested in supporting a project that may be subject to an expensive and lengthy review process.

A conference call between NL, CEAA, the NG and Quest was held on April 17th to provide an update to the proponent.

Quest indicated that they will consult with their advisors and communicate with the three governments within a few days concerning their next move.

Quest indicated they have a revised Project Description ready, tailored to each component and each government and may submit that within several weeks.

**Action Being Taken:**

- The EA Division will continue to participate in a working group comprised of both NG and CEAA officials if there are specific tasks identified beyond the roadmap designed by the CEA Agency.
• The EA Division will provide feedback to the CEA Agency relative to a roadmap designed by the CEA Agency and the result of working group meetings between the EA Division, the NG and the Agency.

• The CEA Agency, the NG and NL agreed that a follow up meeting to the April 17 teleconference is needed to discuss next steps. This will likely occur during the week of April 20.

Prepared by: I. Stone/B. Cleary

April 17, 2015
Melindy, Shawn D.

From: Stone, Ivy  
Sent: Wednesday, May 13, 2015 12:50 PM  
To: Harvey, Brian; Appleby, Christopher  
Subject: FW: Draft Record of Meeting - April 24 2015 - Strange Lake  
Attachments: Draft Record of Meeting - April 24 2015 - Strange Lake - Rev1 (2).docx; Draft Record of Meeting - April 1 2015 - Strange Lake.docx; Draft Record of Meeting - April 17 2015 - Strange Lake - Version 2.docx  
Categories: Quest / Strange Lake

FYI

From: Giroux, Carole [CEAA]  
Sent: Tuesday, May 12, 2015 4:47 PM  
To: Stone, Ivy; Tom Sheldon; Andrea Hoyt; Carter, Ruby; Cleary, Bas; Appleby, Christopher  
Cc: Boulanger, François [CEAA]; Atkinson, Mike [CEAA]; Chabot, Raymond [CEAA]; Therrien, Marie-France [CEAA]  
Subject: FW: Draft Record of Meeting - April 24 2015 - Strange Lake

You will find the last two minutes missing from my previous message.

From: Giroux, Carole [CEAA]  
Sent: Tuesday, May 12, 2015 2:35 PM  
To: Ouellet, Sylvain [CEAA]; 'Stone, Ivy'; 'Tom Sheldon'; 'Andrea Hoyt'; 'Carter, Ruby'; 'clearvb@gov.nl.ca'; 'applebyc@gov.nl.ca'  
Cc: Boulanger, François [CEAA]; Atkinson, Mike [CEAA] (Mike.Atkinson@ceaa-acee.gc.ca); Chabot, Raymond [CEAA]; Therrien, Marie-France [CEAA]  
Subject: Draft Record of Meeting - April 24 2015 - Strange Lake

Sorry, computer problems.... Hope the attached is there now...

From: Giroux, Carole [CEAA]  
Sent: May 12, 2015 2:31 PM  
To: Ouellet, Sylvain [CEAA]; 'Stone, Ivy'; 'Tom Sheldon'; 'Andrea Hoyt'; 'Carter, Ruby'; 'clearvb@gov.nl.ca'; 'applebyc@gov.nl.ca'  
Cc: Boulanger, François [CEAA]; Atkinson, Mike [CEAA] (Mike.Atkinson@ceaa-acee.gc.ca); Chabot, Raymond [CEAA]; Therrien, Marie-France [CEAA]  
Subject: RE: Draft Record of Meeting - April 24 2015 - Strange Lake

You will find attached the draft minutes of three meetings held on April 1, April 17 and April 24 between our three governments to discuss the environmental assessment processes for the Strange Lake Mine Project. I would appreciate if you can review those minutes and add any modifications required and/or validate the content of those minutes. The Agency will finalize the documents and distribute the final versions for our respective record.

Sylvain Ouellet
Record of Meeting
Strange Lake Project
Nunatsiavut, Newfoundland and Labrador, Canadian Environmental Assessment Agency
April 1, 2015 – Teleconference

Nunatsiavut Government:
Tom Sheldon
Andrea Hoyt

Newfoundland and Labrador:
Bas Cleary
Ivy Stone
Chris Appleby

CEAA:
Sylvain Ouellet
Mike Farrell
Mike Atkinson
Nancy Gehlen
Jean-Philippe Croteau
Annie Déziel
Betty Cougle
Raymond Chabot

Context
In December 2014, Quest Rare Minerals Limited (the proponent) met bilaterally with the Government of Québec, Government of Newfoundland and Labrador, the Government of Nunatsiavut and the Government of Canada. During these meetings, the proponent tabled draft documentation related to its proposal with some or all of the Governments for their respective consideration.

Following these initial meetings, the various Governments began contacting each other about this proposal and the application of their respective environmental assessment and regulatory processes.

From January to April the Government of Nunatsiavut, Government Newfoundland and Labrador and Government Canada had bilateral calls, trilateral calls and trilateral meetings at the officials’ level to gain a better understanding of our respective environmental assessment processes and to map out potential streamlining opportunities for the various processes.

1. Definition of project under respective government legislation

Canadian Environmental Assessment Agency:
- The Canadian Environmental Assessment Act, 2012 (CEAA 2012) requires that the designated activity and the incidental activities be considered for the assessment. The scope of project for the purposes of the assessment could include the mine, airport, road and port. It could also include some aspect of marine shipping and possibly the treatment plant that would be in Bécancour (Qc).
- The proponent has not formally submitted a Project Description as required under CEAA 2012. The Project Description is meant to support the screening decision on whether an environmental assessment will be required for the project and other aspect related to the conduct of the environmental assessment such as the scope of the assessment (i.e. which components of the project will be considered in the assessment).
• With respect to Inuit of Labrador Land Claims Agreement, the Canadian Environmental Assessment Agency (the Agency) remains committed to continuing work with the other signatories to determine how best to harmonize the three review process for the Strange Lake project in Labrador in the context of this and future projects given the Treaty obligations. Canada recognizes the interest in setting out a streamlined approach to other projects that would trigger the treaty in the future.

Newfoundland and Labrador:
• Only the parts of the proposal which are located in Newfoundland and Labrador would be examined under the provincial environmental assessment process. The road from the Quebec boarder to the Voisey’s Bay area, and the marine infrastructure. Not clear at this time whether the marine shipping routes would be considered as this would be determined through the scoping exercise.

Nunatsiavut:
• Nunatsiavut Government’s jurisdiction under Part 4 of the Nunatsiavut Environmental Protection Act extends to assessment of the Environmental Effects of any and all proposed infrastructure and activities that will be carried out in Labrador Inuit Lands so as to enable the NG to determine if it will issue entry, land use and other approvals and permits required under the Labrador Inuit Lands Act and, if so, on what terms and conditions.

2. Type of environmental assessment process under respective government legislation

Canadian Environmental Assessment Agency:
• There are two types of environmental assessments under CEAA 2012: standard environmental assessment and a review panel. Under CEAA 2012, the default process is the standard environmental assessment.
• The standard environmental assessment is managed by the Agency and is completed by way of a technical review team. This technical review team is comprised of federal and provincial experts. Aboriginal groups are also invited to sit on the technical review team. This allows for the process to benefit from each other’s expertise.
• The standard environmental assessment is an iterative process and allows for discussion through enquiries on all aspects relevant to the environmental assessment. The Agency prepares the environmental assessment report which will include mitigation measures that will form the basis of the conditions for the federal environmental assessment decision statement.
• In a review panel process, the information and perspective of participants is provided by all parties directly to the panel.
• The panel identifies mitigation measures it considers appropriate and its conclusions in a report. The Government of Canada then issue its response to the panel report along with the environmental assessment decision statement containing conditions.

• Based on available information,

Newfoundland and Labrador:
• Under the provincial legislation, a decision is made on the level of scope of environmental assessment following a screening. The Minister decides whether the Project is referred to a panel.
• As a minimum, the project is expected to require an environmental impact assessment. This assessment would proceed by way of an environmental assessment committee which would consider the various aspects of the Project and its effects.

Section 29(1)(a)

Nunatsiavut:

Section 34(1)(a)(v)
3. **Technical Project Review Team**

- A technical review team could comprise experts from the province, the federal government and from the Nunatsiavut Government. This comity does not approve or authorise.
- There are no limitations in the number of representatives.
- The province noted its extensive experience with joint technical review processes.

4. **Coordination of timing of environmental assessment processes and Agreement/Arrangement**

- Canada and Newfoundland and Labrador noted their commitment to a joint review process that minimize duplication and overlap.

5. **Next Steps (e.g., meeting with the proponent)**

- The Agency proposed a call with the proponent to update them on the status of discussions before their shareholders meeting scheduled for April 20.
Record of Meeting
Strange Lake Project

April 17, 2015 – Teleconference
11:00 to 12:00 (Eastern Daylight Saving Time)

Nunatsiavut Government
Tom Sheldon
Andrea Hoyt
Rod Laing

Newfoundland and Labrador
Bas Cleary
Ivy Stone
Chris Appleby

Canadian Environmental Assessment Agency
Sylvain Ouellet (Ottawa)
Marie-France Therrien (Ottawa)
Mike Atkinson (Halifax)
Raymond Chabot (Québec)

Proponent
Dirk Nauman (Quest Rare Minerals)
Christian Audet (AECOM)

Key Objective: Update the proponent of the Strange Lake Mine Project on discussions between the three governments (Nunatsiavut Government, Newfoundland and Labrador and Canada) to develop an environmental assessment that minimizes overlap and duplication while meeting the requirements of all three governments.

- Sylvain Ouellet summarized the discussions that took place up to now between the three governments.

- Mr. Ouellet thanked the proponent for its collaboration in providing some time, prior to the official submission of its project description, to allow the three governments to initiate discussions on the potential to harmonize or coordinate the environmental assessment process.

- Mr. Ouellet noted that the Agency is of the view that a standard environmental assessment is the most appropriate type of review for the Project at this time. Under the Canadian Environmental Assessment Act, 2012 (CEAA 2012), the default process is a standard environmental assessment. This process is flexible enough to allow a coordinated environmental assessment of the project with the two other jurisdictions. A technical review team formed by the three governments and First Nation representatives would enable the pooling and sharing of expertise to analyse the project potential effects.
Québec also noted that the James Bay and Northern Québec Agreement outlines the environmental assessment process that will be required for the mine. This process has already been initiated in March 2015, when the proponent submitted its application to the Québec government. The Agency is also of the view that the nature of the project is not one that normally would require an environmental assessment by mean of a panel review.

• Bas Cleary (Newfoundland and Labrador Government) indicated that its government has jurisdiction only over the road and the marine terminal and that such project components would normally not require a review by an independent panel. It is also the preference of the province to conduct a coordinated assessment conducted by staff. He noted that a coordinated review by staff is flexible enough to ensure a thorough review of potential effects from the project on caribou and arctic char. Under the provincial legislation, a decision is made on the level of scope of environmental assessment following a screening. The Minister would decide whether the Project should be bumped up to a panel review. The road and marine facilities would be subject to a screening where departments would form a committee for the review. The province has conducted coordinated assessment in the past and is willing to discuss how the three different processes could be coordinated.

• Dirk Naumann (Quest Minerals) indicated his desire for a timely solution, noting that the clock is ticking and that the project description is ready. The project description will take the form of three different packages design to address the requirements of each jurisdiction. The plan is to send it out in the next several weeks. Mr. Naumann summarized the timeline of the project as follows: Summer 2017—start of construction; 2019—end of construction; 2020—beginning of operation.

**Next step:** The three governments will hold a conference call to discuss options and a path forward.
Record of Meeting  
Strange Lake Project  

Friday, April 24, 2015 – Teleconference  
10:00 to 11:30 (Eastern Daylight Saving Time)  

Nunatsiavut Government  
Tom Sheldon  
Andrea Hoyt  
Jean-Sébastien Boutet  
Rod Laing  

Newfoundland and Labrador  
Ivy Stone  
Chris Appleby  
Bas Cleary  

Canadian Environmental Assessment Agency (Agency)  
Mike Farrell (Ottawa)  
Marie-France Therrien (Ottawa)  
Sylvain Ouellet (Ottawa)  
Annie Déziel (Ottawa)  
Mike Atkinson (Halifax)  
François Boulanger (Québec)  

Key Objective: To discuss the path forward regarding a streamlined approach for the environmental assessment processes of the Nunatsiavut Government, of Newfoundland and Labrador Government and of Canada for the Strange Lake Mine Project.

- Tom Sheldon (Nunatsiavut Government) sought clarification on which Aboriginal groups have been consulted up to now on the Strange Lake project and whether these groups have a view on the conduct of the environmental assessment processes for this project. He also noted a desire to discuss Canada’s experience with other joint review panel process under CEAA 2012.

- Sylvain Ouellet indicated that existing practices is to engage First Nation groups once an official project description is submitted and that this is not yet the case. Once a project description is officially received, the Agency will formally identify and notify the Aboriginal groups likely to be affected by the project. During the consultation on the project description, Aboriginal groups will have an opportunity to provide their views about the need for an assessment and the type of assessment that should be conducted for a specific project.

- Ivy Stone also confirmed that no consultation had taken place so far because the environmental assessment process was not yet formally initiated.

M. Ouellet noted that Aboriginal
groups often prefer a review panel process, but that the decision to refer a project to review panel is made on a case by case basis based on the project's specific characteristics.

*Section 34(1)(a)(v)*

- He invited the Nunatsiavut Government to write to the Minister of the Environment to express their view and that the Agency, until directed otherwise, was not in a position to entertain discussions on a joint panel review for this project.

- He also invited the Nunatsiavut Government to write to the Quebec government to express their views.

- Marie-France Therrien noted the limited experience so far under CEAA, 2012 with the conduct of joint review panel processes. Only one panel review (Roberts Bank) has been established under CEAA, 2012 and it is still at an early stage of the process. She also indicated that, under the former Act, the joint panel process varied significantly from one province to another.

- In response to the interest of the Nunatsiavut Government to better understand the panel review process. Mr. Ouellet committed to organizing a separate call with the Nunatsiavut Government representatives to provide generic and factual information about the panel review process, as long as it does not lead to discussion related to a review panel for the Strange Lake Project.

- The parties discussed the need to continue discussions on options to streamline the assessment processes given Nunatsiavut position on a review panel. In particular when both the Newfoundland and Labrador and Canada are not mandated by their respective Minister to discuss a review panel process for the project.

- Newfoundland and Labrador noted that the proponent could submit a project description in the near future and that when it does, the three governments would have very little time to discuss options to harmonize their processes.

**Next steps**

- The Agency is to set up a conference call with Nunatsiavut representatives to present information available about the panel review process. The Agency request that Mr. Sheldon provides a list of the subjects or type of information he wishes to covered during this session.

- After this call, the Agency will set up a call with Nunatsiavut and with Newfoundland and Labrador representatives to further discuss the path forward.
Sure thing

Sent from my BlackBerry 10 smartphone on the Bell network.

Can we have a chat in the morning though? Thanks.

Ivy

Hi Ivy,

As of right now, I'm good all next week except for Tuesday. I would prefer not to meet this week if at all possible as I'm just back from holiday and have tons on my plate.

Chris

Hi Chris,

Can we have a chat about points 1 and 2 in the email below? What is your availability this week or early next week to have a chat with Quest? Thanks.

Ivy
Hi Bas and Ivy,

Further to being nominated as VP-Env. Quest, effective April 20, I am assuming greater responsibility for planning of the EIA from Quest’s perspective. On this basis, I am writing to see if we can schedule a brief call this week (30 min. max.). I can provide you with a quick update on our progress. We also have some specific questions on the NL vision of harmonization options, and of the EIA process in general:

- NG EIA jurisdiction outside LIL, in particular in VBA (Voicey’s Bay Area) – given reference to harmonization for VBA in LILCA and associated implementation plan, and VBA MOU Agreement, etc.?
- NL EIA jurisdiction inside LIL i.e. degree of overlap of NG and NL jurisdiction?
- NL-NG harmonization possibilities, i.e. without federal?
- Other schedule risks from NL perspective i.e. any chances that Minister could request a board for this project?
- Any concern from your end if we submit final versions of Project Registration to NL by end of May, several weeks before officially filing with CEAA?
- Confirmation of Project Registration requirements with NL:
  - In paper, original + 10 copies. Assume original defined simply as signed version?
  - Preferred mode for sending digital copy?
  - The fee for registration of $200 plus HST
  - Anything else?

Sincerely,

Christen Audet, F.Eng., Ph.D
Vice-President - Project Development and Environment
Quest Rare Minerals Ltd.
1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7
Tel: (514) 258-9002
www.questrareminerals.com
Hi,

I updated this note based on our May 12 meeting and the earlier email from Quest. Do you have any suggested revisions? Thanks.

Ivy
Information Note
Department of Environment and Conservation (ENVC)

Title: Tripartite harmonization of EA processes for the proposed Strange Lake Road & Port Access Project in Northern Labrador.

Issue: Update of efforts to harmonize environmental assessment review of the proposed Strange Lake Road & Port Access Project in Northern Labrador.

Background and Current Status:
• Quest Rare Minerals Ltd. (Quest) is proposing a mining project comprising three components:
  o the Strange Lake Rare Earth Element (REE) mining project (in Quebec), roughly 235 km northeast of Schefferville, Québec;
  o a private road from the mine in Quebec to a port facility at Voisey’s Bay, on the Labrador coast (the project for NL);
  o A shipping and processing facility in Bécancour, southern Quebec.

• This proposed project will trigger environmental assessment legislation with the government of Newfoundland & Labrador (NL), the Nunatsiavut Government (NG) and the Canadian Environmental Assessment Agency (the Agency).

• The road portion of the proposed project crosses both Labrador Inuit Lands (LIL) and Labrador Inuit Settlement Area (LISA) outside LIL.

• Under Part 11.2 of the Environmental Assessment chapter of the Labrador Inuit Land Claims Agreement (LILCA), no project in LIL can commence until an EA has been completed and all necessary permits / licenses have been issued by the authorities, including the NG.

• Section 11.2.3 of the LILCA notes “If a Project is subject to more than one Environmental Assessment, the relevant Authority and the Nunatsiavut Government shall, having regard to any harmonization measures that may have been established pursuant to section 11.2.2, negotiate an agreement or arrangement for the coordination and harmonization of the applicable Environmental Assessment processes so as to avoid unnecessary overlap and duplication while also meeting their respective decision-making needs with respect to the Project.”

• The EA Division had a number of working level meetings with the Agency and NG representatives over a month long period and subsequent to a face-to-face meeting held on February 5, 2015 in St. John’s. The objective of those meetings was to determine to what extent the three EA processes could be harmonized in order to avoid overlap, high costs and duplication for the three jurisdictions as well as for the proponent.
EA Division met with Quest officials in St. John's on March 19, 2015. At that meeting Quest provided updated information relative to their revised Port facilities and spoke of their recent meetings with the Innu Nation (IN) and the NG.

Quest also provided information on company restructuring and background information on REEs and why they feel this deposit will be considered world class should it be developed.

The NG can ultimately determine if the project proceeds as LILCA provides the NG control over development on LIL through IBAs, land title, etc.

A conference call between NL, the Agency, the NG and Quest was held on April 17th to provide an update to the proponent.

The Agency, the NG and NL had a follow up meeting to the April 17 teleconference on April 24th.

The NG tabled two other agenda items at the April 24th meeting:

- It was acknowledged by all that Quest may submit a project description very soon. As such, the province indicated that it would endeavor to carry out its review in as coordinated a fashion as possible.
The Agency and the NG had a bilateral meeting to discuss, in general terms, previous JRPs and how the process worked. Both governments reported on May 12 that the meeting went well.

On May 8, Minister Shiwick sent a letter to Minister Aglukkaq (CEAA Minister) requesting an in-person meeting to discuss a harmonized EA process. CEAA is making arrangements for that meeting.

Analysis:
- On March 20, the Agency forwarded a roadmap outlining results of tripartite working group meetings to the EA Division and to the NG.
- The Canadian Environmental Assessment Act, 2012 (CEAA 2012) does not prescribe the form a harmonization agreement or arrangement with another jurisdiction should take, however, CEAA 2012 does have significant flexibility on how formal or informal agreements could be created, e.g., MOU, exchange of letters etc.
- The proponent has indicated that shareholders may not be interested in supporting a project that may be subject to an expensive and lengthy review process.
Deputy Minister Chippett and Deputy Carl McLean (NG) had a call during the last week of April to discuss

Subsequent to the bilateral meeting between the Agency and the NG, the EA Division and LAAO met via conference call on May 12 with the NG and the Agency to discuss next steps.

The EA Division had provided a draft version in February 2015 and all agreed to work on that version and meet again on May 22nd to review progress.

Quest contacted the EA Division on May 20, 2015 requesting a short meeting and requesting clarification on a number of EA process issues. Specifically, Quest enquired about:

- NG EIA jurisdiction outside LIL, in particular in Voisey's Bay Area (VBA) - seeking information on need for harmonization for VBA in LiLCA and associated implementation plan, and VBA MOU Agreement
- NL EIA jurisdiction inside LIL i.e., degree of overlap of NG and NL jurisdiction
- NL-NG harmonization possibilities, i.e., without CEAA
- Other schedule risks from NL perspective i.e., any chances that Minister could request a board for this project

Quest indicated they may submit a Project description by the end of May, several weeks before officially filing with CEAA

**Action Being Taken:**
- The EA Division will continue to participate in a working group comprised of both NG and Agency officials if there are specific tasks identified beyond the roadmap designed by the Agency.
- The EA Division will provide feedback to the Agency relative to a roadmap designed by the Agency and the result of working group meetings between the EA Division, the NG and the Agency.
- It was agreed that while awaiting the outcome of the Ministers’ meeting (NG and CEAA), the tripartite working group would reconvene and work on
- The EA Division will present additional input re common guidelines at a proposed May 22nd meeting with the Agency and the NG.
• The EA Division proposed a May 25th meeting with Quest and LAAO to address questions posed by Quest on May 20.

Prepared by: I. Stone/B. Cleary

May 20, 2015
Have a read and LMK if this helps ...

I can do more explaining if needed...but I think this should cover it.
NG EIA jurisdiction outside LIL, in particular in VBA (Voisey's Bay Area) – given reference to harmonization for VBA in LILCA and associated implementation plan, and VBA MOU Agreement, etc.?

The Voisey's Bay Area is treated outside of LIL and LISA under Part 8.3 Status of the Voisey's Bay Area.

8.3.1 For greater certainty, except as otherwise provided in this chapter, the Voisey's Bay Area is not Labrador Inuit Lands or part of the Labrador Inuit Settlement Area.

8.3.2 Except with respect to land in the Voisey's Bay Area that has been transferred or designated under section 8.3.15, the Voisey's Bay Area is absolutely deemed to be part of the Labrador Inuit Settlement Area outside Labrador Inuit Lands for purposes of the following:
(a) subject to sections 8.3.3 and 8.3.6, chapters 12 and 13;
(b) subject to section 8.3.3, chapter 15;
(c) chapter 16;
(d) as provided in section 8.3.7, parts 14.1, 14.2, 14.5 and 14.7;
(e) as provided in section 8.3.8, section 5.2.3 and part 5.6;
(f) as provided in section 8.3.9, chapter 11(Environmental Assessment); and
(g) as provided in section 8.5.7, part 7.7.

8.3.9 Chapter 11 applies to any change or addition to the Undertaking that is subject to Environmental Assessment. In applying chapter 11, a change or addition to the Undertaking that requires an Environmental Assessment shall be absolutely deemed to be a Project and the Parties shall take all reasonable steps to conclude a harmonization agreement for purposes of Environmental Assessment of the change or addition having regard to the applicable provisions of any Overlap Agreement.

("Undertaking" means, notwithstanding any other provision of the Agreement, the project generally described in section 1.5 of the Report on the Proposed Voisey's Bay Mine and Mill Project prepared by the Voisey's Bay Environmental Assessment Panel and dated April 1st, 1999;)

For LISA outside LIL Part 11.5 applies:

11.5.1 With respect to a Project in the Labrador Inuit Settlement Area outside Labrador Inuit Lands, the Provincial Authority shall, in addition to providing the notice and information required under section 11.2.7:
(a) Consult the Nunatsiavut Government about the Environmental Effects of the Project;
(b) Consult the Nunatsiavut Government about the best way to achieve meaningful participation of Inuit in any Environmental Assessment under the Environmental Protection Act if, in the opinion of the Provincial Authority, the Project may reasonably be expected to have adverse Environmental Effects in Labrador Inuit Lands or adverse effects on Inuit
rights under the Agreement but nothing in this subsection derogates from section 11.5.6; and
(c) provide the Nunatsiavut Government with a report on the matters referred to in section 11.2.10 upon completion of an Environmental Assessment of the Project.

NL EIA jurisdiction inside LIL i.e. degree of overlap of NG and NL jurisdiction)?

4.4.1 Inuit own in fee simple Labrador Inuit Lands, excluding Subsurface Resources, but including:
(a) ownership of an undivided 25 percent interest, with the Province, in all Subsurface Resources which entitles Inuit to the rights set out in the Agreement; and
(b) for greater certainty:
   (i) Specified Materials in Specified Material Lands;
   (ii) Carving Stone; and
   (iii) Geothermal Resources.

10.9.1 No new use of land, Water, Tidal Waters, or buildings within the Labrador Inuit Settlement Area outside Labrador Inuit Lands, other than one which conforms to a municipal plan, may be permitted between the Effective Date and the date when the Land Use Plan comes into effect without Consultation with the Nunatsiavut Government.

11.2.1 No Project in Labrador Inuit Lands shall commence until an Environmental Assessment has been completed and all necessary permits, licences or other authorizations required for the Project to commence have been issued by the appropriate Authority, and by the Nunatsiavut Government under an Inuit Law.

(In this case, in order for the Project to commence all three parties (CAN, GNL, and NG) need to approve.)
Binder 6
Melindy, Shawn D.

From: Christen Audet <christen.audet@questrareminerals.com>
Sent: Friday, May 29, 2015 4:47 PM
To: Appleby, Christopher
Cc: Stone, Ivy
Subject: RE: Quest Strange Lake Project
Categories: Quest / Strange Lake

PS We would also like to confirm that the 2012 draft of the Nunatsiavut Regional Land Use Plan is still the last one and that it has not yet been finalized. Even better if you know when it could be finalized.

Thx

Hi Chris,

Thanks again for call earlier this week with Ivy re: project status.

In addition to items discussed that require clarification on your end, do you have an electronic copy of the LILCA appendices that you can send us?

We just realized that we do not have a copy to help verify if the marine “Zone” in LILCA encompasses more than just tidal waters. Also, what is the map atlas referred to in the same definition and how to get access if relevant for us?

Thanks,

Christen Audet, F.Eng., Ph.D
Vice-President - Project Development and Environment
Quest Rare Minerals Ltd.
1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7
Tel: (514) 258-9002
www.questrareminerals.com
Hi Chris,
I just had a chat with Christen and he was wondering if you had any answers to his questions? Also, he will be in St. John's on the morning of June 17th. If you're free, we can meet briefly with him to get an update. He will be meeting with the NG on the 15th in Nain. Please advise on your availability. Thanks.

Ivy

Hi Chris,
Thanks again for call earlier this week with Ivy re: project status.

In addition to items discussed that require clarification on your end, do you have an electronic copy of the LILCA appendices that you can send us?

We just realized that we do not have a copy to help verify if the marine "Zone" in LILCA encompasses more than just tidal waters. Also, what is the map atlas referred to in the same definition and how to get access if relevant for us?

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Vice-President - Project Development and Environment
Quest Rare Minerals Ltd.
1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7
Tel : (514) 258-9002
www.questrareminerals.com
Hi Chris,

Further to our meeting this morning with Quest, here’s what I noted re information requests:

1. What is the significance of schedule 2A of LILCA? Is this an Amendment to do with a terrestrial land claim within Quebec? Has this been resolved and is this something Quest needs to address or be aware of.

2. Is it necessary to consult with the NCC re this proposed project? Please review their claim maps and advise Quest.

3. Are you aware of any progress in the Overlap Agreement between the NG and IN? Is that confidential?

4. Are you aware of any rationale or precedent that would see Quest only consult the NG government on activities within LIL? And carry out meaningful consultation for LISA and VBA with the NG via the provincial process?

Thanks

Ivy
Ivy - Further to my call this morn., a mtg on Wed. June 17 am up to 11:30 am would be ideal, as discussed. But if this does not work, I can always stay over to the afternoon same day or morning of the next day. Again, apologize for last minute request.
Thx.
Christen

Christen Audet, F.Eng., Ph.D
Vice-President - Project Development and Environment
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1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7
Tel: (514) 258-9002
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fyi
Title: Tripartite harmonization of EA processes for the proposed Strange Lake Road & Port Access Project in Northern Labrador.

Issue: Update of efforts to harmonize environmental assessment review of the proposed Strange Lake Road & Port Access Project in Northern Labrador.

Background and Current Status:
- Quest Rare Minerals Ltd. (Quest) is proposing a mining project comprising three components:
  - the Strange Lake Rare Earth Element (REE) mining project (in Quebec), roughly 235 km northeast of Schefferville, Quebec;
  - a private road from the mine in Quebec to a port facility at Voisey’s Bay, on the Labrador coast (the project for NL);
  - A shipping and processing facility in Bécancoeur, southern Quebec.

- This proposed project will trigger environmental assessment legislation with the government of Newfoundland & Labrador (NL), the Nunatsiavut Government (NG) and the Canadian Environmental Assessment Agency (the Agency).

- The road portion of the proposed project crosses both Labrador Inuit Lands (LIL) and Labrador Inuit Settlement Area (LISA) outside LIL.

- Under Part 11.2 of the Environmental Assessment chapter of the Labrador Inuit Land Claims Agreement (LILCA), no project in LIL can commence until an EA has been completed and all necessary permits/licenses have been issued by the authorities, including the NG.

- Section 11.2.3 of the LILCA notes “If a Project is subject to more than one Environmental Assessment, the relevant Authority and the Nunatsiavut Government shall, having regard to any harmonization measures that may have been established pursuant to section 11.2.2, negotiate an agreement or arrangement for the coordination and harmonization of the applicable Environmental Assessment processes so as to avoid unnecessary overlap and duplication while also meeting their respective decision-making needs with respect to the Project.”

- The EA Division had a number of working level meetings with the Agency and NG representatives over the winter and spring, including a face-to-face meeting held on February 5, 2015 in St. John’s. The objective of those meetings was to determine to what extent the three EA processes could be harmonized in order to avoid overlap, high costs and duplication for the three jurisdictions as well as for the proponent.
EA Division and LAAO have had a number of discussions, (in person and via telephone) with Quest officials during spring 2015 (e.g., March 19, April 17, May 20). Typically Quest has provided updated information relative to their proposed project and has requested clarification on the NL EA process and requirements concerning Aboriginal consultation under the provincial process.

Quest also provided information on company restructuring and background information on REEs and why they feel this deposit will be considered world class should it be developed.

The NG can ultimately determine if the project proceeds as LILCA provides the NG control over development on LIL through IBAs, land title, etc.

In a teleconference on April 17th,

During an April 24th teleconference,

All three regulators acknowledged that Quest may submit a project description very soon. As such, NL indicated that it would endeavor to carry out its review in as coordinated a fashion as possible,

On May 8, Minister Shiwak sent a letter to Minister Aglukkaq (CEAA Minister) requesting an in-person meeting to discuss a harmonized EA process, CEAA is making arrangements for that meeting.

Analysis:

On March 20, the Agency forwarded a roadmap outlining results of tripartite working group meetings to the EA Division and to the NG.
The Canadian Environmental Assessment Act, 2012 (CEAA 2012) does not prescribe the form a harmonization agreement or arrangement with another jurisdiction should take, however, CEAA 2012 does have significant flexibility on how formal or informal agreements could be created, e.g., MOU, exchange of letters etc.

The proponent has indicated that shareholders may not be interested in supporting a project that may be subject to an expensive and lengthy review process.

Deputy Minister Chippett and Deputy Carl McLean (NG) had a call during the last week of April to discuss

During a May 12 teleconference among the three regulators,

The EA Division provided a draft version in February 2015 and all agreed to work from that version and to continue discussion and meetings to advance that document.

Quest contacted the EA Division on May 20, 2015 requesting a short meeting and requesting clarification on a number of EA process issues. Specifically, Quest enquired about:

- NG EIA jurisdiction outside LIL, in particular in Voisey's Bay Area (VBA) – seeking information on need for harmonization for VBA in LILCA and associated implementation plan, and VBA MOU Agreement
- NL EIA jurisdiction inside LIL i.e., degree of overlap of NG and NL jurisdiction
- 4 -

- NL-NG harmonization possibilities, i.e., without CEAA
- Other schedule risks from NL perspective i.e., any chances that Minister could request a board for this project

- Quest met with NG Environment officials on June 15 in Nain to discuss the project. The discussion centered on Article 27 (LILCA) requirements, i.e., the depth and quantity of information to be presented in the PD for project registration with the NG.

- Quest had a second meeting on June 17 with DM Carl McLean in Goose Bay. Quest reported that further discussions re the Article 27 requirements were had.

- Quest met with EA Division and LAAO officials on June 19 where a draft PD and an update on project submission were provided. Quest indicated they may submit a PD to the NG in less than two weeks, several weeks before submitting to the province.

- Although a draft PD was presented to EA Division on June 19th, Quest indicated that a revised PD would be presented to the NG for registration in order that their requirements under Article 27 could be met as much as was possible.

- Quest also indicated that relative to the marine shipping zone, they intend to use the same route as Vale Inco from Voisey’s Bay and that ten (10) ships a year are anticipated with payload in roughly equaling payload out.

- Quest queried LAAO concerning the extent of the marine zone over which the NG have jurisdiction. According to LILCA, this zone includes the intertidal zone but in a document that appears to be a plain language interpretation of LILCA, the zone is presented as being 12 nautical miles off the coast.

Action Being Taken:
- The EA Division will continue to participate in a working group comprised of both NG and Agency officials to advance harmonization beyond the roadmap designed by the Agency.

- It was agreed that while awaiting the outcome of the Ministers’ meeting (NG and CEAA), the tripartite working group would work on [redacted] for the Project.

- LAAO is to present an example of post EA Aboriginal guidelines to Quest, e.g., Kami [Section 29(1)(a)]

- LAAO to provide Quest with a response concerning the extent of the marine zone under NG jurisdiction.

Prepared by: I. Stone/B. Cleary

June 25, 2015
Thanks Chris

From: Appleby, Christopher
Sent: Monday, June 29, 2015 10:03 AM
To: Stone, Ivy
Subject: RE: Strange Lake Information Note -25June2015.doc

Hi Ivy

I disagree with
- LAAO is to present an example of post EA Aboriginal guidelines to Quest, e.g., Kami

Maybe better to say “LAAO will seek guidance on whether they are able to present an example of post EA Aboriginal guidelines to Quest, e.g., Kami.”

From: Stone, Ivy
Sent: Monday, June 29, 2015 9:42 AM
To: Appleby, Christopher
Subject: Strange Lake Information Note -25June2015.doc

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Strange Lake Rare Metal Deposit

- Quest Rare Minerals Ltd. (Quest) is proposing a mining project that will require a private road from the mine in Quebec to a port facility at Voisey's Bay, on the Labrador coast (the project for NL). This proposed project will trigger environmental assessment legislation with the government of Newfoundland & Labrador (NL), the Nunatsiavut Government (NG) and the Canadian Environmental Assessment Agency (the Agency).

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- Section 11.2.3 of the LILCA requires harmonization measures be established when a Project is subject to more than one Environmental Assessment. GNL had a number of working level meetings with three parties. The objective of those meetings was to determine to what extent the three EA processes could be harmonized in order to avoid overlap, high costs and duplication for the three jurisdictions as well as for the proponent.
**Melindy, Shawn D.**

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</tr>
<tr>
<td>Categories:</td>
<td>Quest / Strange Lake</td>
</tr>
</tbody>
</table>

Thanks. If you hear anything different LMK. I will note that CEAA is arranging the meeting as per one of your last versions of the information note.

Cheers.

Chris

---

**From: Stone, Ivy**  
**Sent: Tuesday, August 18, 2015 9:41 AM**  
**To: Appleby, Christopher**  
**Subject: FW: Meeting between Ministers**

Will let you know if I hear anything else.

Ivy

---

**From: Chabot, Raymond [CEAA]**  
**[mailto:Raymond.Chabot@ceaa-acee.gc.ca]**  
**Sent: Tuesday, August 18, 2015 9:38 AM**  
**To: Stone, Ivy**  
**Subject: RE: Meeting between Ministers**

Hi Ivy, I don't think so. I will ask the central administration.

Conseiller principal | Senior advisor  
Agence canadienne d'évaluation environnementale | Canadian Environmental Assessment Agency  
901-1550, ave. d'Estimauville, Québec (Québec) G1J 0C1  
Telephone 418-648-7832  
Fax 418-649-6443  
raymond.chabot@ceaa-acee.gc.ca  
www.ceaa-acee.gc.ca

---

**De : Stone, Ivy [mailto:IvyStone@gov.nl.ca]**  
**Envoyé : 17 août 2015 13:01**  
**À : Chabot, Raymond [CEAA]**  
**Objet : Meeting between Ministers**

Hi Raymond,  
Do you know whether Minister Shiwak (NG) met with your Minister concerning the proposed Strange Lake Project? It was requested in a letter sent in May 2015 from the NG to your minister. Please advise on the outcome as well if you can. Thanks!

*Ivy Stone, M.Sc.*
Environmental Scientist
Environmental Assessment Division
Department of Environment and Conservation
4th Floor, West Block, Confederation Building
St. John's, NL, A1B 4J6
Phone: (709)729-0090
Fax: (709)729-5518
E-Mail: ivystone@gov.nl.ca

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Donna, please print for the Minister to consider. If the Minister signs the note, please send me back the signed PDF.

------< HP TRIM Record Information >------

Record Number : BN-2015-0072
Title : Information Note - Inuit Hot Issues Note - LG Notes - August 2015
Issue #9 - Quest Project

- Quest Rare Minerals Ltd. (Quest) is proposing a mining project that will require a private road from the mine in Quebec to a port facility at Voisey’s Bay, on the Labrador coast (the project for NL). This proposed project will trigger GNL, NG and GoC environmental assessment (EA) processes.

- The road portion of the proposed project crosses the LISA including LIL. In accordance with the LILCA no project in LIL can commence until an EA has been completed and all necessary permits/licenses have been issued by the authorities, including the NG. As a portion of the road is within LIL, the NG has a decision with respect to the project.

- The LILCA requires harmonization measures be established when a project is subject to more than one EA. GNL had a number of working level meetings with the NG and the Canadian Environmental Assessment Agency (CEAA) to determine to what extent the three EA processes could be harmonized in order to avoid overlap, high costs and duplication for the three jurisdictions as well as for the proponent.

- On May 8, 2015, Minister Shiwall sent a letter to Minister Aglukkaq (CEAA Minister) requesting an in-person meeting to discuss a harmonized EA process. CEAA is making arrangements for that meeting.
Issue #9 – Quest Project

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- On May 8, 2015, Minister Shiwaq sent a letter to Minister Aglukkaq (CEAA Minister) requesting an in-person meeting to discuss a harmonized EA process, a JRP was mentioned as one means of doing that. CEAA is making arrangements for that meeting.

Christopher Appleby
Senior Policy Analyst
Labrador and Aboriginal Affairs Office
6th Floor, East Block
Confederation Complex
St. John's, NL
A1B 4J6

Telephone 709 729-1773
Fax: 709 729-4900
Melindy, Shawn D.

From: Harvey, Brian  
Sent: Wednesday, September 02, 2015 1:07 PM  
To: Appleby, Christopher  
Subject: TRIM: FW: Strange Lake - Environmental Assessment for Road  
Attachments: Strange Lake Meeting Note 27 August 2015.doc  
Categories: Quest / Strange Lake

TRIM and FYI

Brian RM. Harvey  
Director - Aboriginal Affairs  
Government of Newfoundland and Labrador  
(709) 729-1487 (w)  
(709) 693-1612 (c)

---

From: Gover, Aubrey  
Sent: Friday, August 28, 2015 2:29 PM  
To: Bowles, Ron  
Cc: Goebel, Martin; Harvey, Brian  
Subject: FW: Strange Lake - Environmental Assessment for Road

Martin, may ask you to attend this meeting.

Aubrey Gover  
Deputy Minister  
Labrador and Aboriginal Affairs Office  
Government of Newfoundland and Labrador

This email is PRIVILEGED and contains confidential information intended only for the person(s) named above. Any other distribution, copying or disclosure is strictly prohibited. If you have received this email in error, please notify us immediately by return email and delete the original message.

---

From: Goebel, Martin  
Sent: Friday, August 28, 2015 11:34 AM  
To: Gover, Aubrey  
Subject: Strange Lake - Environmental Assessment for Road

Hi Aubrey,

Mike Atkinson from CEAA is meeting with Carl McLean, DM Lands & Natural Resources, NG on September 15 in Goose Bay. The subject of the meeting is the Strange Lake project which involves a new road from the mine in Quebec to the port facilities at Voisey’s Bay.

Please see the attached draft meeting note. My purpose in writing you is 1) to inform you about this meeting and 2) to ask you for any comments or cautions you might have with NL attending. I have indicated to both NG and CEAA that I would be willing to attend and I have discussed this with Jamie who also thinks I should attend. Could you let me know shortly, but I can give you more information if you would like to discuss by phone or face to face. Thanks

Regards,
Martín G. Goebel, P.Eng
ADM, Environment Branch
Department of Environment and Conservation
Government of Newfoundland and Labrador
Confederation Bldg W, 4th Floor
PO Box 8700
St. John's NL A1B 4J6

e: MGoebel@gov.nl.ca
t: (709) 729-2559
f: (709) 729-0112

P:\Briefing Notes\EAD\Strange Lake Meeting Note 27 August 2015.doc
Meeting Note
Department of Environment and Conservation
Nunatsiavut Government (NG)
Canadian Environmental Assessment Agency (CEAA)
2:30PM, September 15, 2015
Goose Bay, Labrador

Attendees: Heather Smith, Vice President, Operations, CEAA
Mike Atkinson, Regional Director-Atlantic, CEAA
Carl McLean, Deputy Minister of Lands & Natural Resources, NG
Martin Goebel, Assistant Deputy Minister, ENVC

Purpose of Meeting:
• To discuss the tripartite harmonization of EA processes for the proposed Strange Lake Pot & Road Project in Northern Labrador.

Background:
• Quest Rare Minerals Ltd. (Quest) is proposing a mining project comprising three components:
  o the Strange Lake Rare Earth Element (REE) mining project (in Quebec), roughly 235 km northeast of Schefferville, Quebec;
  o a private road from the mine in Quebec to a port facility at Voisey’s Bay, on the Labrador coast (the project for NL);
  o A shipping and processing facility in Bécancour, southern Quebec.
• The road component will trigger GNL, NG and GoC environmental assessment (EA) processes.
• The road portion of the proposed project crosses the LISA including LIL. In accordance with the LILCA no project in LIL can commence until an EA has been completed and all necessary permits / licenses have been issued by the authorities, including the NG. As a portion of the road is within LIL, the NG has a decision with respect to the project.
• The LILCA requires harmonization measures be established when a project is subject to more than one EA. GNL had a number of working level meetings with the NG and the Canadian Environmental Assessment Agency (CEAA) to determine to what extent the three EA processes could be harmonized in order to avoid overlap, high costs and duplication for the three jurisdictions as well as for the proponent.

Section 29(1)(a), Section 34(1)(a)(v)

Section 29(1)(a), Section 34(1)(a)(i), Section 34(1)(a)(v)
The mine EA process has begun in Quebec, and the Chair of the Quebec group overseeing the Mine portion had a discussion with the EA Division on August 6th and encouraged ongoing communication and invited the EA Division to attend public meeting in Quebec relative to this project. They are concerned that they will be six months ahead of every other jurisdiction relative to this project.

On May 8, 2015, Minister Shiwick sent a letter to Minister Aglukkaq (CEAA Minister) requesting an in-person meeting to discuss a harmonized EA process. The Minister declined such a meeting.

The IN also requested a meeting with the federal minister shortly after concerning this project.

Quest met with NG Environment officials on June 15 and 17th discuss the project. The discussion centered on Article 27 (LILCA) requirements, i.e., the depth and quantity of information to be presented in the PD for project registration with the NG.

A draft Project Description (PD) was presented to the EA Division on June 19th and Quest indicated that a revised PD would be presented to the NG for registration in order that their requirements under Article 27 could be met as much as was possible.

Quest made two requests of LAAO:
- clarification of the extent of the marine zone under NG jurisdiction;
- an example of post EA Aboriginal guidelines.

Agenda item #1
- Project submission to the three jurisdictions may be coordinated to maximize efficiencies and
Proposed Actions:

- If Quest submits a project description very soon, GNL will endeavor to carry out its review in as coordinated a fashion as possible.
Thanks for the update Christen,
Chris and I checked our calendars and October 14th is looking like the best day if you’d like to meet. Thanks.

Ivy

---

Hi Ivy and Chris,

Please see attached for updates provided recently to both aboriginal groups in Labrador. Same will be provided shortly to federal government EIA authorities.

After our last meeting and your note below, our priorities shifted to putting all of our efforts on completing the NG project description for EIA registration. In the coming weeks, I will provide you with an email list of follow-up items but this was related mainly to subsequent steps (EIA harmonization, aboriginal consultation, etc.).

Finally, would it be possible to schedule a next update meeting with you in St. John’s in the week of Thanksgiving (Oct. 13-16)? I will be in town all week and can make myself available at your convenience.

Thanks,

Christen Audet, F.Eng., Ph.D
Vice-President - Project Development and Environment
Quest Rare Minerals Ltd.
1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7
Tel: (514) 258-9002
www.questrareminerals.com
Hi Christen,

When we walked out together after our last meeting you were going to send me an email listing some of the questions you had for me. I have yet to receive same. Just wanted to follow-up with you on this.

Cheers

Chris

"This email and any attached files are intended for the sole use of the primary and copied addressee(s) and may contain privileged and/or confidential information. Any distribution, use or copying by any means of this information is strictly prohibited. If you received this email in error, please delete it immediately and notify the sender."
Regarding Quest’s EIA project description, we are still completing our review of the documents required to register the project with the Nunatsiavut government. The iterative process between engineering and environmental groups working on this documentation has taken longer than expected, in order to ensure that we provide an appropriate level of detail for relevant EIA processes in Labrador and for related consultation. I remain confident that we will be able to wrap up the entire registration package for NG by the end of September.

We will then establish the best date for registration with NL provincial and federal EIA authorities, using the same documentation, in order to align the three EIA processes.

Quest looks forward to providing Innu Nation with copies of all of these EIA documents.

Please don’t hesitate to contact me directly, should Innu Nation have any questions or require additional information on the EIA for Quest’s Strange Lake Project.

Sincerely,

Christen Audet, F.Eng., Ph.D
Vice-President - Project Development and Environment
Quest Rare Minerals Ltd.
1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7
Tel: (514) 258-9002
www.questrareminerals.com
Hi Andrea,

Thanks for your response below. I also received your recent vmail during my vacation last week and understood that you were looking for an update from Quest:

- Regarding the EIA project description, we are still completing our review of the documents required to register the project with the Nunatsiavut government. The iterative process between engineering and environmental groups working on this document has also taken longer than expected, in order to ensure that we provide an appropriate level of detail for public consultation. However, I currently expect to close off the entire summary by next week, which I will then send immediately to you for translation to Inuktitut. Once we close off the long version of the PD in the subsequent week or so, we will be in a better position to provide exact dates for completion. I remain optimistic that we will be able to wrap up the entire registration package by the end of September.

- Regarding the aquatic work planned for this year, especially in the Ikadlivik Valley, we have elected to postpone this effort to 2016 in order allow for engineering to advance further and to seek efficiencies by combining with other field work, depending also on the specifics of what might be requested via the EIA guidelines.

- Dirk and Quest CFO Alain Wilson would also like to meet with NG leadership to further explain the project’s economic justification. Dirk will communicate independently with Harry Borlasse to coordinate this separate meeting but we will keep you informed on this as well.

Sincerely,

Christen Audet, F.Eng., Ph.D
Vice-President - Project Development and Environment
Quest Rare Minerals Ltd.
1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7
Tel: (514) 258-9002
www.questrareminerals.com
In any written materials, no archeological sites should be identified on a map. However, a description of the types of sites, any possible interaction between the project and the sites, and other important details which will help the reader understand potential impacts, can be included.

For species at risk, you should follow the appropriate Provincial or Federal guidelines around location identification.

I hope this is helpful. If you have any questions, don’t hesitate to call.

Cheers,

Andrea

On 21 August 2015 at 17:43, Christen Audet <christen.audet@questrareminerals.com> wrote:

Hi Andrea,

Does NG have any special instructions regarding masking of sensitive locations in reports to be released publicly (i.e. rare species or archeological sites)?

Or do we just stay aligned with NL standard advice on this.

Thanks,

Christen Audet, F.Eng., Ph.D

Vice-President - Project Development and Environment

Quest Rare Minerals Ltd.
Binder 7
Memorandum of Understanding between the Canadian Environmental Assessment Agency (the Agency), the Nunatsiavut Government and the Province of Newfoundland and Labrador (the Province) on the conduct of the environmental assessment of the Strange Lake Project (the Project) Hereinafter referred to as the Parties
Brian, Ruby and Taracetta, please note discussion of Strange Lake. Karen, this is completed.

Aubrey Gover  
Deputy Minister  
Labrador and Aboriginal Affairs Office  
Government of Newfoundland and Labrador

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-----Original Message-----
From: Evans, Catherine
Sent: Wednesday, September 23, 2015 11:07 AM
To: Premier,; Burden, Nancy; Roberts, Edna; Haynes, Brenda; Glynn, Valerie; Power, Colleen (HCS); Halliday, Janice; Elliott, Donna Y; Hunter, Karen; Baker, Bridget
Subject: Emailing: Mayor Karen Oldford Sept 17.pdf

Your message is ready to be sent with the following file or link attachments:

Mayor Karen Oldford Sept 17.pdf

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.
In addition, you also requested a response in regard to the potential development of Strange Lake. The Strange Lake rare earth deposit in Labrador is currently classified as exempt mineral land. This means that the mineral rights are currently held by government, and there are currently no proposals to develop the deposit. The land containing the deposit is also Labrador Inuit Land. Quest Rare Minerals is considering the development of similar minerals in adjacent Quebec, and has contacted the Province in regard to construction of a road to the Labrador coast. There have been no discussions in regard to smelter construction. Quest’s pre-feasibility study (available on their website) contemplates processing in Betancourt, Quebec, chosen due to access to port facilities, electrical infrastructure, and natural gas.
Hi Ivy,

In anticipation of our meeting next week, please see attached for summary project description. This last version was just sent to Nunatsiavut and will be shared also with Innu Nation and CEAA to provide an update.

Regards,

Christen Audet, F.Eng., Ph.D
Vice-President - Project Development and Environment
Quest Rare Minerals Ltd.
1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7
Tel: (514) 258-9002
www.questrareminerals.com

From: Christen Audet <christen.audet@questrareminerals.com>
Sent: Thursday, October 08, 2015 10:46 AM
To: Stone, Ivy
Cc: Appleby, Christopher; Goebel, Martin; Cleary, Bas; Dirk Naumann
Subject: RE: Quest Update on EIA (Environmental Impact Assessment) - Strange Lake Project
Attachments: Quest SL Access_Summary_Rev_C_151007 jm_complete.pdf
Categories: Quest / Strange Lake

Hi Ivy,

In anticipation of our meeting next week, please see attached for summary project description. This last version was just sent to Nunatsiavut and will be shared also with Innu Nation and CEAA to provide an update.

Regards,

Christen Audet, F.Eng., Ph.D
Vice-President - Project Development and Environment
Quest Rare Minerals Ltd.
1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7
Tel: (514) 258-9002
www.questrareminerals.com

De : Stone, Ivy [mailto:IvyStone@gov.nl.ca]
Envoyé : 11 septembre 2015 10:05
À : Christen Audet
Cc : Dirk Naumann; Appleby, Christopher; Goebel, Martin; Cleary, Bas
Objet : FW: Quest Update on EIA (Environmental Impact Assessment) - Strange Lake Project

Thanks for the update Christen,
Chris and I checked our calendars and October 14th is looking like the best day if you’d like to meet. Thanks.

Ivy

From: Christen Audet [mailto:christen.audet@questrareminerals.com]
Sent: Thursday, September 10, 2015 3:37 PM
To: Appleby, Christopher; Stone, Ivy
Cc: Dirk Naumann
Subject: Quest Update on EIA (Environmental Impact Assessment) - Strange Lake Project

Hi Ivy and Chris,

Please see attached for updates provided recently to both aboriginal groups in Labrador. Same will be provided shortly to federal government EIA authorities.

After our last meeting and your note below, our priorities shifted to putting all of our efforts on completing the NG project description for EIA registration. In the coming weeks, I will provide you with an email list of follow-up items but this was related mainly to subsequent steps (EIA harmonization, aboriginal consultation, etc.).
Finally, would it be possible to schedule a next update meeting with you in St.John’s in the week of Thanksgiving (Oct. 13-16)? I will be in town all week and can make myself available at your convenience.

Thanks,

Christen Audet, F.Eng., Ph.D
Vice-President - Project Development and Environment
Quest Rare Minerals Ltd.
1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7
Tel: (514) 258-9002
www.questrareminerals.com

De : Appleby, Christopher [mailto:applebyc@gov.nl.ca]
Envoyé : 29 juin 2015 07:46
À : Christen Audet; Stone, Ivy
Objet : Email request

Hi Christen,

When we walked out together after our last meeting you were going to send me an email listing some of the questions you had for me. I have yet to receive same. Just wanted to follow-up with you on this.

Cheers

Chris

"This email and any attached files are intended for the sole use of the primary and copied addressee(s) and may contain privileged and/or confidential information. Any distribution, use or copying by any means of this information is strictly prohibited. If you received this email in error, please delete it immediately and notify the sender."

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From: Stone, Ivy
Sent: Wednesday, October 14, 2015 8:58 AM
To: Appleby, Christopher
Subject: FW: Strange Lake- Memorandum of Understanding
Attachments: CEAA NG NL MOU.docx
Categories: Quest / Strange Lake

From: Cleary, Bas
Sent: Thursday, October 01, 2015 7:38 AM
To: Stone, Ivy
Subject: Fw: Strange Lake- Memorandum of Understanding

For review. Discuss later.

From: Atkinson, Mike [CEAA] [mailto:Mike.Atkinson@ceaa-acee.gc.ca]
Sent: Wednesday, September 30, 2015 05:22 PM
To: Goebel, Martin; carl.mclean@nunatsiavut.com <carl.mclean@nunatsiavut.com>; Smith, Heather [CEAA] <Heather.Smith@ceaa-acee.gc.ca>; "Ouellet, Sylvain [CEAA]"@ec.gc.ca <"Ouellet, Sylvain [CEAA]"@ec.gc.ca>; Gaudet, Anne-Marie [CEAA] <Anne-Marie.Gaudet@ceaa-acee.gc.ca>; Chabot, Raymond [CEAA] <Raymond.Chabot@ceaa-acee.gc.ca>; Cleary, Bas; "Kirstein, Friederike [CEAA]"@ec.gc.ca <"Kirstein, Friederike [CEAA]"@ec.gc.ca>
Cc: andreahoyt@nunatsiavut.com <andreahoyt@nunatsiavut.com>; Tom Sheldon <tom.sheldon@nunatsiavut.com>

Subject: Strange Lake- Memorandum of Understanding

Carl/Martin

As discussed and promised during our meeting of September 15, 2015, please find attached a draft Memorandum of Understanding for a joint environmental assessment of the Strange Lake Project.

We look forward to discussing this further with you during our teleconference arranged for October 9, 2015.

If you have any questions, do not hesitate to call me.

Regards

Mike

Mike Atkinson

Regional Director, Atlantic
Canadian Environmental Assessment Agency / Government of Canada
Mike.Atkinson@ceaa-acee.gc.ca / Tel: 902 426 7496/ Cel: 902 877 4404

Directeur Regional, Atlantique
Agence canadienne d'évaluation environnementale / Gouvernement du Canada
Mike Atkinson@ceaa-acee.gc.ca / Tél. : 902 426 7496/ Tél. cell. : 902 877 4404
Memorandum of Understanding between the Canadian Environmental Assessment Agency (the Agency), the Nunatsavut Government and the Province of Newfoundland and Labrador (the Province) on the conduct of the environmental assessment of the Strange Lake Project (the Project)

Hereinafter referred to as the Parties
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Hereinafter referred to as the Parties
Meeting Note
Department of Environment and Conservation
Nunatsiavut Government (NG)
Canadian Environmental Assessment Agency (CEAA)
2:30 PM, September 15, 2015
Goose Bay, Labrador

Attendees:
Heather Smith, Vice President, Operations, CEAA
Mike Atkinson, Regional Director-Atlantic, CEAA
Carl McLean, Deputy Minister of Lands & Natural Resources, NG
Martin Goebel, Assistant Deputy Minister, ENVC

Purpose of Meeting:
• To discuss the tripartite harmonization of EA processes for the proposed Strange Lake Pot & Road Project in Northern Labrador.

Background:
• Quest Rare Minerals Ltd. (Quest) is proposing a mining project comprising three components:
  o the Strange Lake Rare Earth Element (REE) mining project (in Quebec), roughly 235 km northeast of Schefferville, Quebec;
  o a private road from the mine in Quebec to a port facility at Voisey’s Bay, on the Labrador coast (the project for NL);
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• The road component will trigger GNL, NG and GoC environmental assessment (EA) processes.
• The road portion of the proposed project crosses the LISA including LIL. In accordance with the LILCA no project in LIL can commence until an EA has been completed and all necessary permits / licenses have been issued by the authorities, including the NG. As a portion of the road is within LIL, the NG has a decision with respect to the project.
• The LILCA requires harmonization measures be established when a project is subject to more than one EA. GNL had a number of working level meetings with the NG and the Canadian Environmental Assessment Agency (CEAA) to determine to what extent the three EA processes could be harmonized in order to avoid overlap, high costs and duplication for the three jurisdictions as well as for the proponent.
The mine EA process has begun in Quebec, and the Chair of the Quebec group overseeing the Mine portion had a discussion with the EA Division on August 6th and encouraged ongoing communication and invited the EA Division to attend a public meeting in Quebec relative to this project. They are concerned that they will be six months ahead of every other jurisdiction relative to this project.

On May 8, 2015, Minister Shiwick sent a letter to Minister Aglukkaq (CEAA Minister) requesting an in-person meeting to discuss a harmonized EA process. The Minister declined such a meeting. The IN also requested a meeting with the federal minister shortly after concerning this project. This too was declined.

Quest met with NG Environment officials on June 15 and 17th to discuss the project. The discussion centered on Article 27 (LILCA) requirements, i.e., the depth and quantity of information to be presented in the PD for project registration with the NG.

A draft Project Description (PD) was presented to the EA Division on June 19th and Quest indicated that a revised PD would be presented to the NG for registration in order that their requirements under Article 27 could be met as much as was possible.

Quest made two requests of LAAO:
- clarification of the extent of the marine zone under NG jurisdiction;
- an example of post EA Aboriginal guidelines.

**Agenda item #1**
- Project submission to the three jurisdictions may be coordinated to maximize efficiencies and
If Quest submits a project description very soon, GNL will endeavor to carry out its review in as coordinated a fashion as possible, despite the absence of a harmonization arrangement with the Agency or the NG.

Prepared by: I. Stone

August 27, 2015
Memorandum of Understanding between the Canadian Environmental Assessment Agency (the Agency), the Nunatsiavut Government and the Province of Newfoundland and Labrador (the Province) on the conduct of the environmental assessment of the Strange Lake Project (the Project)

Hereinafter referred to as the Parties.
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Hereinafter referred to as the Parties
Nunatsiavut Government comments on draft “Memorandum of Understanding between the Canadian Environmental Assessment Agency (the Agency), the Nunatsiavut Government and the Province of Newfoundland and Labrador (the Province) on the conduct of the environmental assessment of the Strange Lake Project (the Project)” (Dated September 2015)
THIS MEMORANDUM OF UNDERSTANDING ON THE CONDUCT OF THE ENVIRONMENTAL ASSESSMENT OF THE STRANGE LAKE

Made at ______ this____ day of _____, 2015.

BETWEEN: The Province of Newfoundland and Labrador, represented by the Minister of Environment and Conservation (hereinafter referred to as the “Minister”).

AND: Canadian Environmental Assessment Agency (hereinafter referred to as the “Agency”)

AND: the Nunatsiavut Government
THIS MEMORANDUM OF UNDERSTANDING ON THE CONDUCT OF THE ENVIRONMENTAL ASSESSMENT OF THE STRANGE LAKE

Made at _______ this____ day of ______, 2015.

BETWEEN: The Province of Newfoundland and Labrador, represented by the Minister of Environment and Conservation (hereinafter referred to as the “Minister”).

AND: Canadian Environmental Assessment Agency (hereinafter referred to as the “Agency”)

AND: the Nunatsiavut Government

DRAFT - October 27, 2015 – 2:40 p.m.
THIS MEMORANDUM OF UNDERSTANDING ON THE CONDUCT OF THE ENVIRONMENTAL ASSESSMENT OF THE STRANGE LAKE

Made at ______ this____ day of ______, 2015.

BETWEEN: The Province of Newfoundland and Labrador, represented by the Minister of Environment and Conservation (hereinafter referred to as the “Minister”).

AND: Canadian Environmental Assessment Agency (hereinafter referred to as the “Agency”)

AND: the Nunatsiavut Government
Nunatsiavut Government comments on draft “Memorandum of Understanding between the Canadian Environmental Assessment Agency (the Agency), the Nunatsiavut Government and the Province of Newfoundland and Labrador (the Province) on the conduct of the environmental assessment of the Strange Lake Project (the Project)” (Dated September 2015)

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Memorandum of Understanding between the Canadian Environmental Assessment Agency (the Agency), the Nunatsiavut Government and the Province of Newfoundland and Labrador (the Province) on the conduct of the environmental assessment of the Strange Lake Project (the Project)

Hereinafter referred to as the Parties
Binder 10
THIS MEMORANDUM OF UNDERSTANDING ON THE CONDUCT OF THE ENVIRONMENTAL ASSESSMENT OF THE STRANGE LAKE

Made at _______ this____ day of ______, 2015.

BETWEEN: The Province of Newfoundland and Labrador, represented by the Minister of Environment and Conservation (hereinafter referred to as the "Minister").

AND: Canadian Environmental Assessment Agency (hereinafter referred to as the "Agency")

AND: the Nunatsiavut Government
Nunatsiavut Government comments on draft “Memorandum of Understanding between the Canadian Environmental Assessment Agency (the Agency), the Nunatsiavut Government and the Province of Newfoundland and Labrador (the Province) on the conduct of the environmental assessment of the Strange Lake Project (the Project)” [Dated September 2015]

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AND: Canadian Environmental Assessment Agency (hereinafter referred to as the "Agency")

AND: the Nunatsiavut Government
| From:     | Harvey, Brian               |
| Sent:     | Thursday, January 28, 2016 10:41 AM |
| To:       | Appleby, Christopher       |
| Subject:  | Decision Note_StrangeLake_27Jan2016.doc |
| Attachments: | Decision Note_StrangeLake_27Jan2016.doc |
| Categories: | Quest / Strange Lake       |
Please see comments provided by LAAO on Jan 28

Hi Ivy,

Let's discuss when you get a chance...

Chris
Christopher Appleby
Senior Policy Analyst
Labrador and Aboriginal Affairs Office
6th Floor, East Block
Confederation Complex
St. John’s, NL
A1B 4J6

Telephone 709 729-1773
Fax: 709 729-4900
Melindy, Shawn D.

From: Stone, Ivy
Sent: Monday, February 01, 2016 12:15 PM
To: Appleby, Christopher
Subject: FW: EIA Harmonization Quest Labrador - follow-up
Attachments: AECOM Transmittal Form Quest_151106_CA jm.pdf; Quest SL Access_Summary_Rev D_151023_CA2_tracked.docx; Figure_Becancour_QC_ENGLISHNFL_26102015.jpg

Categories: Quest / Strange Lake

fyi

From: Christen Audet [mailto:christen.audet@questrareminerals.com]
Sent: Thursday, January 28, 2016 6:04 PM
To: Stone, Ivy
Subject: TR: EIA Harmonization Quest Labrador - follow-up

Bonjour Ivy,

Further to our call on Jan. 14, 2015, please find attached:
1. Resend of list of baseline reports that we have shared with NG to date – which previously accompanied the note below;
2. Version (rev. D) of our summary Project description that was translated to French. Translation to Inuitut is also almost completed, on the basis of this same version. Just need to revise some minor details (i.e. Dirk Naumann was promoted from VP to President of Quest in Dec. 2015). Tracked changes for attached file indicate modifications that we made to previous versions, after consulting with NG. This summary is based on a long English-only version that is 99% complete but which we currently do not intend to issue until requirements are clarified for EIA harmonization.
3. Revised figure to show only legal interprovincial boundary, after our discussions last fall. This is to replace figure 2-1 that currently appears in Rev. D.

Once you get a chance to look at these documents, maybe we can schedule a follow-up phone call at your convenience, as suggested at our last call.

I have a call with Mike Atkinson (CEAA) tomorrow morning to get an update on federal perspective for EIA harmonization discussions. Dirk also met with NG leadership in Ottawa yesterday, when it was suggested by NG that they were waiting on other government(s) to advance harmonization. Though Quest is not party to these discussions, please don't hesitate should you have any suggestions as to how we may contribute to help things along.

Meilleures salutations,

Christen

De : Christen Audet
Envoyé : 20 novembre 2015 11:52
À : Ivystone@gov.nl.ca
Cc : Appleby, Christopher (applebyc@gov.nl.ca)
Objet : EIA Harmonization Quest Labrador - follow-up
Hi Ivy,

Hope your windy fall weather isn’t driving you sideways!

Just wondering how your discussions are progressing re: harmonization with NG and CEAA. Would it be possible to schedule a call next week to share updates? Although short notice, it would be helpful for me if we could arrange a brief call before our next management meeting on Wed. Nov. 25. If not, I would like to at least fix a date for a call to inform the Quest management team.

From our end, we look forward to informing you of our meetings and information sessions last week in Labrador. Please also find attached a list of documents that we provided to the Nunatsiavut Government last week, which we can provide also to you at your convenience — either now or later when we have additional documentation available.

Kind Regards,

Christen Audet, F.Eng., Ph.D
Vice-President - Project Development and Environment
Quest Rare Minerals Ltd.
1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7
Tel: (514) 258-9002
www.questrareminerals.com
# Transmittal Form

**Date**: November 6, 2015  
**Project Number**: 60290419

**Contact**: Minister of Lands and Natural Resources  
**Company**: Nunatsiavut Government  
**Address**: 25 Ikajuktauvik Road, P.O. Box 70, Nain, NL, Canada A0P 1L0  
**Telephone #**: (709) 922-2942  
**Sent By**: Yves Leblanc (AECOM)  
**Copies To**: Christen Audet (Quest)

**Project Name**: Strange Lake Road and Port Access, Northern Labrador

- **Urgent**:  
- **For Your Use**: ✗  
- **For Review**:  
- **For Your Information**:  
- **Confidential**: ✗

## List of Drawings and Other Materials:

<table>
<thead>
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<th>Quantity</th>
<th>Description</th>
<th>Date</th>
</tr>
</thead>
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<tr>
<td>2</td>
<td>Stantec, 2013. Geotechnical Investigation, Quest Strange Lake Project – Port Area, Edward’s Cove, Analdalak Bay, NL. Prepared for AECOM c/o Quest Rare Minerals Ltd. Revised Interpretable Geotechnical Report, St. John’s NL.</td>
<td>February 11, 2013</td>
</tr>
<tr>
<td>Quantity</td>
<td>Description</td>
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<td>------------</td>
</tr>
<tr>
<td>1</td>
<td>DVD - containing test (DRAFT) pdf portfolio document for summary project registration document and a selection of the reports listed above (mainly env. baseline)</td>
<td>November 2015</td>
</tr>
</tbody>
</table>

Comments: On behalf of Quest Rare Minerals Ltd., the above documents are being submitted as final reports to the Minister of Lands and Natural Resources, in anticipation of Quest's EIA official registration with the Nunatsiavut Government for the Strange Lake Project. Two paper copies are being provided at this time to provide one each for Nunatsiavut's offices in Makkovik (A. Hoyt) and in Nain (T. Sheldon/R. Laing). Other paper copies of documents will follow - including baseline reports still being finalized on freshwater and marine aquatic habitat. All documents will then be provided in electronic format with cover letter from Quest to officially register. Some are provided here on DVD as a sample of how this can be organized as a portfolio document, for Nunatsiavut's review.

Where only 1 copy is provided, a previous copy was provided by hand via Christen Audet (Quest) on June 15, 2015 during a meeting in Nain with Nunatsiavut Government officials (AH, TS, RL). During this same June meeting, other draft documents were provided (that may now be superceded). A certified cheque or bank draft of $1000 was also provided at the same meeting on June 15, payable to the Nunatsiavut Government, to be held by your Ministry uncashed until the Registration is officially commenced.

Please note that 2 reports are provided in 2 versions: 1 CONFIDENTIAL for the Nunatsiavut Government and 1 for the public registry. The latter was amended to hide the location of archeology sites and any rare species to help protect these features.

Sent Via: mail, courier, picked up X by hand, email, fax, other
To be brought to Nain Nov. 9-10 by C. Audet, Quest VP Environment

Authorized Signature:
Name: Yves LeBlanc
Title: Project Manager
(please print)
Strange Lake Road and Port Access, Northern Labrador
Environmental Assessment Registration
and Project Description – SUMMARY

For submission to the:

Nunatsiavut Government
Ministry of Lands and Natural Resources

and

Government of Newfoundland and Labrador
Department of Environment and Conservation

and

Government of Canada
Canadian Environmental Assessment Agency

To the extent of their respective jurisdictions

Prepared by:

AECOM
Project No. 60260419

September October 2015
Front cover photos (from top to bottom) illustrate the three main physiographic landscapes affected by the Project's Road and Port, moving from west to east in Labrador:

- the relatively flat and treeless sub-arctic plateau;
- the forested Ikadiilik valley viewed from its northern edge; and
- the west part of Edward's Cove viewed from Anaktalak Bay.

Back cover photo illustrates Quest's mineral exploration camp in Quebec next to Brisson Lake and the B-Zone Mineral Deposit being considered for mining. The B-Zone is found within a larger rare earth-bearing geological formation named the Strange Lake Alkali Complex that extends about 5 km into Newfoundland and Labrador.
## List of Acronyms and Abbreviations

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<tr>
<td>AIP</td>
<td>Agreement-in-Principle</td>
</tr>
<tr>
<td>ASL</td>
<td>Above Sea Level</td>
</tr>
<tr>
<td>ATV</td>
<td>All-terrain vehicle</td>
</tr>
<tr>
<td>CCME</td>
<td>Canadian Council of Ministers of the Environment</td>
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<tr>
<td>CEAA</td>
<td>Canadian Environmental Assessment Agency</td>
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<tr>
<td>CNSC</td>
<td>Canadian Nuclear Safety Commission</td>
</tr>
<tr>
<td>COSEWIC</td>
<td>Committee on the Status of Endangered Wildlife in Canada</td>
</tr>
<tr>
<td>CTD</td>
<td>Conductivity, Temperature, and Depth (for vertical water column profile)</td>
</tr>
<tr>
<td>dBA</td>
<td>A-weighted decibels (relative loudness of sounds in air as perceived by the human ear)</td>
</tr>
<tr>
<td>DFO</td>
<td>Fisheries and Oceans Canada</td>
</tr>
<tr>
<td>DWT</td>
<td>Dead weight (tons)</td>
</tr>
<tr>
<td>DWCC</td>
<td>Dead Weight Cargo Capacity</td>
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<tr>
<td>EA</td>
<td>Environmental Assessment</td>
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<tr>
<td>ECP</td>
<td>Engagement and Communications Plan</td>
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<tr>
<td>EIA</td>
<td>Environmental Impact Assessment</td>
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<tr>
<td>EPMP</td>
<td>Environmental Protection and Monitoring Plan</td>
</tr>
<tr>
<td>ERAP</td>
<td>Emergency Response Assistance Plan</td>
</tr>
<tr>
<td>Fednav</td>
<td>Canadian ocean-going ship chartering company</td>
</tr>
<tr>
<td>FS</td>
<td>Feasibility Study</td>
</tr>
<tr>
<td>GST</td>
<td>Goods and Services Tax (Canada)</td>
</tr>
<tr>
<td>GRCH</td>
<td>George River Caribou Herd</td>
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<tr>
<td>HST</td>
<td>Harmonized Sales Tax combining the NL provincial sales tax and the federal GST</td>
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<tr>
<td>IBA</td>
<td>Impacts Benefits Agreement</td>
</tr>
<tr>
<td>IDLP</td>
<td>Inuvik Development Limited Partnership</td>
</tr>
<tr>
<td>KRG</td>
<td>Kativik Regional Government</td>
</tr>
<tr>
<td>LAeq</td>
<td>Equivalent sound pressure level in dBA</td>
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<tr>
<td>LIL</td>
<td>Labrador Inuit Lands</td>
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<tr>
<td>LILCA</td>
<td>Labrador Inuit Land Claims Agreement</td>
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<tr>
<td>LISA</td>
<td>Labrador Inuit Settlement Area</td>
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<tr>
<td>MOA</td>
<td>Memorandum of Agreement</td>
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<tr>
<td>MPMO</td>
<td>Major Projects Management Office (Canada)</td>
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<tr>
<td>NAD83</td>
<td>North American Datum 1983 (adopted by Natural Resources Canada in 1990)</td>
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<tr>
<td>NG</td>
<td>Nunatsiavut Government</td>
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<td>NGC</td>
<td>Nunatsiavut Group of Companies</td>
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<tr>
<td>NGO</td>
<td>Non-governmental Organization</td>
</tr>
<tr>
<td>NL</td>
<td>Newfoundland and Labrador</td>
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</table>
Summary

AECOM

NL 43-101 National Institute on the Standards of Disclosure for Mineral Projects within Canada
NL Newfoundland and Labrador
NMEF Nunavik Mineral Exploration Fund
NO₂ Nitrogen Dioxide
NORM Naturally Occurring Radioactive Material
NRCAN Natural Resources Canada
NTS National Topographic System (Canada)
ph A measure of the acidity or alkalinity of a solution
PFS Pre-feasibility Study
PK Kilometer Point
PM₂.₅ Particulate Matter less than 2.5 micrometers in diameter
PM₁₀ Particulate Matter less than 10 micrometers in diameter
Quest Quest Rare Minerals Limited
RDL Reported Detection Limit
REE Rare Earth Element
SARA Species at Risk Act (Canada)
SL Strange Lake
SLBZ Strange Lake B-Zone
SO₂ Sulfur Dioxide
TSP Total Suspended Particulates
Vale Vale Canada Ltd, Vale Newfoundland and Labrador Ltd.
VBA Voisey’s Bay Area
VBNC Voisey’s Bay Nickel Company (which became part of Vale)
VEC Valued Ecosystem Component
VOC Volatile Organic Compounds
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Appendix A  Project Map
Appendix B  Map of Communities near the Project
Appendix C  Map of Aboriginal Agreements in Labrador
1 Introduction

1.1 Name and Nature of the Project

The name of the project is “Strange Lake Road and Port Access” (hereafter the “SL Access Project”). The project is located entirely in Labrador and involves the following key components: a 150-km all-weather access road (the “Road”) from the Labrador-Quebec border to the coast, and a marine terminal (the “Port”) with a capacity for vessels up to 55,000 DWT (dead weight tons).

1.2 Proponent Information

The proponent is Quest Rare Minerals Limited (“Quest”), a Canadian company focused on the development of its B-Zone REE (Rare Earth Element) deposit in northeastern Québec. Quest aims to become an integrated producer of rare earth metal oxides and a significant participant in the global rare earth elements (REE) material supply chain.

Address (Head Office): 1155 Robert Bourassa Boulevard, 9th Floor Suite 906 Montreal, Quebec H3B 3A7

Emails: SLenviro@questrareminerals.com
info@questrareminerals.com

Telephone (Toll-Free): (888) 678-3551 ext. 26

Website: http://www.questrareminerals.com/

Chief Executive Officer
Name: Pierre Lortie
Official Title: Executive Chairman
Address: 1 Place Ville Marie, Suite 3900, Montreal, Quebec H3B 4M7

Telephone: (514) 673-7181
Email: pierre.lortie@dentons.com
Telephone: (514) 673-7181

Senior Manager
Name: Dirk Naumann
Official Title: Executive Vice President - Development
Address: 1155 Robert Bourassa Boulevard, Suite 906 Street, 9th Floor
Montreal, Quebec H3B 3A7

Email: dirk.naumann@questrareminerals.com
Telephone: (514) 220-2087
Fax: (514) 878-4427
Email: dirk.naumann@questrareminerals.com

Principal Contact - Environmental Assessment (EA)
Name: Christen Audet
Official Title: Vice President - Project Development and Environment
1.3 Environmental Assessment Requirements

The SL Access Project will require environmental assessments (EAs) and approvals from multiple jurisdictions, based on the project's scope and location in Labrador. The following sub-sections explain what triggers an EA in each respective jurisdiction, and the nature of EA in each case.

1.3.1 Nunatsiavut Process

This Project is located on lands in Northern Labrador subject to a land claims agreement (modern-day treaty). In 2005, the Labrador Inuit Association signed the Labrador Inuit Land Claims Agreement (LILCA) with the Government of Canada and the Government of Newfoundland and Labrador.

LILCA creates two main categories of land in which the Inuit have special rights pursuant to the agreement: the Labrador Inuit Settlement Area (LISA) and the Labrador Inuit Lands (LIL). In particular, access to and use of LIL is managed by the Nunatsiavut Government. The LIL are the lands where the Inuit enjoy the most rights and benefits. LILCA also provides for and recognizes the Voisey's Bay Area (VBA) and a special regime for this area of provincial Crown land asserted to be part of the traditional territories of both the Labrador Inuit and Innuit. The VBA includes the area leased by Vale Newfoundland and Labrador Limited ("Vale") for the Voisey's Bay mine and its associated infrastructure. The SL Access Project affects LISA, LIL, and VBA land categories.

About 36 km of the 150-km Road crosses LIL. Pursuant to Section 4.5.1 of the Nunatsiavut Environmental Protection Act, a project initiative on LIL must be registered with the Minister of Lands and Natural Resources of the Nunatsiavut Government for the purposes of environmental review. Under corresponding regulations, a detailed review is required for projects which include "a public or private road or public highway".

The Nunatsiavut Government may elect to replace a detailed review with a harmonized review, subject to agreement with other governments.

1.3.2 Newfoundland and Labrador Process

Part III of the Environmental Assessment Regulations, 2003 lists designated undertakings (projects) that must be registered with the Department of Environment and Conservation, according to the Newfoundland and Labrador Environmental Protection Act. This list includes "construction projects other than buildings that involve the construction of roads ... where a portion of the road will be more than 500 metres from an existing right of way" (paragraph 35 (1)(b)), which is applicable to the Project. On the basis of its analysis of the submitted registration document and any related comments from the public, the Government of Newfoundland and Labrador may decide whether an Environmental Preview Report and/or an Environmental Impact Statement are required.

1.3.3 Federal Process

According to the Schedule of the Regulations Designating Physical Activities, under the Canadian Environmental Assessment Act (CEAA), 2012, the list of designated physical activities includes "construction and operation of a new marine terminal designed to handle ships larger than 25,000 DWT". Thus, the port facilities planned in the SL Access Project could trigger an Environmental Assessment under CEAA, 2012. Considering that the planned Road would be private, the Road component does not trigger, by itself, an Environmental Assessment.
under CEAA, 2012. Upon receiving and accepting Quest's Project Description, it is currently assumed that the Canadian Environmental Assessment Agency would initiate a standard EA (356-day government timeline).

1.4 Purpose of the Registration Summary

The present document summarizes the Environmental Assessment Registration and Project Description of the SL Access Project.

1.5 Other Relevant Background Information on Project Development

1.5.1 List of Jurisdictions and Other Parties/Communities Consulted

Quest has consulted with the governments or regional governing bodies of Nunatsiavut (Labrador Inuit), Newfoundland and Labrador, Kativik (Québec Inuit), Québec and Canada. The SL Access Project also interests other Aboriginal groups, non-governmental organizations and community stakeholders. Consultations have been initiated with the following four Aboriginal groups:

- The Labrador Inuit;
- The Labrador Innu;
- The Quebec Inuit; and
- The Naskapi of Quebec.

The Quebec Innu, specifically the Innu community of Matimekush-Lac John, have also requested to be consulted; initial meetings were held with their band leadership.

Informal consultation has also begun with a selection of non-Aboriginal communities and groups likely to have an interest in the SL Access Project.

Refer to Section 7 for further details on groups consulted as well as issues, concerns or questions raised.

1.5.2 Regional Environmental Studies

The Port and a 12-km portion of the Road of the SL Access Project are located in the VBA, which has been the subject of environmental studies conducted in 1996 and 1997 for the Environmental Impact Assessment of the Voisey's Bay nickel mine project. However, no known regional studies have been conducted in the vicinity of the SL Access Project, in the sense given by CEAA, 2012.

1.5.3 Related Reports and Studies

The following series of reports and studies were prepared to support registration of the SL Access Project:

- project development reports;
- trade-off studies and selected engineering studies; and
- environmental baseline studies.

The next phase of development of the SL Access Project will comprise four main activities to be pursued in parallel, namely:

1. Feasibility Study - engineering, planning and financials;
2. Fieldwork - increasing definition of geotechnical and environmental conditions;
3. Government Approvals - specifically EA and other permitting preparation for various jurisdictions; and
4. Community Liaison - providing regular updates and encouraging local involvement.
1.5.4 Application of the Precautionary Principle

The above sequencing of studies emphasizes proactive and progressive project optimization. This has included efforts to lessen the project's overall environmental footprint, while considering government/community concerns or suggestions. Over the past five years, the SL Access Project has been continuously improved to reduce any potential effects on sensitive ecological features and functions. Additional precautions have been taken in project design where important uncertainty remains in terms of available baseline data or in anticipating project impacts. Greater caution has been built into project design – notably by considering alternatives to reduce risk or enhancing mitigation measures.
2.1 Project Objectives and Justification

Quest requires private road and port access from the Labrador Coast to a REE-enriched near-surface mineral deposit in Quebec, entitled the "B-Zone", for mining of rare earth concentrate. After onsite processing, a REE concentrate is to be shipped via the road and port to a proposed facility for further treatment in Bécancour, Québec.

A port facility with the capacity to receive vessels of up to 55,000 DWT is planned for Edward’s Cove (Anaktaq Bay), approximately 30 km southwest of Nain, close to the existing port facility used for Vale’s Voisey’s Bay Project. To link this new port in Edward’s Cove to the Labrador/Quebec border near the Mine Site, a private 150-km all-season road is also proposed by Quest.

2.2 Context

2.2.1 Location

A map depicting the SL Access Project’s overall location and the spatial relationship of the project components is presented in Appendix A. The closest communities are shown in Appendix B. A possible shipping route, to be taken by a third party contractor, is illustrated in Figure 2.1. Refer to Table 2-1 for key project geographical coordinates from west to east.

Table 2-1 Selected Project Coordinates (NAD83 geographic system)

<table>
<thead>
<tr>
<th>Geographic Reference Coordinates</th>
<th>Latitude</th>
<th>Longitude</th>
</tr>
</thead>
<tbody>
<tr>
<td>Km 0 for Road at the Labrador/Quebec border</td>
<td>56° 16' 13.00&quot; North</td>
<td>64° 05' 29.00&quot; West</td>
</tr>
<tr>
<td>Main Water Crossing #1 (bridge)</td>
<td>56° 10' 50.70&quot; North</td>
<td>63° 28' 56.32&quot; West</td>
</tr>
<tr>
<td>Main Water Crossing #2 (arch culvert)</td>
<td>56° 20' 19.90&quot; North</td>
<td>62° 59' 25.48&quot; West</td>
</tr>
<tr>
<td>Main Water Crossing #3 (arch culvert)</td>
<td>56° 22' 20.73&quot; North</td>
<td>62° 07' 37.89&quot; West</td>
</tr>
<tr>
<td>Port Site (at end of the Road)</td>
<td>56° 24' 51.00&quot; North</td>
<td>62° 06' 11.00&quot; West</td>
</tr>
</tbody>
</table>

2.2.2 Labrador Inuit Land Claims Agreement and Innu Nation Land Claims in Labrador

Appendix C illustrates relevant lands under the LILCA and the Innu Nation Agreement-in-Principle (AIP) in Labrador. In terms of aboriginal land categories affected by the project, as first explained in Section 1.3.1, the Road would run through the LISA for 138 km, including 36 km in LIL, and the VBA for 12 km.

Quest understands that the rights of the Inuit and of the Innu of Labrador with respect to project development in the VBA will be governed respectively by the provisions of the LILCA and a MOA (Memorandum of Agreement) between the Innu Nation and the Province of Newfoundland and Labrador.

The Port is located entirely in the VBA. Shipping would move from the VBA to the maritime route already used for ships calling on Vale’s port in Edward’s Cove, which pass through the marine "Zone" referred to in LILCA.
2.2.3 Land Tenure, Access and Property

For the Road located in LIL land parcel 08, the Nunatsiavut Government may convey to Quest a private interest in Inuit surface rights (i.e., a lease or an easement), subject to conditions.

Within Crown Land in LISA and the VBA, the provincial Minister may issue a lease, a licence, an easement or a grant of land to Quest, subject to the terms and conditions of the LILCA and to the MOA mentioned above. The most recent version of the Regional Land Use Plan for the LISA may also be considered.

Applicable conditions may include provisions to allow for local land-users to cross the road in a safe manner, especially by snowmobile in the winter and most likely at pre-designated safe crossings, for which the number and locations would be determined through consultation.

Within the VBA, Vale holds a Mining Lease and a Surface Lease, which defines the "Vale Inco Tenure" containing the mine and associated infrastructure. No part of Quest's proposed Road or Port lies within the Vale Inco Tenure.

The waters of Edward's Cove are considered "inland (marine) waters" within the VBA. As such, Newfoundland and Labrador had the authority to lease some land under the water of Edward's Cove to Vale. The same could apply to Quest regarding its proposed Port, in another adjacent area of Edward's Cove, outside Vale's Tenure.

About 13% of the Road (20 of 150 km) is also planned to cross several mining claims, based on licenses registered as of July 2015. The Newfoundland and Labrador Government will likely consult with interested claim holders prior to issuing a Crown land grant or lease for the road corridor.

2.2.4 Related Projects

The SL Access Project is a key component in two related projects providing the terrestrial and marine transportation links between the companion elements of a mine in northern Quebec with a proposed processing plant in southern Quebec. Thus, Quest has two related projects in Quebec:
- the Strange Lake B-Zone Rare Earth Mine Project in northern Quebec, adjacent to the Labrador-Quebec border; and
- the Rare Earth Processing Plant Project located in southern Quebec, in an industrial park at Bécancour on the Saint Lawrence River.

These two other projects are described in separate project registration documents due in part to different respective EIA jurisdictions. A brief but comprehensive description of these related projects is provided in the following two sub-sections to provide context for understanding the EIA of the SL Access Project.

For additional information on the mine site, the summary project description for the B-Zone Rare Earth Mine Project is available on the Project Registry website of the Kitikmeot Environmental Quality Commission in Quebec. This document will also be submitted to the governments of Nunatsiavut and of Newfoundland and Labrador as a related reference in support of the SL Access Project's Registration and Project Description.

Upon initiating the EIA process with the federal government, all three project registration documents are also expected to be made available for public access on the registry of the Canadian Environmental Assessment Agency (https://www.ceaa-acee.gc.ca/050/index-eng.cfm).

Figure 2-1 Related Quest Project Components and Logistics
2.2.4.1 The Strange Lake B-Zone Rare Earth Mine Project in Northern Quebec

The mine project site, including 18 km of access road from the Labrador-Quebec border, is situated on lands known as Category III land subject to the James Bay and Northern Quebec Agreement (JBNQA) and the Northeastern Quebec Agreement (NEQA). These agreements settle the respective land claims and Aboriginal rights of the Inuit and the Naskapi Nation of Kawacatchikonach. The region is also covered by the Quebec Government’s Administrative Region of the Nord-du-Quebec and the Kabivit Regional Government based in Kuujjuaq (323 km northwest of the mine). Other communities near the mine project are shown in Appendix B.

The physical features of this related project in northern Quebec comprise: a mine pit, manufacturing and storage facilities for explosives; local haul roads; ore processing facilities; designated stockpile locations for ore, waste rock, overburden and soil; a tailings management facility; and an airstrip. Other supporting buildings include a multi-functional building, housing, offices, a laboratory, medical and emergency facilities, a change-house, workshops and warehouses. Facilities are also planned for potable water supply, sewage treatment, power supply, fuel storage and distribution, stormwater management, and waste management (including a local landfill). An 18-km all-weather road will link these features to the SL Access Project at the provincial border with Labrador.

Similar to the SL Access Project, the northern Quebec B-Zone Mine Project will undergo construction over a period of about 2 years, followed by an operational life of 30 years and then closure. Decommissioning and site rehabilitation may take 2 years, with post-closure environmental monitoring expected to continue for 10 additional years.

Possible environmental effects and mitigation measures for the mine project have been considered using a similar approach to that outlined for the SL Access Project in Section 6 below: Valued Ecosystem Components (VEC’s) are identified and assessed to capture the most important potential effects and mitigation measures. There is some variation for the mine site: the VEC “Marine Environment” is not relevant; greater consideration is given to “Visual Aesthetics” due to some infrastructure seen from Lake Brisson; and “Transboundary effects” are expected due to prevailing winds that could bring some Project emissions and dust into Labrador. No water effluent from the mine site will reach any water bodies in Labrador, as explained in Section 6.1.6 below.

Specific environmental design and controls in relation to principal mine site discharges during various project phases can be summarized as follows:

- In terms of liquid effluent, retention and/or sedimentation ponds are planned for contact run-off water to facilitate settling of suspended solids and pre-release testing. Limited quantities of process wastewater, after water recycling, will require testing and treatment as required before release to the environment. An appropriate wastewater treatment unit is planned and discharge point(s) would be identified on Lake Brisson.

- Semi-solid residue from ore processing will be appropriately dewatered, treated with cement additive and dry-stacked near the mine site. Contact with groundwater will be limited by installation of an under-drain system within the impoundment area.

- Other waste (solid and liquid) will include non-hazardous materials to be disposed of in a dedicated landfill; contaminated soils and snow to be treated onsite; used oils to be incinerated on site, possibly for generation of heat or power; and hazardous wastes to be stored in sealed containers for shipping to an authorized off-site treatment/disposal facilities.

- Air emissions (diesel emissions/greenhouse gases, and dust from vehicular activity) are expected to have standard monitoring, testing and mitigative measures.
2.2.4.2 The Rare Earth Processing Plant Project in Southern Quebec

A second related Quest project is a processing facility to be owned and operated by Quest in Southern Quebec (see Figure 2-1). This processing facility would receive ore concentrate shipped from Quest's planned port in Edward's Cove on the Labrador coast. It may also receive and treat material from other sources (i.e., used fluorescent tubes containing rare earths from elsewhere in North America).

The proposed site for the processing plant and related residue storage facility (RSF) is located in an Industrial Park, which is managed and operated by the Société du parc industriel et portuaire de Bécancour (SPIPB), a provincial crown corporation. The industrial park is located on the southern shore of the Saint-Lawrence River and within the City of Bécancour, just above the 46° parallel. This Project Area would be potentially subject to Quebec's southern environmental assessment process, in addition to CEAA if applicable.

2.2.5 Subsequent Phases

Current plans are to request environmental approvals for a 30-year scenario for the Road and Port. Subsequent phases of road and port use will be considered at a later date, if considered viable, after the SL Access Project has successfully operated for several years. Concerned governments, communities, and other stakeholders would be consulted, and Quest would apply for any additional environmental approvals at that time.

2.3 Project Alternatives

2.3.1 Road

The most viable port entry for a road was first established as Edward's Cove/Anaktalak Bay following a study of alternative routes. Route access options were studied after discarding rail and pipeline options based on technical, economic, and environmental criteria. This analysis also considered routes to Schefferville, to Natuashish, and even to Northern Quebec but all presented serious constraints in terms of distance, physical barriers, cost, or technical feasibility.

The preferred route to Edward's Cove was then examined in more detail and alternative road alignments from the Labrador/Quebec border were considered in a trade-off study of five options. The preferred alignment for the SL Access Project represents the shortest route (and smallest environmental footprint), provides the fastest travel time for a roundtrip between the Port and the Labrador-Quebec border; traverses less difficult topography resulting in fewer constructability challenges; and avoids multiple crossings of provincial boundaries. However, it is currently assumed that a selection of these five options – considering in particular different levels of disturbance of Ikadlivik valley – will continue to be evaluated as part of the Environmental Assessment with emphasis on land use and environmentally sensitive areas.
Figure 2-1  Related Quest Project Components and Logistics

![Map of Related Quest Project Components and Logistics](image-url)
2.3.2 Port

A systematic analysis of various options for the location and design of a wharf in Edward's Cove was conducted during the initial phases of a Prefeasibility Study. The result of this analysis of alternatives concluded that the installation of a floating wharf, which could be dismantled during the ice season, constitutes the preferred option because of advantages for both navigation and berthing/un-berthing operations.

Initial discussions between Quest and Vale have resulted in a potential alternative port scenario for Quest is to reuse the existing marine terminal located in Vale's Viosey's Bay port (east part of Edward's Cove in the VBA). This would require an arrangement with Vale, Aboriginal consent and government approvals, as applicable. In this scenario, about 8 km of Vale's existing road could be used by crossing Reid Brook further south than the main P3 crossing (shown in Appendix C). Quest would need to build its own concentrate storage shed with associated truck dumping facilities at the Vale port. An additional bulk fuel storage tank would also be required - with a dedicated truck fueling station and tanker truck loading facility. There may also be potential for supplying Quest operations in winter by using any excess capacity in the Fednav Ltd Ice Breaker class vessels (e.g. Umiaq 1) already servicing Vale's operations. The SL Access Project would not otherwise use winter shipping.

2.4 Physical Features of the Project

2.4.1 Road

The link between the Labrador/Quebec border and the Port is planned to be an 8-m wide all-weather road, over about 150 km.

The dimensions of the planned road profile are as follows: a width of 7 m with two (2) shoulders of 0.5 m. This width is intended mainly for one-way traffic but will provide sufficient passing clearance between two (2) semi-trailer trucks. Safety features - such as lane pull-outs, runaway lanes and safety berms - will be considered at strategic locations, to be determined at the feasibility stage of road engineering design.

Road cross-sections would include open ditches to channel and control surface water, where deemed necessary.

The alignment of the Road has been divided into two (2) segments as follows (Appendix A):

- A relatively flat segment from PK 0 to PK 104 which corresponds mainly to a treeless sub-arctic plateau; and
- A segment with more relief from PK 104 to PK 150, which corresponds to a forested valley and coastal lands.

In terms of total Road footprint, the right-of-way on the flatter treeless plateau segment is expected to be 21 m wide on average, considering safety features that would periodically increase road or right-of-way width. To help maintain driver sightlines, any obstructing vegetation would be removed from this right-of-way. The right-of-way may also be wider in permafrost-sensitive areas where greater fill volumes may be added to help insulate from surface thermal regime changes. The right-of-way width on the plateau would also be increased by planned road profile modifications to facilitate crossing by migratory caribou. This would be limited to a selection of 50-m long road sections with over 1.5 meters of fill above grade, which has yet to be confirmed. The shoulders of modified road sections - for either permafrost or caribou - would have gentler slopes.

By comparison, in the forested valley of Kieldvik Brook, the right-of-way is currently assumed to be 35 m wide on average. This greater right-of-way width is required here because of the valley's topographical relief, which increases space needed to stabilize slopes and to maintain acceptable driver sightlines. Permafrost is expected to be less common than on the plateau and no caribou crossings are considered necessary in the Road's valley segment. However, further to consultation with local communities, additional right-of-way width may be considered for selected road segments to allow, for example, for parallel snowmobile access trails leading to designated safe road crossings.
On 1:50,000 scale mapping, the Road crosses a total of 90 water crossings in Labrador, including 20 in LIL. There are three main watercourses where one 29-m span bridge and two 16-m span arch culverts are planned. These are represented as P1, P2 and P3 in the Overall Project Map (Appendix A), respectively at kilometer points PK 43.2 (bridge), PK 81.4 and PK 144.8. None of these main crossings are in LIL.

Metal pipe culverts (over 1000 mm diameter) are otherwise planned for smaller crossings. Based on analysis of higher resolution images, a total of 267 smaller streams currently intersect the road alignment in Labrador, including 111 in LIL. About half of these 267 watercourses are considered intermittent.

### 2.4.2 Port

Upon arriving at the Port by truck, from the Labrador/Quebec border, the REE concentrate would be dumped into a conveyor system leading to a concentrate storage building. Bulk concentrate material would be reclaimed in the storage building by front end loader and delivered to another series of conveyors, including fixed conveyors located on the shore, which would feed mobile conveyors located on the floating bridge and dock.

In terms of total footprint for both permanent and temporary infrastructure, the Port would cover a land area of about 0.5 km² and a marine area of less than 0.05 km² (Appendix A, inset map). This includes the following facilities:

- Floating wharf (to be removed in winter);
- Temporary dock for a construction barge and floating hotel;
- Truck ore unloading station;
- Concentrate storage building;
- Bulk concentrate reclaim system;
- Ship-loading system;
- Fuel ship unloading system;
- Aboveground bulk fuel holding tank(s);
- Truck re-fuelling station;
- Temporary construction airstrip (800 metres long);
- Laydown area (100 m x 40 m);
- Buildings (offices, workshop);
- Construction camp (partly to be converted to permanent accommodation facilities);
- Services (water treatment, fire water system, sewage system);
- Power generation system (generators using arctic diesel);
- Waste incinerator;
- Landfill;
- Runoff water retention pond; and
- Contaminated snow/soil treatment pad.

### 2.5 Project Activities

#### 2.5.1 Preparation Phase

Prior to the start of construction, and subject to obtaining applicable environmental approvals, certain activities may be initiated as early works including:

- Surveying of the Road and Port;
- Delivery and staging of construction materials and equipment;
- Setting up of temporary facilities – including camps and mobile fuel storage; and
- Preliminary site preparation for selected accessible sections of the Project, especially near the Port.
2.5.2 Construction Phase

Construction would start as soon as the SL Access Project is released from the applicable environmental assessment processes and subsequent environment permitting is obtained. On this basis, the earliest construction start date would be in the spring of 2017, assuming that staging and other preparation had already commenced at that time.

The total construction period would last 21 months (Table 2-2 Table 2-2). Road construction planning would take into account the appropriate timing window for carrying out in-water work in fish habitat, which is from June 15th to September 15th in Labrador. The schedule assumes work crews would work simultaneously from both ends of the road alignment.

Table 2-2 Construction Schedule

<table>
<thead>
<tr>
<th>Project Components</th>
<th>Months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port</td>
<td>Nov</td>
</tr>
<tr>
<td>Access Road</td>
<td>Port Site - 6 Months</td>
</tr>
<tr>
<td>Access Road</td>
<td>Penetration Road - 14 months</td>
</tr>
</tbody>
</table>

2.5.2.1 Road Construction

Site preparation would include partial clearing of vegetation and road bed establishment. Standard road construction methods would be adapted as required to the local environment and permafrost. Any extra materials needed for the road bed would be obtained from borrow pits (sand or gravel) and rock quarries (tentatively located in Appendix AAppendix A), especially for the plateau road segment where cut and fill are not expected to balance.

Temporary construction camp accommodations of up to 200 beds during the summer peak periods would be established near the Port, by combining a floating barge hotel and a smaller trailer camp. As construction advances towards the Labrador/Quebec border, temporary stages areas would be established at discrete intervals along the road; these would be associated with mobile camps, at locations proposed in Appendix AAppendix A, close to the main water crossings at PK 44 and PK 82. These staging areas would include mobile camps for construction workers, mobile offices and amenities, mobile workshops and temporary fuel storage facilities.

2.5.2.2 Port Construction

During the first year of construction, work at the port site would be focused on the accommodation camp, camp services, site preparation and civil works. After the main construction camp is established, including associated sewage and waste management facilities, all equipment and mobile accommodation related to the construction of the access road would be brought on site to start road penetration.

Drinking water is planned to be produced using a modular treatment system. Water sources would be identified based on the final location of the construction camp. Since the potable water sources still have to be confirmed, the water treatment system would be designed to treat both potential sources of water: surface water and groundwater.

During the second year, more equipment and mobile accommodation would be moved away from the Port to support road construction. The ore concentrate storage building and the fuel holding tank would then be erected at the Port. The concentrate handling equipment, as well as the truck unloading and refueling station, would be installed in preparation for the first ore concentrate delivery from the Mine.
2.5.2.3 Shipping during Construction

All shipping and associated activities (crews, provisions, refueling and other supplies, waste management, etc.) will be contracted to a third party for both the Construction and Operations Phases of the Project. The potential shipping route(s) would be the same used by construction supply ships accessing Edward's Cove since 2002.

Shipping during the Construction period would transport incoming equipment, materials and fuel. A temporary barge and a floating hotel are also planned to be delivered for the Construction Phase. Waste, other materials and returning rental equipment would be periodically shipped off-site.

2.5.3 Operations and Maintenance Phase

2.5.3.1 Road

The Road would remain open twelve months a year to continue supplying the mine, with the exception of temporary seasonal closure periods for caribou migration in the spring and fall.

Road maintenance would include grading, resurfacing and plowing-scarifying-sanding, in-order-to ensure road trafficability and maintain a low-rolling resistance. Snow removal would occur during the winter time. Road maintenance would be accomplished by two (2) fleets, one based at the mine site in Quebec, and another at the Port.

The Road would be used mainly for transportation of the following materials:

- The haul trucks carrying ore concentrate would transit from the Labrador/Quebec border to the Port over a six (6) month period (145 days), starting one month ahead of the first ship arriving at the Port. During this period, there would be an estimated 31 return truck trips per 24-hour day (each with an assumed capacity of 90 tonnes of ore concentrate).
- Fuel (arctic diesel) requirements for the Mine and Port are estimated at about 27,000,000 litres/year which represents an estimated 4 tanker truck return trips per day over the 5-month shipping season.
- Secondary haulage activities on the road would consist of supplying dry, fresh and refrigerated foods as well as various materials and equipment for daily operations of the Mine.
- This traffic represents a truck about approximately every 20 minutes during 6 months, outside of the main winter period.

2.5.3.2 Port

Port operations would occur mainly during the summer shipping season of five (5) months duration, between July 1 and December 1, with the possibility of extending the shipping season in certain years, depending on sea ice conditions. Port operations would typically include:

- Receiving haul trucks loaded with ore concentrate from Strange Lake;
- Handling ore concentrate at the port’s storage facility;
- Reclaiming ore concentrate from the storage facility and transport to the wharf installation;
- Loading ships with ore concentrate (approximately 18 hours per port call, 10 outgoing ships over the 5 month period);
- Receiving fuel (arctic diesel) and other supplies (food, material and equipment) required for Project operations; and
- Miscellaneous activities such as handling mooring lines and attending to the fuel farm and to building maintenance.

Outgoing ships would be loaded with up to 43,000 DWT of ore concentrate, considering the draft limitations of the receiving port in Southern Quebec.
Part of the construction laydown area (approximately 100 m x 40 m) will be retained for the Operations Phase for other consumables being unloaded at the port – including containers. Part of the construction camp would also be converted into Port accommodation facilities, in support of the main worker camp at the mine site. Some workers may be flown into the mine site and transported by road to the Port, as required.

2.5.3.3 Shipping

As indicated above for the Construction Phase, all shipping and associated activities (such as crews, provisions, refueling and other supplies, and waste management) etc. will be contracted to a third party for both the Construction and Operations Phases of the Project.

The Operations Phase of the SL Access Project will involve three principle types of cargo to be shipped to and/or from Quest’s operations: ore concentrate, fuel and general cargo mainly in containers. The latter would include incoming supplies such as food, material and equipment and outgoing waste, other excess materials and any equipment no longer in use.

The shipping route would be the same used by large commercial ships travelling between the Labrador Sea and Edward’s Cove since 2005. Ships carrying Quest REE concentrate would transit to the Port of Becancour in the St. Lawrence River, most likely via the Strait of Belle Isle to access the St. Lawrence Gulf. Fuel and general supplies would be backhauled as much as possible in returning empty ore concentrate ships.

Quest would require approximately 10 outgoing ore shipments (up to 43,000 tonnes each) and about 7 incoming fuel supply shipments (of up to 4 million liters each). The quantities of other supply cargos have yet to be determined but are expected to be relatively minor compared to ore and fuel.

The SL Access Project is designed to exclude winter shipping. Ore concentrate would be shipped through the Edward’s Cove Port during the summer shipping season of five months duration, between July 1st and December 1st, with the possibility of extending the shipping season in certain years, depending on sea ice conditions. Incoming ships would adhere to the same schedule.

2.5.4 Decommissioning Phase

A preliminary conceptual closure plan, to be implemented at the end of the project life (30 years), was prepared for the road and port access infrastructure. The conceptual closure plan assumes that future land use is wildlife habitat and that disturbed areas would be returned to the pre-project state so that traditional activities can continue in locally affected areas. This plan considers progressive dismantling of project infrastructure, remediating and monitoring of residual impacts on soil or water quality, and restoring wildlife habitat. The conceptual closure plan also addresses financial measures and securities for costs of closure and restoration of the Road and Port.

2.6 Environmental Discharges and Waste

2.6.1 Air

During the Construction and Operation Phases for the Road and Port facilities, emissions from vehicles, heavy machinery, equipment, blasting operations and generators would produce airborne discharges pollutants, dust and greenhouse gases. Appropriate dust control measures are planned. Best Available Control Technologies would be considered in selecting the generators. Operation of the incinerator, and wastes allowed to be incinerated, would be strictly controlled. Dust emissions may persist into the Decommissioning Phase and may be subject to monitoring.
2.6.2 Waste Water

For sanitary wastewater, holding tanks would be installed for the mobile construction camps and would be emptied periodically by vacuum truck and brought to a septic system at the Port camp. A sewage treatment plant (membrane bio-reactor system) would be installed at or near the Port.

During operations, drainage water from the Port’s ore concentrate handling area would be collected and directed into a retention or sedimentation pond to remove suspended matter and be tested before discharge into the environment (Appendix A). Ditches would divert clean rain water away from the work areas.

During the Decommissioning Phase, wastewater treatment may continue several years after closure, subject to monitoring of the quality of water being drained from the site.

2.6.3 Solid Waste

For the lower proportion of waste that would be produced at the Port (as compared to the Mine site), several treatment or disposal options would be established (at locations suggested in Appendix A).

- A landfill to accommodate non-hazardous solid waste is planned to be built near the Port in an area with suitable site conditions.
- An incinerator would be set up to take kitchen/organic waste and other non-recyclable and non-hazardous domestic wastes.
- Recoverable materials would be compacted on site and then shipped to an off-site sorting facility.
- Hazardous and other special wastes would also be prepared for shipping to an authorized treatment/disposal facility, likely outside of Labrador.
- An area near the Port will also be designated to collect contaminated soil/snow, with a bioremediation pad for soil, as well as an appropriate drainage and collection system to treat any contact water prior to discharge.

Certain waste types produced at the Mine in Quebec are planned to be transported by truck in suitable containers to the Port.

- Recoverable waste, hazardous and other special waste from the Mine will be shipped off-site to authorized facilities.
- If approved, the Port incinerator may burn part of the Mine site’s kitchen/organic waste and other non-recyclable and non-hazardous domestic wastes.

Given the Project’s remote location, it is proposed that used oil collected at the Port be burned on-site in the local power plant or in a dedicated furnace to produce heat, subject to appropriate approvals and conditions.

Waste management strategies would be modified through the project decommissioning stage. Use of onsite facilities would be gradually reduced and remaining waste would be transferred offsite for authorized treatment and disposal.

2.7 Variants for Different Phases of the Project

Project planning studies are expected to continue to optimize project components in terms of cost, schedule and environmental footprint. These may include the following possible variants for the SL Access Project:

- Preparation: A temporary winter road from the Labrador coast, or other mode of winter transportation (i.e., winter landing strip), could bring heavy materials and equipment to the Mine site, to begin staging before the start of construction.
- Construction: Modular, containerized and other pre-fabricated options for buildings and equipment would be considered.
- Alternative Energy: Wind farm development at a suitable location may serve to reduce fuel transported via the SL Access Project, in addition to reducing Quest’s overall Greenhouse Gas Emissions.
- Shipping: The third party shipping contractor may consider alternate supply scenarios involving dedicated ships for certain types of incoming cargo (such as fuel), in combination with backhauling of other supplies on empty ore concentrate ships.
- Post-closure Reclamation: The current conceptual closure concept assumes that the Road and Port would be returned to a pre-project state as wildlife habitat. However, subject to community and government consultation, alternative end land-uses may be considered, such as leaving the port site and/or part of the road network in a working state as a basis for other forms of development in the area.

2.8 Schedule for Project Development

Table 2-3 provides a list of key schedule milestones up to first ore concentrate delivery and beyond, until project decommissioning.

<table>
<thead>
<tr>
<th>Key Schedule Milestones</th>
<th>Planned Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registration for Environmental Assessment</td>
<td>September-December 2015</td>
</tr>
<tr>
<td>Start Feasibility Study (FS)</td>
<td>September 2015</td>
</tr>
<tr>
<td>Complete Environmental Impact Statement (EIS)</td>
<td>September 2016</td>
</tr>
<tr>
<td>Complete FS and commence Detailed Engineering</td>
<td>October 2016</td>
</tr>
<tr>
<td>Release from EA</td>
<td>May 2017</td>
</tr>
<tr>
<td>Reception of first Construction Permits</td>
<td>June 2017</td>
</tr>
<tr>
<td>Construction commences</td>
<td>July 2017</td>
</tr>
<tr>
<td>First delivery of ore concentrate to the Port</td>
<td>September 2019</td>
</tr>
<tr>
<td>Decommissioning and Dismantling</td>
<td>2049-2051</td>
</tr>
<tr>
<td>Post-closure Environmental Monitoring</td>
<td>2051-2061</td>
</tr>
<tr>
<td>Site Abandonment</td>
<td>2062</td>
</tr>
</tbody>
</table>
2.93 Physical Environment

3.1 Climate

The Road's plateau segment experiences a severe Arctic climate with very cold winters and short summers, with temperatures as low as -45°C in the winter. Daily average temperatures above freezing are restricted to the period between May and September. Near the Labrador/Quebec border, the Mine's average winter temperatures for 2011-2013 were generally 2°C colder than Nain, whereas summer temperatures were about 2°C warmer in summer (June-August). The Road's valley segment was presumed to have average temperatures in between these 2 data sets (Mine and Nain). The Port site's temperature data (2012-2014) was comparable to Nain where minimum, average and maximum mean annual temperatures were respectively -7.3°C, -3.1°C and 1.3°C (1970-1993).

Precipitation averages 250 to 500 mm per year near the Labrador/Quebec border and increases towards the Labrador coast to 800-1,000 mm per year, with relatively equal proportions of rain and snow.

Prevailing winds were most often from the southwest at the Mine site (2011-2014) whereas at the Port (2012-2014), prevailing wind directions were mainly from the south-southwest, possibly influenced by local topography. By comparison, over a longer period in Nain (1971-2010), prevailing winds were from the west and northwest, with the exception of summer easterlies. For 2011-2014, wind speeds at the Mine site resembled those in Nain during the fall, winter and spring— with maximum wind speeds exceeding 80 km/hour. At the Port (2012-2014), the average hourly wind was as high as 70 km/hour with gusts reaching 140 km/hour. By contrast, in Schefferville, over 200 km southwest of the Mine, the average wind speed is less than 20 km/hour and gusts less than 60 km/hour (1971-2000). The lowest average wind speeds for all cited data sets were in the summer.

3.2 Air Quality and Noise

Baseline conditions for air quality and noise were typical of those seen in remote and undeveloped areas. No air ambient sampling was undertaken in Labrador. However, at the mine site near the Labrador-Quebec border, no anomalies were noted for the following parameters tested in 2011: particulates (PM2.5, PM10, TSP), metals with selected REEs (as particulate), SO2, NO2, VOC, and asbestos. No concerns were raised near the Port, based upon 1995-1997 Environmental Studies for TSP, dustfall, SO2, and NO2 - prior to the Voisey's Bay Mine Project.

In terms of noise, the maximum hourly background sound levels (LAEq 1 hour) measured at the Mine site over 24 hours were 37.7 dBA during the day and 31.5 dBA during the night, which is less than a typical refrigerator. This is expected to be representative of the Road, especially on the plateau. Background noise in the Road's valley segment may be slightly higher due to the presence of tree/wind interaction. At the Port site, background noise may reach 75 dBA (comparable to city traffic noise) due to the greater wind/wave activity and, to a lesser degree, Vale's periodic port activities over 1 km away.

3.3 Geology, Geomorphology and Permafrost

The general bedrock geology along the Road and near the Port is Precambrian, with both metamorphic (gneisses) and igneous (granites) rock types present. Numerous remnant glacial features are present at surface. The western half of the SL Access Project is dominated by a thick glacial till, often overlain with organic peat having poor drainage, particularly in lower-lying areas between ridges. Towards the east of the Road plateau segment, the till becomes thinner, poorly drained areas are less common, and higher relief rocky outcrops are more prevalent. Glacioluvial sand and gravel deposits dominate the valley along Ikkadilik Brook, and are also important around Reid Brook and Little Reid Brook up to the Port site. The Port site also has an active sand and gravel beach.

Some surface geology features, including drainage patterns, are influenced by the presence of permafrost. The plateau region corresponds to a zone of extensive discontinuous permafrost, the Ikkadilik valley has sporadic permafrost and the coast has isolated patches of permafrost.
3.4 Hydrogeology and Soil Quality

Hydrogeology and soils were assessed at the Port only. Surficial sediment is mainly comprised of relatively permeable sand and gravel. The bedrock tested was much less permeable, though fracturing was suspected. Bedrock and overburden may contain distinct aquifers. In general, groundwater quality was consistent with natural variability and within acceptable range for drinking water. The potential for seawater infiltration was suggested in the north part of the Port site by higher electrical conductivity and chloride concentrations. Mineral soil characteristics, at less than 50 cm below ground surface, were consistent with local bedrock (mafic igneous); aluminum, iron, calcium and magnesium were the dominant metals.

3.5 Hydrology and Surface Water Quality

The Road plans to cross three main watercourses with one 29-m bridge span and two multiplate arch culverts, each spanning 16-18 m. Culverts of lesser dimensions would be installed to cross 276 smaller streams. The latter includes 111 tributaries in LIL. None of these 279 tributaries convey water to or from Quebec, the interprovincial border is defined at this latitude as the regional height of land or divide.

The Road touches overlapped watersheds in Labrador associated with the Kogaluk River, Konrad Brook, and the Ikadlivik Brook/Trout Pond/Voisey's Bay system. These three main watercourses respectively drain subwatersheds of 1462, 257 and 85 km². By comparison, more than half of the Road's 279 watercourses each draw upon drainage areas of less than 2 km². These streams are likely intermittent; they may either dry up in summer or freeze completely in winter, which could present seasonal restrictions to aquatic habitat. Upper watershed ponds and stream sections are further isolated by steep slopes and other obstacles, especially around Ikadlivik Brook.

The dominant watercourse substrate type is coarse; with erosion-sensitive materials surrounding about one third of the water crossings. Sediment quality analyzed at the three main water crossings had metal concentrations reflective of natural background conditions. Surface water quality was typical of northern oligotrophic conditions, as characterized by low nutrient availability, low electrical conductivity, high dissolved oxygen concentration, low mean turbidity and near-neutral pH. Water temperatures increased seasonally in the latter half of June and throughout July before reaching a seasonal high in early August.

3.6 Marine Physical Environment

Edward's Cove is about 70 km west of open ocean. The bay and islands between the Port and the open ocean provide a degree of shelter from wind, waves, and pack ice. The shipping passage and water depths at the proposed wharf site are considered sufficient to accommodate ships of up to 50,000 DWT.

Ice cover is generally expected between December and June but may begin in November and persist until July. In the fall, ice forms first in protected bays and channels and then extends rapidly seaward to be incorporated into the ice forming on offshore islands. Land-fast ice thickness can reach 140 cm by April. Currents are typically less than 0.1 m/s. Spring tides may range up to 2.9 m. There is insufficient fetch to produce destructive waves at the Port. The shorelines in Anaktaluk Bay are generally considered stable, due notably to regular intertidal boulder barricade lines parallel to the shore, caused by repetitive ice lift. As ice accumulates annually, there is also potential for near-shore ice pressure events. The west side of Edward's Cove is also subject to sedimentation from local long-shore drift and the presence of Little Reid Brook. In Edward's Cove and Anaktaluk Bay, relatively strong stratification of both salinity and temperature is developed during peak runoff in July and progressively dissipates through October. However, in September 2012, conductivity, temperature, and depth (CTD) profiles indicated minimal evidence of a conductivity-temperature-depth gradient and near-neutral pH. At that time, values for pH were slightly alkaline and water was clear with moderately low Total Suspended Solids. Metal concentrations and nutrients in marine water samples were generally low. Marine sediment samples did not have unusual metal concentrations.
4 Biological Environment

3.74.1 Vegetation and Wetlands

The SL Access Project lies within the Taiga Shield Ecozone as defined by the Canadian Ecological Framework. This is a transitional ecosystem from the boreal forest to the treeless arctic biome to the north. On the basis of vegetation, site and soil conditions observed in 2011-12 along the Road and potential right-of-way width for several road alignment options, a total of 71 ecological types were mapped and grouped into three categories (arctic lands, forests and wetlands), which can be briefly described as follows:

- From the Labrador-Quebec border to the planned P1 bridge crossing (PK 45), the plateau is dominated by dwarf arctic shrublands, with wetlands occupying up to 40% of land cover;
- Further east, the plateau road segment is characterized by a mosaic of dwarf and tall arctic shrublands, with fewer wetlands overall (15%);
- Sedge fens are the most common wetland type across the entire plateau;
- Forests represent less than 5% of land cover on the plateau, and are found mainly in the eastern half of the Road's plateau segment;
- In the valley (mainly from PK 104 to the east), less than 25% of land is covered by arctic land types. Coniferous forests are more prevalent, often with pockets of open lichen woodlands;
- In the floodplain of Ikaklivik Brook, land cover alternates between bare alluvial areas and tall shrub riparian swamps;
- The latter is the most common wetland type across the valley, however, wetlands occupy less than 3% of the valley's vegetation cover.

The Port site has dense spruce forests with some tundra and a moss understory. Bedrock outcrops are generally treeless with variable levels of shrub cover. The coastline has a dense cover of tall shrubs above denuded beaches.

3.84.2 Semi-Aquatic and Terrestrial Wildlife

3.8.14.2.1 Mammals

During a 2013 winter tracking survey, animal prints belonging to at least twelve (12) different mammal species or species groups were recorded: caribou, moose, fox, lemming, hare, squirrel, otter, wolf, lynx, porcupine, muskrat and small mustelids (martin, mink and/or ermine). In addition, two (2) birds were observed: ptarmigan and spruce grouse. Snowshoe hare, red squirrel and ptarmigan tracks were most abundant, especially in the Valley. In fact, track abundance in the Ikaklivik valley was three (3) times greater than on the Plateau. For this survey, coniferous forests and tall shrublands exhibited higher small mammal species diversity and abundance.

In terms of larger mammals, the presence of black bear, moose, red and arctic fox, and grey wolf was reported based on previous studies, incidental sightings or other evidence during various multi-season surveys in the area, especially in or around Ikaklivik Brook. However, the most important large mammal in the area is the caribou, which can be found mainly on the plateau during migration.

- Historically, the George River Caribou Herd (GRCH) crosses the planned Road's corridor twice annually: to northerly calving grounds in the spring and back south in the fall to their wintering range. Analysis of available telemetry data for a recent period (2000-2011) indicates that over 90% of the caribou migration expected to cross the Road is likely to occur in the plateau segment.
- The GRCH has shown continued recent decline in population, from 74,000 in 2010 to 14,200 in 2014. This was reflected in 2012 aerial visual surveys covering 4 km on each side of the Road. In late June, only one caribou was observed, on the plateau about 3 km south of PK120 (valley segment). In mid-October, a total of three caribou groups (58 individuals) were observed in Labrador on the plateau. The absence of caribou sightings near the Port was as expected based on known migration routes and habitat.
A small mammal live-trapping program in August 2012 served to compare diversity indicators between different habitat types in the valley and on the plateau (partly on LIL). Five species were captured: southern red-backed vole, meadow vole, masked shrew, deer mouse and northern bog lemming. In general, wetlands showed a higher abundance of small mammals than drylands and the valley had a significantly higher abundance than that of barren lands on the plateau.

Small animal species observed by previous studies in the vicinity of the Port included arctic shrew, deer mouse, Gapper's red-backed vole, heather vole, Labrador collared lemming, masked shrew, meadow jumping mouse, meadow vole, northern bog lemming, pygmy shrew, rock vole, and Ungava lemming.

### 3.8.24.2.2 Birds

During early summer aerial surveys over two years (2011-2012), twelve (12) waterfowl species and one loon species were observed within 500 m of the Road option centrelines. The species with the highest number of individuals observed was the red-breasted merganser, followed in abundance by the common merganser, the Canada goose, the long-tailed duck, the greater scaup, the harlequin duck, the gregg's-scaled teal and the surf scoter. During the same survey period, the following raptor species were observed as breeding pairs in a wider surveyed corridor (within 4 km from Road centerline): peregrine falcon, golden eagle, merlin, gyrfalcon, and short-eared owl. Three active peregrine falcon nests were found, each over 500 m from the Road center.

During June/July 2012, an average of 17 terrestrial bird species per location were observed, based on 44 point counts within 100 m of the Road centreline observed. Across all point counts, 23 species of perching birds (passerine) and ground feeding birds (galliforme) were observed. Coniferous forests had greater bird diversity and density compared to ecotone deciduous forests and heaths.

In the Port area, the following birds were noted from mainly incidental sightings during 2012 surveys and/or in previous 1995-96 surveys associated with the Voisey's Bay Mine project: harlequin duck, American black duck, Canada goose, common and red-breasted merganser, common goldeneye and mallard. Observed shorebirds included various species of plovers and sandpipers. Seabirds included herring gull, great black-backed gull, common tern, arctic tern, black guillemot, thick billed murre, razorbill, common eider, merganser, white-winged scoter and Atlantic puffin. The herring gull was the most common seabird observed in 1955, while the guillemot was the most abundant in 1956. Raptors and related cliff nesting have also been previously reported around 1956 near Edward's Cove, including golden eagle, peregrine falcon, gyrfalcon and osprey.

During the surveys of potential shipping routes for the Voisey's Bay project in the 1990s, large colonies of thick-billed murre, razorbills, Atlantic puffins and white-winged scoters were seen on the offshore islands. However, the closest known marine bird or shorebird colony is over 10 km away from the Port, according to information from the Canada Wildlife Service.

### 3.8.4.3 Freshwater Aquatic Habitat

Fish were present in about half of sampled water crossings along the Road. Brook trout was the most abundant species, representing more than 70% of the catch. A total of eight fish species were caught: brook trout, lakechub, longnose sucker, burbot, sculpin sp., Arctic char, Atlantic salmon and lake trout.

Benthic invertebrates (small bottom-dwelling organisms) were sampled in the sediment at the three main water crossings: two on the Plateau, one in the Valley. The highest benthic density was obtained at the first main water crossing, furthest west, which drains into the Kogaluk River. The highest taxonomic richness was observed at the second water crossing, furthest east, in Reid Brook.

The presence of instream vegetation cover was rare. In terms of streamside (riparian) vegetation, a total of 40 species were reported.
A number of seasonal and permanent obstacles to fish movement were observed. The relative importance of aquatic habitat affected by each main road segment can be summarized as follows:

- On the plateau, relatively low fish and macroinvertebrate diversity and densities were observed in many water bodies, due to typical subarctic oligotrophic conditions (low nutrients and primary productivity); and,
- Tributaries connected to Ikadlilik Brook generally had higher productivity. Its valley has greater abundance and diversity of habitat for freshwater species – including spawning habitat for arctic char and Atlantic salmon, which are also important for fishing by local Aboriginal people. Migrating (anadromous) salmonids from the sea enter the Ikadlilik-Reid Brook system through Voisey's Bay.

Near the Port, resident brook trout were observed within Little Reid Brook, which is the main freshwater stream flowing into Edward's Cove. Local Inuit have reported that Little Reid Brook is an anadromous Arctic char spawning river; Arctic char smolts have also been observed in the lower section of this stream.

### 3.10.4.4 Marine Habitat

#### Flora

The west part of Edward's Cove has a range of estuary, boulder and bedrock habitats within its intertidal and subtidal zones.

- Below a typically rocky backshore, the width of the denuded sand and cobble intertidal beach reaches nearly 200 m in some sections around Edward's Cove.
- Flora in the intertidal zone is sparse. As the exposed inter-tidal zone is normally ice-scoured every year, only a few hardy species of algae are able to colonize these habitats on an annual basis. Rock weed and knotted wrack were only observed on less exposed cobble and boulder substrates.
- In the subtidal zone, the dominant and macrofloral type was brown algae, with its distribution favored in fine substrate. The single dominant taxon was filamentous brown algae. *Fucus* species, *Punctaria* species, *Chorda filum* and *Desmarestia* species were also important taxa.

Previous studies in the 1990s also reported brown algae (*Fucus* sp.) as dominating intertidal biomass in the interior of Anaktalak Bay. Other macroflora observed included the marine lichen *Verrucaria* sp., filamentous green algae *Ullothrix* sp., filamentous brown and red algae, and kelp. Past surveys have also indicated that phytoplankton is sparse and composed mainly of diatoms, dinoflagellates, and ciliates.

#### Fauna

Benthic invertebrates make up an important part of the marine food chain, together with zooplankton. The latter is composed mainly of invertebrates, chordates and juvenile fish species, according to past local studies. Benthic invertebrate abundance was deemed to be moderate, while the taxon richness was low to moderate.

The marine benthic community at the Port site was largely composed of macroinvertebrate species common to Eastern Canada. In general, marine benthos was dominated by benthos (sediment dwelling), particularly polychaete worms, with relatively few bivalves and amphipods. Otherwise, the dominant invertebrates were green sea urchins, while sea stars and toad crabs were occasional. Blue mussels, barnacles and periwinkles inhabited sheltered pool areas among the cobble and boulder substrate of the intertidal zone. Little evidence of marine life was observed in the subtidal area except for clumps of mussels on hard surfaces, including cobble.

In 2012, fish were inventoried in west Edward's Cove and part of Anaktalak Bay. Seven species from three sampling sites were caught: shorthorn sculpin, winter flounder, Greenland cod, Arctic char, twohorn sculpin, rock gunnel, and banded gunnel. All of these fish species have previously been reported in Labrador and are known to have widespread distributions along its coast.
Most marine mammals found in the area are migratory and spend only the ice-free periods in the inshore waters of the Labrador coast. The diversity of marine mammals increases as the land-fast ice retreats northward during May and June; this diversity continues to increase steadily throughout the summer until the fall.

- In previous studies, harp seal was the most abundant marine mammal, including in bays such as Anaktalak. Ringed seal followed in abundance, especially in the spring and summer; however, the highest seasonal densities of ringed seals were further east, primarily associated with the outer islands. During 1996 spring surveying, no ringed seals and/or ice holes were observed in proximity to the Port in Edward’s Cove, nor in inner Anaktalak Bay. Harbour and bearded seals were also observed in Anaktalak Bay from the summer onwards.
- Minke whale is the most common cetacean to occur in the study area during the ice-free season; it has been observed in Anaktalak Bay during late summer and early fall (Aug.-Oct.)

### Species at Risk

#### Flora

Within the SL Access Project, no observed or previously reported vascular plants were listed under the provincial Endangered Species Act, under Canada’s Species at Risk Act (SARA), or included among the federal-level vascular plants candidate lists held by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

However, twenty-two (22) plant species observed within 200 m of the Road centreline are considered potentially rare – according to the Atlantic Canada Conservation Data Centre regional rankings based on previous reported occurrences in Labrador. All of these regionally rare plants were detected on the plateau in LISA (outside of LIL); none were found in the wooded part of Iklutivik Valley or to the east along the Road up to or within the Port site. This included three (3) plant species with a regional S1 ranking (extremely rare, possibly 5 or fewer occurrences in Labrador), and one (1) species with a regional ranking of S2 (rare, 6-20 occurrences in Labrador). None of these S1 or S2 regionally rare plants were found less than 35 m from the Road centreline. It should be noted that plant rareness in this area may be partly due to a lack of past field inventories.

No rare marine or freshwater flora species were observed or indicated for the Project area in relevant literature.

#### Fauna

Harlequin duck (eastern population), peregrine falcon (anatum and tundrius sub-species) and short-eared owl are all listed as Special Concern in Canada (SARA) and as Vulnerable in Newfoundland and Labrador (Endangered Species Act). The harlequin duck is also protected by the federal Migratory Birds Convention Act. No other observed or reported semi-aquatic or terrestrial wildlife species in the Project area had any official protection status under federal or provincial legislation.

The continued decline of the George River Caribou Herd represents nonetheless an emerging issue, especially given the value of this animal for Inuit, Innus and other Labradorians.

In terms of aquatic wildlife in the SL Access Project area, no observed or documented species had any official protection status in either freshwater or marine environments. However, isolated sightings of beluga whale and narwhal have been previously reported as out of their usual range in Anaktalak Bay; these marine mammal species, or their regional populations, have been assessed as Endangered (to be considered for official protection) by the COSEWIC. Atlantic Cod, designated as Special Concern by COSEWIC, has also been reportedly caught in Anaktalak Bay in the past but this is considered uncommon. Other COSEWIC designated species have been previously reported in the regional inner coast area, east of Anaktalak Bay; they include the following species designated as Special Concern: killer whale, harbor porpoise, and polar bear. The latter also has the same ranking under SARA.
5 Socio-economic Environment

3.125.1 General Characteristics

The closest permanent settlement to the SL Access Project is Nain, about 30 km northeast of the Port. With over 1100 persons, it is the largest of five Inuit communities designated in Labrador under LILCA and is also the administrative center of the Nunatsiavut Government.

The next closest settlement is the Labrador Innu community of Natuashish, located about 75 km southwest of the Port. It has about 900 persons, mostly Mushuau Innu, and is one of two Innu communities in Labrador. This is also the location of the closest First Nations Reserve, as defined by federal legislation.

Non Aboriginal communities likely to have an interest in the Project include Happy Valley – Goose Bay (Labrador), about 370 km to the south of the Port.

3.135.2 Land Use and Traditional Ecological Knowledge

Aboriginal groups have traditionally used territories located within or near the Project. Some groups continue to visit these lands. This is based on available documentation and interviews conducted in 2012-13 with elders and land users of the following groups: Natuashish Innu, Sheshatshiu Innu, Kawawachikamach Naskapi, Kangiqsualujuaq Inuit and Kuujjuaq Inuit. The latter three communities are in Quebec. Data were also gathered in this same period by the Nunatsiavut Government among Labrador Innu from Nain, Hopevale and Makkovik.

The proximity of SL Access Project to any permanent, seasonal or temporary residences or other forms of traditional sites is as follows:

- For the Labrador Inuit, the closest campsite is more than 500 m away from the Road, the closest cabin 2.5 km and the closest Aullavik (traditional tenure) is over 3.5 km away, according to the Nunatsiavut Government;
- Among sites used by the Labrador Innu, their closest campsite is 140 m away from the Road centrelig and and their closest cabin is more 15 km away; and
- Available data does not indicate the presence of any commercial outfitter camps or water lots – either Aboriginal or non-Aboriginal – in the vicinity of the Project.

In terms of lands and resources used for traditional purposes in the vicinity of the Road, several traditional and contemporary activities such as caribou hunting and small game hunting, char fishing, and snowmobile transportation occur.

- Both Labrador Inuit and Labrador Innu hunt on the plateau, especially for caribou. The Quebec Innu and Naskapi have also reportedly hunted some areas of the plateau near the Road in Labrador.
- Ikadlivik Valley is used by both Labrador Inuit and Labrador Innu for hunting and for more-sedentary-seasonal activities (fishing, trapping) involving camps or use of other semi-permanent sites.

Along the coast, Anaktalak Bay is occasionally used by the Labrador Innu, particularly for hunting geese. The same Bay is used frequently by the Labrador Inuit for a variety of activities, some of which are supported by local seasonal camps. Fishing is especially important at the mouths of watercourses in the summer and further upstream in the winter to catch salmon and Arctic char. Waterfowl is hunted near river mouths, in coves and around islands. Berry picking, black bear hunting/trapping, fox trapping, and small game hunting are other local activities conducted. Marine mammal hunting (mainly of seals) is also practiced in the area.
3.4-5.3 Archaeology

A Project inventory undertaken along the Road showed no archeological constraints, except at the location of a potential sand and gravel pit near the Port, where the presence of a known burial site as well as a flake concentration was confirmed and enlarged.

During visual prospection and test pits at the Port site, other known archeological sites were also reassessed, including any previously established protection areas. The protection limit of one previously documented site was adjusted accordingly.

3.4-5.4 Socio-Economic Issues

As Northerners, both Aboriginals and non-Aboriginals have similar socio-economic interests and concerns with respect to the SL Access Project. However, certain Aboriginal communities have greater socioeconomic vulnerability. The following issues are faced by several regional Aboriginal groups in both Labrador and Quebec:

- Younger populations;
- Overcrowded housing;
- Local institutions which are often in need of capacity-building, including larger facilities or more space;
- Lower education levels and employment skills;
- Higher unemployment;
- Limited training and new employment opportunities;
- Social issues including drug and alcohol abuse, child neglect, and suicide;
- Isolation and challenges in terms of accessing and delivering social and health services; and
- Higher costs of living, financial insecurity, and poverty.

Other communities, such as Happy Valley-Goose Bay, are concerned by the following issues associated with mining and large projects in general:

- Economic boom and bust cycles in the mining and/or resource sectors;
- An increasing demand for short-term temporary accommodation options;
- High inflation, particularly for housing and accommodation costs;
- Insufficient infrastructure;
- A need for updated education and training programs; and
- Promoting harmonious relationships with Aboriginal peoples.

3.4-5.5 Landscape

The landscapes potentially affected by the SL Access Project present varying levels of visual accessibility, visual interest and landscape values.

The topography of the plateau road segment is generally flat to gently rolling and the views are typically open to the horizon. The vegetation is sparse and stunted. Despite the open panoramic views, the landscape can be perceived as repetitive and monotonous.

The Ikadlivik Brook valley, including the portion within LIL, has significant topographic relief and is dominated by closed forests with bedrock outcrops and meandering watercourses. The valley is known by local people for its spectacular scenery from selected vistas. However, some parts of the valley are inaccessible or have limited views due to forests or topography.

In the Reid Brook and Little Reid Brook watersheds, between Ikadlivik Brook and Edward's Cove, vistas tend to be more open and expansive than in the Ikadlivik Valley although some views may be confined in one or more directions due to vegetation and changes in topography. Vale's open pit and associated infrastructure can be viewed from several angles at higher elevations in this area.
The Port also provides open views due to coastal exposure, rugged terrain and abrupt topography — especially when viewed from Anaktalak Bay. The Vale port is visible from most angles of Edward’s Cove. Aside from certain traditional uses summarized above, Quest’s port site is not particularly visited for its aesthetic qualities or used for recreational and tourism purposes.

Winter conditions can attenuate or accentuate certain landscape attributes. Furthermore, many local individuals are only familiar with certain landscapes in either the summer or the winter, especially in the backcountry away from the coast. This applies in particular to inland areas accessed more frequently by snowmobile.

3.175.6 Significant Areas

There are no known protected areas, nor any other areas of interest, in or immediately adjacent to the Road or the Port. However, in the vicinity of the active shipping route east of the inner coast, over 70 km from the Port, two “Important Bird Areas” have been designated by a non-governmental program supported by Bird Studies Canada, Nature Canada and BirdLife International: ‘Nain Coastline’ (1429 km²) and ‘Offshore Islands Southeast of Nain’ (532 km²). The first has a large concentration of sea ducks (i.e. surf scoter) as well as the presence of some Species at Risk such as harlequin duck or peregrine falcon. The second has significant colonies of nesting seabirds, especially Atlantic puffins, razorbills and glaucous gulls. For these reasons, both marine areas are reportedly considered of global significance, though they do not have any official government designation. The islands in this area have also been used traditionally by the Labrador Inuit for bird hunting and egg collecting.
6 Possible Environmental Impacts and Mitigation Measures

3.105.1 Environmental Effects

3.106.1.1 Valued Ecosystem Components

Environmental effects or changes due to the SL Access Project have been considered by assessing potential Valued Ecosystem Components (VECs) and analyzing their potential interaction. Noteworthy criteria for selection of possible VECs included: component value and importance recognized by laws, regulations, or policies; sensitivity or vulnerability of the component; uniqueness or rarity of the component; viability (durability) of the component or ecosystem; component value and importance given by stakeholders; risk for health, safety or well-being of the population; and ecosystem considerations for northern environments located beyond the treeline and characterized by discontinuous permafrost.

The following VECs were tentatively considered:

- Atmospheric Environment (air quality, noise, climate change, permafrost);
- Water and Soil Resources (quality of surface and groundwater, sediment and soil quality);
- Vegetation and Wetlands (biodiversity of plants and wetlands);
- Freshwater Fish and Fish Habitat (quality of habitat, abundance and range of fish species);
- Birds, Small Game and Furbearers (quality of habitat, abundance and range of wildlife species);
- Caribou (George River Caribou Herd);
- Species at Risk or of Conservation Concern (flora and fauna);
- Marine Environment (quality of habitat, abundance and range of fish species);
- Health and Well-being (of people and communities);
- Employment and Economy (training, local/regional economy, business development);
- Land Use and Resources (for both Aboriginal and larger public, as well as any significant areas); and
- Cultural Heritage (historical, archeological and cultural resources and sites);

A selection of these potential VECs were adapted and analyzed for their potential effects at each major Project Phase (Table 6-1), which included pre-construction preparation (surveying, staging and site preparation) and post-operations closure (where progressive closure is not possible). This initial analysis did not consider mitigation measures summarized in Section 6.2, which would aim to reduce potential effects of the Project.

Some specific potential Project environmental effects are further outlined in the following sub-sections because of their particular importance for government EIA authorities.

3.108.2.2 Aboriginal Peoples

Upon considering the socio-economic context described in Section 5, the SL Access Project may have both positive and negative effects on Aboriginal employment and economy, health and well-being as well as community infrastructures and services.

Various phases of the Project could also affect contemporary land and resource use activities, such as caribou and small game hunting, fishing and snowmobile transportation – according to information gathered through meetings with Aboriginal leaders, interviews with selected community representatives, and consultation of available documentation. Other Aboriginal concerns with regards to potential Project impacts and related concerns are outlined in Section 7.2.2.
Table 6-1 Possible Effects of SL Access Project on Selected Valued Ecosystem Components (VEC)

<table>
<thead>
<tr>
<th>Potential VEC</th>
<th>Preparation Phase</th>
<th>Possible Effects (pre-mitigation) per Project Phase</th>
<th>Operations Phase</th>
<th>Decommissioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Activities</td>
<td>Surveying/line clearing; Temporary camp set-up; equipment/materials transportation and staging; mobile fuel storage; initial site preparation of Port site</td>
<td>Vegetation removal and earthmoving to construct Road; construct Port onshore facilities (tanks, handling and storage); transportation of construction materials and supplies</td>
<td>Transportation and handling of ore, fuel and other supplies, maintain Road and Port infrastructures</td>
<td>Closure and restoration activities, with offsite transportation of waste and materials</td>
</tr>
<tr>
<td><strong>Biophysical Environment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atmospheric Environment</td>
<td>Limited air emissions</td>
<td>Air emission sources (greenhouse gases, pollutants, ambient light, noise, dust)</td>
<td>Air emission sources (greenhouse gases, pollutants, ambient light, noise, dust)</td>
<td>Return to pre-project conditions with reduced net habitat loss</td>
</tr>
<tr>
<td>Freshwater Environment</td>
<td>Limited freshwater effects</td>
<td>Inwater works affecting fish habitat, possible erosion, alteration in water and sediment quality, risk of accidental spills</td>
<td>Risk of additional erosion and accidental spills</td>
<td></td>
</tr>
<tr>
<td>Marine Environment</td>
<td>Shore disturbance, risk of accidental spills</td>
<td>Shore disturbance/erosion risk, underwater noise, risk of accidental spills and invasive species</td>
<td>Marine toxicity effects, risk of accidental spills and invasive species, ballast water discharge</td>
<td></td>
</tr>
<tr>
<td>Birds</td>
<td>Some disturbance due to noise and vegetation removal, especially at Port</td>
<td>Habitat loss due to noise, lighting and vegetation removal</td>
<td>Reduced habitat quality due to noise and lighting</td>
<td></td>
</tr>
<tr>
<td>Caribou</td>
<td>Limited caribou effects due to pre-construction mainly near the Port</td>
<td>Habitats loss and alteration of migratory movements due to clearing/grading for Road and noise</td>
<td>Alteration of migratory movements due to noise and traffic</td>
<td></td>
</tr>
<tr>
<td>Species at Risk</td>
<td>Limited effects on species at risk</td>
<td>Disruption of Harlequin duck at certain breeding sites; possible habitat loss for raptor and owl species</td>
<td>Limited additional effects on species at risk after construction is completed</td>
<td></td>
</tr>
<tr>
<td><strong>Human Environment</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Health and Well-Being</td>
<td>Increased collective wealth as project commences</td>
<td>Increased collective wealth; potential worker health risks</td>
<td>Continued increase in collective wealth; potential health risks for workers and site visitors</td>
<td>Return to pre-project; possible transition challenges for regional workforce</td>
</tr>
<tr>
<td>Socio-economics</td>
<td>Increased employment, pressure on community services and infrastructures, business and training opportunities</td>
<td>Increased revenue, labour shortages, new family dynamics (fly-in fly-out), lifestyle changes, exacerbation of social problems; increased pressure on community services and infrastructures, economic growth, business and training opportunities</td>
<td>Increased revenue, economic growth, lifestyle changes, exacerbation of social problems, business and training opportunities</td>
<td></td>
</tr>
<tr>
<td>Cultural Heritage</td>
<td>Possible risk to traditional sites and cultural resources</td>
<td>Risk to traditional sites and cultural resources; concerns over the integrity of traditional Aboriginal lifestyle</td>
<td>Concerns over the integrity of Aboriginal languages and traditional lifestyle</td>
<td></td>
</tr>
<tr>
<td>Land Use</td>
<td>Potential interaction with land access patterns</td>
<td>Changes in current land and resource use, potential land access conflicts, changes to visual landscape aesthetics</td>
<td>Changes in land and resource use, potential for continued land access conflicts</td>
<td></td>
</tr>
</tbody>
</table>

*Note: The table content is formatted using Markdown for better readability.*
3.18.3.6.1.3 Aquatic Habitat

3.18.3.6.1.3.1 Freshwater

At least half of the watercourses planned to be crossed by the Road are considered permanent and are expected to contain fish habitat. Constructions could result in temporary or permanent impacts to fish habitat, as well as possible indirect effects due to changes in water quality – especially during installation of culverts and larger water-crossing structures. Effects are considered less important from operational truck transportation of ore concentrates and supplies, which have the potential to generate road dust and accidental spill risks affecting water bodies. Limited wastewater discharges (mainly treated sanitary water) are also expected from temporary and permanent camps for the Project.

A portion of affected watercourses contain spawning and rearing grounds. These habitats are particularly important for salmonids (Arctic char, Atlantic salmon, brook trout, lake trout) due to their Aboriginal, recreational and commercial value. These special reproductive habitats will be avoided and/or protected as much as possible.

3.18.3.6.1.3.2 Marine

The proposed use of floating dock facilities for both Construction and Operations Phases will help limit effects on marine habitat (flora and fauna) in the immediate vicinity of the Port site in Edward’s Cove. However, some temporary or permanent encroachment of the near-shore environment may be required to install supporting infrastructure for material transfer between ships and the shore. Some construction and related underwater noise could temporarily affect marine mammals, especially seals. Additionally, construction and operation of the dry port area could generate dustfall and wastewater discharge (mainly stormwater) affecting Edward’s Cove.

In terms of shipping during construction and operations, the SL Access Project would augment existing vessel traffic along current shipping lanes between Anaktalak Bay and the Labrador Sea. This could increase the risk of accidental spills and invasive species.

3.18.4.6.1.4 Migratory Birds

The different developmental phases of the Road and Port will likely cause localized habitat loss and may disrupt migratory birds – including seabirds in the vicinity of the Port. However, limited residual effects from permanent habitat loss are anticipated, given the abundance of similar habitats in the surrounding area. Species more sensitive to habitat disturbance are expected to move away or avoid the immediately affected areas. As for temporary impacts, construction can be scheduled to avoid critical reproduction periods, especially near potential breeding locations of species at risk. In particular, Harlequin Duck has been previously observed during breeding surveys near one of the Road’s main water crossings (over Reid Brook).

3.18.4.6.1.5 Naturally Occurring Radioactive Materials

Quest’s B-Zone mineral deposit in Quebec contains natural uranium and thorium. For this reason, the ore containing the rare earth element mineralization is slightly radioactive. The natural presence of radioactive elements in such a mining deposit is known as Naturally Occurring Radioactive Materials or NORM. The activity concentrations of B-Zone NORM, even after planned mine site treatment (flotation), will be low enough to be exempt from the 2015 Packaging and Transport of Nuclear Substances Regulations for transportation across Labrador. Consequently, the project is not expected to require approvals from the Canadian Nuclear Safety Commission (CNSC).

3.18.4.6.1.6 Transboundary Effects

No notable interprovincial effects are expected from the SL Access Project. Dust from the westernmost part of the road is expected to be limited in space; prevailing winds are also predominantly from the south-west direction (based on 2011-2014 weather data from the B-Zone mine site). Also, no runoff water from the Project in Labrador will reach Quebec; the interprovincial border in this area is defined as the regional watershed divide.
3.18.76.1.7 Cumulative Effects

Ongoing activities in the exploration, mining, energy, forestry, outfitting and other land use sectors could interact with the SL Access Project. The combined effects of the Road/Port and activities of other projects in the area will be assessed, especially for each Valued Ecosystem Component (VEC). In particular:

- At a local level, both government and aboriginal stakeholders have raised the question of the SL Access Project adding to any ongoing effects associated with the Voisey’s Bay mine project – especially with regards to fish habitat and aboriginal land/sea access;
- On a regional level, the SL Access Project could also cause cumulative socioeconomic effects on the availability of labour, suppliers and temporary accommodations from larger centers such as Happy Valley-Goose Bay, which already provide these resources to several other large projects in Southern Labrador.

3.196.2 Mitigation Measures

In order to reduce the environmental effects of the SL Access Project, a detailed Environmental Protection and Monitoring Plan (EPMPL) will be developed and implemented for all project phases, in accordance with applicable regulations and standards and any other conditions tied to project-specific environmental approvals. The EPMPL would also consider relevant guidance documents such as the Canadian Guidelines for the Management of Naturally Occurring Radioactive Materials. The EPMPL would specifically include the following:

- General mitigation measures will be formulated for the entire project to ensure appropriate erosion and sedimentation control, systematic watercourse protection, coherent management of hazardous materials and waste (solid and liquid), protection of archeology sites, as well as timely emergency and spill response.
- Task-specific precautions will be developed for drilling/blasting, equipment operations, transportation of NORM and other activities which could present a higher environmental risk.
- Site-specific and/or seasonally-specific mitigation measures will be developed on a case-by-case basis for:
  - Selected VEC’s in aquatic, semi-aquatic and terrestrial environments – particularly with regards to monitoring caribou migration, and reducing Project activities accordingly;
  - Avoiding reproduction periods at breeding sites of species at risk such as harlequin duck;
  - Maximizing limiting interaction with traditional seasonal activities such as seal hunting;
  - Protecting arctic char reproduction/overwintering areas;
- Any specific concerns raised in terms of aboriginal land use patterns and sites, especially to minimize any infringement on traditional land and sea access across northern Labrador. This could include provisions to allow for crossing the Road in a safe manner by foot, by snowmobile or by ATV, at designated locations.

Proactive socio-economic programs will be also developed to integrate a workforce expected to come from different communities and to promote overall worker health and well-being.

Both environmental and social indicators will also be identified for ongoing monitoring to help ensure that mitigation measures are effective and that any residual impacts (post-mitigation) are limited.
7 Consultation

3.207.1 Initial Consultation Process

Quest has prioritized ongoing consulting with northern Aboriginal representatives and initiated discussions as early as 2008. Beginning in 2013, a more formal series of meetings took place to provide key Aboriginal groups, and their related governing bodies, with similar levels of information and a comparable opportunity to ask questions and comment on the SL Access Project and Related Projects. Table 7-1 outlines Aboriginal Institutions consulted.

Table 7-1 Aboriginal Representatives and Institutions Consulted and/or Interviewed

<table>
<thead>
<tr>
<th>Group/Type of Consultation Activities</th>
<th>Data</th>
<th>Representatives, Governing Bodies and/or Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labrador Inuit (Nunatsiavut) – Socio-economic and traditional land use baseline studies, information meetings and community engagement process</td>
<td>2011 - ongoing</td>
<td>A selection of Nunatsiavut Government Leaders and Ministers; Nunatsiavut Secretariat; Nunatsiavut Department of Land and Natural Resources; Nunatsiavut Department of Education and Economic Development; Nunatsiavut Department of Health and Social Development; Nunatsiavut Department of Culture and Tourism; Department of Nunatsiavut Affairs; Inuit Community Government of Nain; Elders and community members in Nain (via community meeting); Nunatsiavut Group of Companies (NGC).</td>
</tr>
<tr>
<td>Labrador Innu Nation – Socio-economic and traditional land use baseline studies, information meetings and community engagement process</td>
<td>2012 - ongoing</td>
<td>Labrador Innu Nation Leaders; Innu Development Limited Partnership (IDLP); Mushuau Innu Band Council of Natuashish and the Innu Band Council of Sheshatshiu; Environment Office of the Innu Nation; Economic development advisors of the Mushuau Innu First Nation and the Sheshatshiu Innu First Nation; Social Health Department of the Sheshatshiu Innu First Nation; Community in Natuashish and Sheshatshiu (via community meeting).</td>
</tr>
</tbody>
</table>

Two Quebec-based Aboriginal groups – the Quebec Inuit (Nunavik) and the Naskapi Nation of Kawawachikamach – were consulted in 2012 with regards to their traditional and contemporary land use in Northern Labrador in the vicinity of the SL Access Project. The proposed Road and Port were also presented in 2012 to the Quebec Innu leadership in Mali-Nuuksh-Lac John, including the local Band Council.

Quest has also been presenting SL Access Project since 2011 to a number of government stakeholders responsible for Newfoundland and Labrador, as well as potential regional business interests, as shown in Table 7-2.

In addition, phone interviews were conducted with selected non-Aboriginal institutions to gather complementary baseline information and consult on training and education programs, local services and regional economic development priorities. However, formal information meetings have not yet been organized to date with regional non-Aboriginal stakeholders concerned by the Project.
Table 7-2  Government and Non-governmental Stakeholders Consulted on the SL Access Project

<table>
<thead>
<tr>
<th>Group/Type of Consultation Activities</th>
<th>Date</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government of Canada - Initial project presentation, follow-up meetings and communications</td>
<td>2011-ongoing</td>
<td>- Canadian Environmental Assessment Agency (CEAA) representatives;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Major Projects Management Office (MPMO);</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Natural Resources Canada (NRCAN);</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Canada Nuclear Safety Commission (CNSC).</td>
</tr>
<tr>
<td>Government of Newfoundland and Labrador - Initial project presentation, follow-up meetings and communications</td>
<td>2011-ongoing</td>
<td>- NL Department of Environment and Conservation (Environmental Assessment and Wildlife Divisions);</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- NL Department of Natural Resources (Mines Branch, Mineral Development Division);</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- NL Labrador and Aboriginal Affairs Office.</td>
</tr>
<tr>
<td>Non-Governmental Organizations (NGOs) - Presentations and other meetings related to project development in Labrador</td>
<td>2013-ongoing</td>
<td>- Regional businesses assembled at conferences in Happy Valley-Goose Bay and St. John's;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Specific trade organizations such as the Labrador North Chamber of Commerce, as well as NGOs at selected environmental forums;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Potential investors, commercial partners and other stakeholders.</td>
</tr>
</tbody>
</table>

3.247.2 Issues and Concerns Raised

3.247.2.1 Aboriginal Communities and Governing Bodies

The main questions and issues raised to date regarding the SL Access Project, by both the Labrador and Quebec-based Aboriginal groups cited above, included:

Environmental Issues

- Caribou migration, habitat protection and potential for habitat fragmentation;
- Any impacts on arctic char;
- Protection of watersheds and particularly the Ikadiivik Brook and marine ecosystems; and
- Importance of harmonizing federal, provincial and Nunatsiavut government EIAs processes.

Traditional Land Use and Resource Use

- Concerns over traditional livelihood and access to land through traditional routes;
- Impacts of the Project on wildlife patterns, as well as traditional hunting and fishing patterns;
- Impact on other traditional land-based activities and reliance on country foods; and
- Cumulative impacts on natural habitats relative to other activities in Northern Labrador.

Employment and Training Opportunities

- Expected employment, training and business opportunities; and
- Potential for partnerships with Aboriginal institutions to favor local employment and business capacity (outreach to business, capacity-building, and various public forums).

Community Engagement

- Importance of building a relationship based on trust through good communication; and
- Importance of keeping the communities and Aboriginal leadership updated, especially on the Project’s timeline.
Social Issues

- Importance of improving quality of life (including housing, energy and food security);
- Potential impact on existing social issues such as alcohol and drug abuse, child neglect and housing availability; and
- Distribution of economic benefits between Aboriginal groups and communities.

Negotiation and Implementation of Impacts Benefits Agreements (IBAs)

- Interest in IBAs with Quest, taking into account past and present land-use and traditional resources; and
- Role of IBAs as main drivers of regional economic growth, particularly to favor local benefits such as employment, business opportunities and training programs.

3.24-27.2.2 Other Governmental and Non-Governmental Organizations

A number of government representatives – including federal and provincial representatives – have expressed considerable interest in the positive socioeconomic benefits, the potential for benefiting several nearby communities and other spin-offs related to developing road and port access infrastructure in Northern Labrador.

Governments also seek to better understand the potential environmental impacts of the SL Access Project, especially in relation to Aboriginal perspectives and concerns, as well as those pertaining to the George River Caribou Herd and fish habitat in general.

Informal consultation of non-government organizations has provided an indication of regional interest and capacity to support the Quest project, especially in terms of local suppliers and the regional workforce. This process has also provided a better understanding of issues that may be raised by non-government organizations in relation to potential environmental and social effects of the SL Access Project.

3.227.3 Engagement and Communications Plan

An Engagement and Communications Plan (ECP) is being developed for involving, consulting and informing governments, Aboriginal groups and non-Aboriginal stakeholders. The intent is to continue to ensure that key stakeholders are well informed through the various SL Access Project development phases and have ongoing opportunities to engage in discussions so that their concerns and interests are addressed.

The ECP prioritizes Aboriginal involvement. However, it also increases direct interactions with the local non-Aboriginal population in order to assess overall social acceptability of the SL Access Project and keep informed all affected communities.

Consultation activities will address the following broad categories, with emphasis on Aboriginal groups and institutions identified in Table 7.1:

- Project update presentations and follow-ups as key information becomes available;
- Presentations of environmental and social baseline studies;
- Discussions and forums on traditional and contemporary land use;
- Identification and analysis of issues, concerns and questions regarding potential impacts and related mitigation measures; and
- Presentation of the proponent’s Environmental Impact Statement report.
8 Employment

The SL Access Project would result in positive economic effects for Northern Labrador. Employment opportunities would be available during both Construction and Operations Phases of the Project. Aside from management positions, most of this work would be contracted to third parties.

Quest is committed to employment and gender equity in both its hiring and contracting practices, and intends to prioritize Aboriginal and regional workforces and suppliers to the extent possible. Local worker development would also be supported by appropriate training and other programs.

Table 8-1 provides an indication of worker requirements by occupational group during the Construction Phase, which total an estimated 73 jobs for the Port (over 11 months) and 208 for the Road (over 21 months).

When operational, the SL Access Project is expected to require 118 full time employees and contractors in relation to the Road and Port for the life of the project (Table 8-2).

Table 8-1  Construction Phase Employment Estimate – SL Access Project

<table>
<thead>
<tr>
<th>Occupational Group</th>
<th>Number of Road Workers (over 21 months)</th>
<th>Number of Port Workers (11 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>Engineering</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Construction control</td>
<td>13</td>
<td>7</td>
</tr>
<tr>
<td>Camp services</td>
<td>28</td>
<td>11</td>
</tr>
<tr>
<td>Earthworks operators</td>
<td>98</td>
<td>14</td>
</tr>
<tr>
<td>Auxiliary equipment operators</td>
<td>26</td>
<td>15</td>
</tr>
<tr>
<td>Trades</td>
<td>28</td>
<td>21</td>
</tr>
<tr>
<td>Totals</td>
<td>208</td>
<td>73</td>
</tr>
</tbody>
</table>

Table 8-2  Operations Phase Employment Estimate – SL Access Project

<table>
<thead>
<tr>
<th>Occupational Group</th>
<th>Number of Road Workers (annual basis)</th>
<th>Number of Port Workers (annual basis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>Building maintenance</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Stoweding</td>
<td>-</td>
<td>16</td>
</tr>
<tr>
<td>Accommodation services</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td>Truck transport</td>
<td>42</td>
<td>-</td>
</tr>
<tr>
<td>Road maintenance</td>
<td>23</td>
<td>-</td>
</tr>
<tr>
<td>Totals</td>
<td>70</td>
<td>48</td>
</tr>
</tbody>
</table>
9 Federal Involvement

The SL Access Project does not receive, nor is it expected to receive, any financial support from a federal authority.

No federal land will be used for the purpose of carrying out the SL Access Project. No federal land is located in proximity to the Project's components and hence no effect is expected on federal lands.

Refer to Table 9-1 for a list of permits, licences or other authorizations that may be required under any Act of Parliament to carry out the project. This list is considered as preliminary and may vary as the project evolves.

Third parties (i.e. subcontractors and other suppliers) may be responsible for certain activities such as transporting and storing of explosives. Marine shipping will be managed in particular by another company who will be responsible for obtaining its own applicable government approvals.

Table 9-1 List of Potential Federal Permits, Licenses, and Authorizations Applicable to the Project

<table>
<thead>
<tr>
<th>Permit/Authorization</th>
<th>Law / Regulation</th>
<th>Section</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decision Statement</td>
<td>Canadian Environmental Assessment Act, 2012</td>
<td>54</td>
<td>Approval of applicable components of the project, such as a new Port in Labrador</td>
</tr>
<tr>
<td>Radio Station Licence</td>
<td>Radio Communications Act</td>
<td>5</td>
<td>Install and operate a radio station</td>
</tr>
<tr>
<td>Permit for construction of structures in or near water bodies</td>
<td>Navigation Protection Act</td>
<td>5</td>
<td>Wharf construction, and effect on any other waters identified as navigable</td>
</tr>
<tr>
<td>Permit for approval of harmful alteration, disruption or destruction of fish or fish habitat</td>
<td>Fisheries Act</td>
<td>35(2)</td>
<td>Stormwater outfall and discharge, wastewater outfall, wharf construction, stream crossings</td>
</tr>
<tr>
<td>Authorization, in the event of potential Serious Harm to Fish</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permit to transport explosives</td>
<td>Explosives Act</td>
<td>7</td>
<td>Transportation of explosives</td>
</tr>
<tr>
<td>Emergency Response Assistance Plan (ERAP) Approval</td>
<td>Transportation of Dangerous Goods Act</td>
<td>7 &amp; 31</td>
<td>ERAP and permit demonstrating equivalent level of safety</td>
</tr>
<tr>
<td>License for explosives magazines</td>
<td>Explosives Act</td>
<td>7</td>
<td>For use of explosives; especially during the Construction Phase.</td>
</tr>
</tbody>
</table>

Potential project approvals requirements with other governments (Newfoundland & Labrador; Nunatsiavut) are provided in the detailed project registration document.
10 Project Costs and Funding

10.1 Capital Cost

On the basis of the concept depicted in Appendix A, the estimated capital cost of the SL Access Project in Labrador is Can $398 million in 2013 dollars, including direct costs, indirect costs, and contingency. This represents $313 million for the Road and $85 million for the Port.

Of these totals, approximately $48 million would be required for the Road in LIL. The Road in the remaining LISA would require $238 million. About $112 million would be invested in the VBA for part of the Road and the Port.

These estimates, and the proportions allocated for the Road and the Port situated in the different land categories (LISA, LIL, or VBA), are subject to change as the project design is refined.

10.2 Operating Cost

Annual operating costs over the 30-year life of the SL Access Project are estimated at $8.5 million for the Port and $14 million for the Road, including about $3 million applied annually to maintain the portion of the Road in LIL.

10.3 Government Revenues

Quest is a company resident in the Province of Quebec. Therefore, when profitable, Quest will be required to pay corporate income taxes to the Governments of Quebec and of Canada.

However, the SL Access Project is expected to indirectly or directly generate sources of revenue for the Nunatsiavut Government and the Government of Newfoundland and Labrador, including:

- Personal income taxes for workers residing in Newfoundland and Labrador and particularly for those residing in Inuit communities (where 95% of federal income taxes are transferred to Nunatsiavut);
- Sales (GST/HST) and other taxes due to increased local expenditures from both resident and visiting workers (where part of the federal GST collected in Inuit Communities is transferred to Nunatsiavut);
- Fees for land leases, easements or other forms of land tenure required for construction and operation of the Road, the Port and any associated right-of-way in LIL or on provincial Crown Land; and
- Other provisions to be considered in an Impacts and Benefits Agreement with the Nunatsiavut Government or in an Economic Benefits Agreement with the Government of Newfoundland and Labrador.

10.4 Funding

The SL Access Project does not currently depend upon a grant or loan of capital funds from any government agency. Quest has a variety of options for financing all aspects of the SL Access Project including environmental assessment/review costs, the implementation of an Environmental Protection/Monitoring Plan and the payment of closure and restoration costs. In addition to strategic investors and public market shares for the current project phase, the completion of the subsequent bankable feasibility study will allow a portion of the project's development financing to be obtained through banks and other financial institutions.
References on Applicable EA Processes


Appendix A

Project Map
Appendix B
Map of Communities near the Project
Appendix C
Map of Aboriginal Agreements in Labrador
Binder 12
From: Christen Audet <christen.audet@questrareminerals.com>
Sent: Monday, February 08, 2016 12:38 PM
To: Stone, Ivy
Cc: Appleby, Christopher
Subject: RE: EIA Harmonization Quest Labrador - follow-up

Categories: Quest / Strange Lake

Hi Ivy – I can be available at your convenience on Thurs.
Pls just let me know when and where to call – or whether it would be easier for you that I set up a conference call line for both of you to join in.
Cheers,
Christen

---

De : Stone, Ivy [mailto:IvyStone@gov.nl.ca]
Envoyé : 8 février 2016 10:21
À : Christen Audet
Cc : Appleby, Christopher
Objet : RE: EIA Harmonization Quest Labrador - follow-up

Hi Christen,
Maybe on Thursday we could have a quick chat? Thanks for all the info!

Ivy

---

From: Christen Audet [mailto:christen.audet@questrareminerals.com]
Sent: Friday, February 05, 2016 3:17 PM
To: Stone, Ivy
Subject: RE: EIA Harmonization Quest Labrador - follow-up

Hi Ivy – Just following up on my previous email below. Would there be a good time next week to update each other?
Have a great weekend,
Christen

---

De : Christen Audet
Envoyé : 28 janvier 2016 16:34
À : IvyStone@gov.nl.ca
Objet : TR: EIA Harmonization Quest Labrador - follow-up

Bonjour Ivy,

Further to our call on Jan. 14, 2015, please find attached:
1. Resend of list of baseline reports that we have shared with NG to date – which previously accompanied the note below;
2. Version (rev. D) of our summary Project description that was translated to French. Translation to Inuitut is also almost completed, on the basis of this same version. Just need to revise some minor details (i.e. Dirk Naumann was promoted from VP to President of Quest in Dec. 2015). Tracked changes for attached file indicate modifications that we made to previous versions, after consulting with NG. This summary is based on a long
English-only version that is 99% complete but which we currently do not intend to issue until requirements are clarified for EIA harmonization.

3. Revised figure to show only legal interprovincial boundary, after our discussions last fall. This is to replace figure 2-1 that currently appears in Rev. D.

Once you get a chance to look at these documents, maybe we can schedule a follow-up phone call at your convenience, as suggested at our last call.

I have a call with Mike Atkinson (CEAA) tomorrow morning to get an update on federal perspective for EIA harmonization discussions. Dirk also met with NG leadership in Ottawa yesterday, when it was suggested by NG that they were waiting on other government(s) to advance harmonization. Though Quest is not party to these discussions, please don't hesitate should you have any suggestions as to how we may contribute to help things along.

Meilleures salutations,

Christen

---

De: Christen Audet  
Envoyé: 20 novembre 2015 11:52  
À: Ivystone@gov.nl.ca  
Cc: Appleby, Christopher (applebc@gov.nl.ca)  
Objet: EIA Harmonization Quest Labrador - follow-up

Hi Ivy,

Hope your windy fall weather isn’t driving you sideways!

Just wondering how your discussions are progressing re: harmonization with NG and CEAA. Would it be possible to schedule a call next week to share updates? Although short notice, it would be helpful for me if we could arrange a brief call before our next management meeting on Wed. Nov. 25. If not, I would like to at least fix a date for a call to inform the Quest management team.

From our end, we look forward to informing you of our meetings and information sessions last week in Labrador. Please also find attached a list of documents that we provided to the Nunatsiavut Government last week, which we can provide also to you at your convenience—either now or later when we have additional documentation available.

Kind Regards,

Christen Audet, F.Eng., Ph.D  
Vice-President – Project Development and Environment  
Quest Rare Minerals Ltd.  
1155 Robert Bourassa Street, Suite 906, Montreal, Quebec, H3B 3A7  
Tel: (514) 258-9002  
www.questrareminerals.com

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information is strictly prohibited. If you received this email in error, please delete it immediately and notify the sender.”
Good afternoon,

I received some additional comments from LAAO on Feb 3 and I have tried to address these in the attached revised note. It would be great to advance this DN as soon as possible. Please review and advise whether you recommend more changes or would like to meet to discuss. Thanks.

Ivy

From: Cleary, Bas
Sent: Monday, February 08, 2016 11:33 AM
To: Stone, Ivy
Subject: RE: Proposed Strange Lake Project

Any word from the others on this note?

From: Stone, Ivy
Sent: Monday, February 01, 2016 2:45 PM
To: Cleary, Bas; Mellor, Justin S. C.; Harvey, Brian
Cc: Clarke, Greg; Appleby, Christopher
Subject: RE: Proposed Strange Lake Project

Please disregard two previous versions sent today. Following a meeting with LAAO and IGA today, I have made changes to the draft decision note. Please see attached.

Please review the comments and changes in track changes and advise if we are close. I tried to address all of the LAAO comments in this new version. Thanks for your help.

Ivy

From: Stone, Ivy
Sent: Monday, February 01, 2016 12:49 PM
To: Cleary, Bas; Mellor, Justin S. C.; Harvey, Brian
Cc: Clarke, Greg; Appleby, Christopher
Subject: RE: Proposed Strange Lake Project

Please print and bring along if you can. Thanks.

From: Cleary, Bas
Sent: Monday, February 01, 2016 11:46 AM
To: Stone, Ivy; Mellor, Justin S. C.; Harvey, Brian  
Cc: Clarke, Greg; Appleby, Christopher  
Subject: RE: Proposed Strange Lake Project

I can be there for a portion.

From: Stone, Ivy  
Sent: Monday, February 01, 2016 11:19 AM  
To: Mellor, Justin S. C.; Harvey, Brian; Cleary, Bas  
Cc: Clarke, Greg; Appleby, Christopher  
Subject: RE: Proposed Strange Lake Project

Ok. Those who can, please meet at 1 pm to discuss. I’ll send around a redraft this afternoon for further review. Thanks.

Ivy

From: Mellor, Justin S. C.  
Sent: Monday, February 01, 2016 11:17 AM  
To: Harvey, Brian; Stone, Ivy; Cleary, Bas  
Cc: Clarke, Greg; Appleby, Christopher  
Subject: RE: Proposed Strange Lake Project

Like Brian I’m really pressed for time as I am in court all of next week with a trial.

I would suggest proceeding without me unless there is a particular legal issue that needs addressing in which case we can try to schedule something thurs or Friday morning. I am happy to review a redraft of the Note.

JM

From: Harvey, Brian  
Sent: Monday, February 01, 2016 10:50 AM  
To: Stone, Ivy; Mellor, Justin S. C.; Cleary, Bas  
Cc: Clarke, Greg; Appleby, Christopher  
Subject: RE: Proposed Strange Lake Project

My time will be limited on the back end, and maybe the front as well, as I have two potential conflicts. But I will attend as best I can. Chris will be there for the entirety.

Brian RM. Harvey  
Director - Aboriginal Affairs  
Government of Newfoundland and Labrador  
(709) 729-1487 (w)  
(709) 693-1612 (c)

From: Stone, Ivy  
Sent: Monday, February 01, 2016 9:22 AM  
To: Harvey, Brian; Mellor, Justin S. C.; Cleary, Bas  
Cc: Clarke, Greg; Appleby, Christopher  
Subject: RE: Proposed Strange Lake Project

Hi,
Can we all get together at 1 this afternoon in the EA Boardroom? Greg can join us for a short time then. If this doesn’t work, please suggest an alternate time or day. Thanks.

Ivy

From: Harvey, Brian
Sent: Friday, January 29, 2016 10:26 AM
To: Stone, Ivy; Mellor, Justin S. C.; Cleary, Bas
Cc: Clarke, Greg; Appleby, Christopher
Subject: RE: Proposed Strange Lake Project

Monday is fine

Brian RM. Harvey
Director - Aboriginal Affairs
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

From: Stone, Ivy
Sent: Thursday, January 28, 2016 4:34 PM
To: Mellor, Justin S. C.; Cleary, Bas
Cc: Harvey, Brian; Clarke, Greg; Appleby, Christopher
Subject: RE: Proposed Strange Lake Project

Thanks Justin,
I have feedback from LAAO as well. Is there any chance we can all get together on Monday to discuss this draft? Please advise if you’re available. Thanks.

Ivy

From: Mellor, Justin S. C.
Sent: Thursday, January 28, 2016 3:24 PM
To: Stone, Ivy; Cleary, Bas
Cc: Harvey, Brian; Clarke, Greg
Subject: RE: Proposed Strange Lake Project

A few thoughts about...

1) Section 30(1)(a), Section 29(1)(a)
From: Stone, Ivy
Sent: Wednesday, January 27, 2016 11:36 AM
To: Cleary, Bas
Cc: Harvey, Brian; Mellor, Justin S. C.; Clarke, Greg
Subject: RE: Proposed Strange Lake Project

Please see attached draft decision note re the negotiation of an MOU with the Agency and the NG relative to the proposed Strange Lake Project. Please forward any comments or revisions as soon as possible. Thanks.

Ivy

From: Cleary, Bas
Sent: Wednesday, January 13, 2016 12:24 PM
To: Janes, Colleen
Cc: Goebel, Martin; Stone, Ivy; Mellor, Justin S. C.
Subject: FW: Proposed Strange Lake Project

Colleen,

Below is some background on

In light of our meeting tomorrow with Deputy Minister Maclean, I am requesting whether Justin (copied Justin) can meet with us beforehand to better

Bas

From: Stone, Ivy
Sent: Friday, October 30, 2015 4:33 PM
To: Cleary, Bas
Cc: Mellor, Justin S. C.; Carter, Ruby; Appleby, Christopher
Subject: Proposed Strange Lake Project

Bas,

Further to our chat with LAAO and Justin today, here are some highlights and issues to be pursued at a higher level.
1. All for further discussion. All, please add any commentary re content to be discussed at a senior level.

   Thanks.

   Ivy

   From: Cleary, Bas
   Sent: Tuesday, October 27, 2015 7:29 PM
   To: Mellor, Justin S. C.; Harvey, Brian; Stone, Ivy; Goebel, Martin
   Subject: Re:

   Thanks Justin.

   On the conference call last week with Martin and I, there is an intention to get final input from all parties by end of next week. I am out of the office until Fri this week - I will ask Ivy to arrange a meeting with yourself and LAAO office to discuss these comments. We can do on Friday or beforehand depending on your availability.

   Regards, Bas

   From: Mellor, Justin S. C.
   Sent: Tuesday, October 27, 2015 01:51 PM
   To: Cleary, Bas; Harvey, Brian
   Subject: FW:

   Please find attached a

   JM
From: Battcock, Paula
Sent: Tuesday, October 27, 2015 3:03 PM
To: Mellor, Justin S. C.
Subject:

Paula Battcock
Legal Secretary
Office of the Attorney General
Department of Justice & Public Safety
Government of Newfoundland and Labrador
4th Floor, East Block
Confederation Building
P.O. Box 8700
St. John's, NL A1B 4J6
Facsimile: 729-2129
Telephone: 729-2889
Good day gents,

We are trying to finalize the Strange Lake note (attached) and need your input. Your prompt attention to this request would be greatly appreciated.

Regards Bas
A few thoughts can be found in the comment boxes.  

JM

Section 30(1)(a), Section 29(1)(a), Section 34(1)(a)(i)

From: Clarke, Greg  
Sent: Monday, February 15, 2016 11:20 AM  
To: Cleary, Bas; Mellor, Justin S. C.; Harvey, Brian  
Cc: Appleby, Christopher  
Subject: RE: Proposed Strange Lake Project

Hi all, I've made a few edits to the attached, including re-ordering some bullets for clarity's sake, tidying up the acronyms a little, and reducing a little duplication. The only point...  

I note there were some comment boxes with questions and requests for information that seemed to still need be addressed in the note.  

Greg

Section 29(1)(a)

From: Cleary, Bas  
Sent: Monday, February 15, 2016 10:18 AM  
To: Mellor, Justin S. C.; Harvey, Brian  
Cc: Appleby, Christopher; Clarke, Brian  
Subject: FW: Proposed Strange Lake Project

Good day gents,  

We are trying to finalize the Strange Lake note (attached) and need your input. Your prompt attention to this request would be greatly appreciated.

Regards Bas
<table>
<thead>
<tr>
<th>From:</th>
<th>Harvey, Brian</th>
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<tbody>
<tr>
<td>Sent:</td>
<td>Monday, February 15, 2016 4:17 PM</td>
</tr>
<tr>
<td>To:</td>
<td>Cleary, Bas</td>
</tr>
<tr>
<td>Cc:</td>
<td>Mellor, Justin S. C.; Clarke, Greg; Appleby, Christopher</td>
</tr>
<tr>
<td>Subject:</td>
<td>JMDecision Note_SL_8FebLAAO_IGA (IGA Edit Feb 15).doc</td>
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<tr>
<td>Attachments:</td>
<td>JMDecision Note_SL_8FebLAAO_IGA (IGA Edit Feb 15).doc</td>
</tr>
<tr>
<td>Categories:</td>
<td>Quest / Strange Lake</td>
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</tbody>
</table>
Thanks everyone,
Please see a revised DN attached. I have attempted to address all identified concerns. Please review and advise if further changes are needed. I have also attached a spreadsheet (Annex) that shows the three existing processes. This is referenced in the DN.

Ivy

---

From: Cleary, Bas
Sent: Monday, February 15, 2016 5:05 PM
To: Stone, Ivy
Subject: Fw: JMDecision Note_SL_8FebLAAO_IGA (IGA Edit Feb 15).doc

FYI

---

From: Harvey, Brian
Sent: Monday, February 15, 2016 04:46 PM
To: Cleary, Bas
Cc: Mellor, Justin S. C.; Clarke, Greg; Appleby, Christopher
Subject: JMDecision Note_SL_8FebLAAO_IGA (IGA Edit Feb 15).doc
Melindy, Shawn D.

From: Harvey, Brian
Sent: Wednesday, April 06, 2016 10:33 AM
To: Appleby, Christopher
Subject: FW: Decision Note_SL_16Feb2016.doc
Attachments: Decision Note_SL_16Feb2016.doc
Categories: Quest / Strange Lake

Non-Responsive?

Brian RM. Harvey
Director - Aboriginal Affairs
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

From: Harvey, Brian
Sent: Wednesday, February 17, 2016 9:39 AM
To: Stone, Ivy; Mellor, Justin S. C. (jmellor@gov.nl.ca); Clarke, Greg
Subject: Decision Note_SL_16Feb2016.doc

Some modest changes in the attached, ~ all in an effort to enhance clarity.
Title: Intergovernmental MOU relative to the tripartite harmonization of Environmental Assessment (EA) processes for the proposed Strange Lake Road & Port Access Project (the Project) in Northern Labrador.

Decision/Direction Required:
- Authority is being sought to negotiate a Memorandum of Understanding (MOU) with the Canadian Environmental Assessment Agency (the Agency) and the Nunatsiavut Government (NG) relative to the EA of the proposed Project, for Cabinet review and approval.
- Approval is also being sought for the negotiating team members:

<table>
<thead>
<tr>
<th>Name</th>
<th>Department</th>
</tr>
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<tbody>
<tr>
<td>Ivy Stone</td>
<td>Environment &amp; Conservation</td>
</tr>
<tr>
<td>Brian Harvey</td>
<td>Labrador &amp; Aboriginal Affairs</td>
</tr>
<tr>
<td>Justin Mellor</td>
<td>Justice and Public Safety</td>
</tr>
<tr>
<td>Greg Clarke</td>
<td>Intergovernmental Affairs Secretariat</td>
</tr>
</tbody>
</table>

Background and Current Status:
- Quest Rare Minerals Ltd. (Quest) is proposing a mining project comprising three components:
  - the Strange Lake Rare Earth Element (REE) mining project (in Quebec), roughly 235 km northeast of Schefferville, Quebec;
  - a private road from the mine in Quebec and a port facility at Voisey’s Bay, on the Labrador coast (the project for NL);
  - A shipping and processing facility in Bécancour, southern Quebec.
- Although mining activity for this Project will occur in Quebec, there are significant deposits on the Labrador side as well. There has been no indication however that deposits on the Labrador side will be developed.
- The road component will trigger GNL, NG and Government of Canada EA processes.

- The road portion of the proposed project crosses the Labrador Inuit Settlement Area (LISA) including Inuit owned Labrador Inuit Lands (LIL). In accordance with the Labrador Inuit Land Claims Agreement (LILCA), no project in LIL can commence until an EA has been completed and all necessary permits / licenses have been issued by the authorities, including the NG. Moreover, no project can proceed in LIL unless and until the proponent reaches an Impacts and Benefits Agreement (IBA) with the NG. These provisions combine to give the NG what amounts to a veto over the project.
Section 29(1)(a) of the LILCA requires parties to take appropriate measures to avoid unnecessary overlap and duplication in the conduct of EA, where projects may be subject to more than one EA. The LILCA also requires the parties to consider any harmonization measures that have been established amongst the parties, and requires the parties to negotiate an agreement for the harmonization or coordination of the different governments’ EA processes.

- ENVC’s EA Division (EAD) had a number of working level meetings with Agency and NG representatives over the winter and spring of 2015. The objective of those meetings was to determine to what extent the three governments’ EA processes could be harmonized in order to avoid overlap, high costs and duplication for the three jurisdictions, as well as for the proponent.

- On May 8, 2015, NG Lands and Natural Resources Minister Shiware sent a letter to then-Agency Minister Aglukak requesting an in-person meeting to discuss a harmonized EA process.

- The mine EA process has begun in Quebec, and the Chair of the Kivik Environmental Quality Commission, the Quebec group overseeing the mine process, had a discussion with the EAD on August 6th, 2015 and encouraged ongoing communication, and invited the EAD to attend public meetings in Quebec relative to this project.
• The EAQ and LAAO have had a number of discussions with Quest officials during 2015. Typically Quest has provided updated information relative to their proposed project and has requested clarification on the NL EA process and requirements concerning Aboriginal consultation under the provincial process.

On September 15, 2015, a senior level meeting was held in Goose Bay to discuss tripartite harmonization. The Regional Director-Atlantic from the Agency, the NG Deputy Minister of Lands & Natural Resources and ENVC’s ADM attended. Discussions involved the preference of parties to have a formal MOU. All parties agreed that a ‘formal arrangement’ that respects the LILCA could be drafted (e.g., an MOU) and could outline all parties’ intentions to cooperate and harmonize where practical during the review process.

Subsequently, to that, the Agency circulated a draft MOU to GNL and the NG on September 30, 2015 outlining a potential harmonization agreement.

The provincial election delayed tripartite discussion on the proposed MOU and a meeting scheduled for December 16, 2015 was postponed until GNL had finalized its position on the Agency draft MOU and until formal authority to negotiate an MOU was sought.

On January 14, 2016, the NG Deputy Minister of Lands & Natural Resources and the DM of ENVC discussed the proposed intergovernmental MOU and the next steps for advancing a harmonization agreement.

All three regulators acknowledge that Quest may submit a project description very soon. As such, NL indicated that it would endeavor to carry out its review in as coordinated a fashion as possible.

Analysis:
• Section 34(1)(a)(i), Section 34(1)(a)(v)

The Canadian Environmental Assessment Act, 2012 (CEAA 2012) does not prescribe the form a harmonization agreement or arrangement with another jurisdiction should take, however, CEAA 2012 does have significant flexibility on how formal or informal agreements could be created, e.g., MOU, exchange of letters etc.
Neither the Labrador-Island Transmission Link Project EA nor the Maritime Link project EA had a formalized harmonization agreement, but the parties informally harmonized their processes to the extent possible, including Aboriginal consultation processes.

Alternatives: Section 29(1)(a), Section 30(1)(a), Section 34(1)(a)(i)
Prepared/approved by: I. Stone, in consultation with LAAO, JPS and IGAS/B. Cleary, Director

Ministerial Approval: February 16, 2016
From: Gover, Aubrey  
Sent: Thursday, March 17, 2016 9:05 AM  
To: Harvey, Brian; Carter, Ruby  
Subject: EA MOU  

Aubrey Gover  
Deputy Minister  
Labrador and Aboriginal Affairs Office  
Government of Newfoundland and Labrador  

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Brian RM. Harvey
Director - Aboriginal Affairs
Government of Newfoundland and Labrador
(709) 729-1487 (w)
(709) 693-1612 (c)

From: Stone, Ivy
Sent: Thursday, March 24, 2016 11:57 AM
To: Cleary, Bas; Harvey, Brian; Mellor, Justin S. C.; Clarke, Greg
Subject: FW: Negotiations relative to Tripartite Harmonization of EA processes for the Proposed Strange Lake Road & Port Access Project

fyi

Minister Shiwak,
Please find attached a letter from Minister Trimper concerning negotiations relative to tripartite harmonization of EA processes for the proposed Strange Lake Road & Port Access Project. Please don’t hesitate to contact me should you have any questions.

Regards,

Ivy Stone, B.A.(Hons), M.Sc.
Environmental Scientist
Environmental Assessment Division
Department of Environment and Conservation
4th Floor, West Block, Confederation Building
St. John's, NL, A1B 4J6
Phone: (709)729-0090
Fax: (709)729-5518
E-Mail: ivystone@gov.nl.ca
Hon. Darryl Shiwak  
Minister  
Department of Lands & Natural Resources  
Nunatsiavut Government  
1A Hillcrest Road  
Happy Valley-Goose Bay NL A0P 1E0

Dear Minister Shiwak:

Re: Negotiations Relative to Tripartite Harmonization of Environmental Assessment Processes for the Proposed Strange Lake Road and Port Access Project

I am pleased to inform you that approval has been granted to begin negotiations relative to harmonization measures for the environmental assessment for the proposed Strange Lake Project. I would suggest a teleconference as soon as possible that includes our negotiating team, Nunatsiavut officials and representatives from the Canadian Environmental Assessment Agency to discuss next steps. Our negotiating team includes the following provincial government staff:

1. Brian Harvey, Labrador & Aboriginal Affairs Secretariat;
2. Justin Mellor, Department of Justice & Public Safety;
3. Greg Clarke, Intergovernmental Affairs; and
4. Ivy Stone, Environmental Assessment Division.

We look forward to ongoing discussions with your team. Please don’t hesitate to contact me should you have any questions.

Sincerely,

PERRY TRIMPER, MHA  
District of Lake Melville  
Minister

cc: Mr. Carl McLean, Deputy Minister, Lands & Natural Resources, Nunatsiavut Government  
Mr. Sylvain Ouellet, Canadian Environmental Assessment Agency