
February 16, 2012

Project No. 1113720019

Thomas Kabloona, Chair
Nunavut Water Board
P.O. Box 119
Gjoa Haven, NU X0B 1J0

RE: VALE EXPLORATION CANADA INC. – 2BE-SIP1114, AMENDMENT APPLICATION

Dear Mr. Kabloona,

Vale Exploration Canada Inc. (Vale) is pleased to submit this water licence amendment application for the Southampton Island Project (2BE-SIP1114).

Please find enclosed:

- completed amendment application form and remote camp questionnaire;
- Appendix A – Non-technical Project Summaries;
- Appendix B – Site Maps;
- Appendix C – Updated Plans Associated with the Application;
- Appendix D –Conformity Letter from NPC (from the original application); and
- Appendix E -Screening Decision Letter from NIRB (from the original application).

As per the advice of your staff only the application fee is being submitted and the remaining fees will be paid once prorated calculations totals are determined:

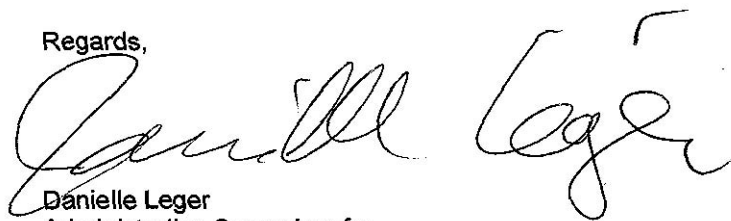
- **Type B Water Licence application = \$30;**

Please provide a receipt to Golder Associates for the application fee.

If you have any questions regarding the enclosed application, please contact me at 905-403-2548 or by email at Jason.Rickard@vale.com. Also, Vale has authorized Golder Associates to communicate on our behalf with the Nunavut Water Board regarding the water licence amendment application. Please contact Sarah Gagné with Golder Associates in Edmonton at 780-930-8654 or by email at sarah_gagne@golder.com.



Regards,

A handwritten signature in black ink, appearing to read 'Danielle Leger', written in a cursive style.

Danielle Leger
Administrative Supervisor for,
Vale Exploration Canada Inc.

Jason Rickard, P.Geol.
Senior Geologist
Vale Exploration Canada Inc.

CC: Sarah Gagné, Golder Associates



Application for Water Licence Amendment

Document Date: May 2011

Application Submission Date: February /16/2012
Month/Day/Year

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NUNAVUT IMALIRIYIN KATIMAYIT
NUNAVUT WATER BOARD
OFFICE DES EAUX DU NUNAVUT

DOCUMENT MANAGEMENT

Original Document Date: April 2010

DOCUMENT AMENDMENTS

	Description	Date
(1)	Updated for public distribution as separate document from NWB Guide 7	June 2010
(2)	Updated NWB logos and reformatted table to allow rows to break across page	May 2011
(3)		
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
(10)		



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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYIT
OFFICE DES EAUX DU NUNAVUT

APPLICATION FOR WATER LICENCE AMENDMENT

The applicant is referred to the NWB's Guide 7: *Licensee Requirements Following the Issuance of a Water Licence* for more information about this application form.

EXISTING LICENCE NO: 2BE-SIP1114

1. LICENSEE CONTACT INFORMATION

Is the licensee the same as that referred to on the existing licence?

☒ Yes ☐ No

If No, a licence assignment must be completed and approved by the NWB. **An amendment will only be issued in the name of the current licensee in the absence of assignment of the licence.**

If the licensee is the same, but the name of the licensee has changed, attach a certificate of name change.

Name:

Address:

Phone: _____

Fax: _____

e-mail: _____

2. LICENSEE REPRESENTATIVE CONTACT INFORMATION – If different from Block 1.

Name: Sarah Gagné

Address: #300, 10525 – 170 St
Edmonton, AB
T5P 4W2

Phone: 780-930-8654

Fax: 780-483-1574

e-mail: sarah_gagne@golder.com

(Attach authorization letter.)

3. NAME OF PROJECT

Has the name of the project changed?

☐ Yes ☒ No

If Yes, indicate the name of the project including the name of the location: _____

4. LOCATION OF UNDERTAKING

Does the proposed amendment change the location of the amended undertaking?

☒ Yes ☐ No

Provide the project extents and camp locations. Identify proposed changes.

Project Extents – SAME AS APPLICATION

NW: Latitude: (° ' " N)	Longitude: (° ' " W)
NE: Latitude: (° ' " N)	Longitude: (° ' " W)
SE: Latitude: (° ' " N)	Longitude: (° ' " W)
SW: Latitude: (° ' " N)	Longitude: (° ' " W)

Camp Location(s)

Latitude: (64° 45' 43.56"N) Longitude: (82° 29' 27.24"W)

5. MAP

Does the proposed amendment change the locations of any of the main components of the undertaking?

☒ Yes ☐ No

Attach a topographical map, indicating the main components of the undertaking. Identify proposed changes.

NTS Map Sheet No.: ____46B and 46G____ Map Name: _____ Map Scale: _NTS map scale:
1:250,000. Figures 1 and 2 scale shown on figures._____

6. NATURE OF INTEREST IN THE LAND

Does the proposed amendment change the nature of the interest in the land?

☐ Yes ☒ No

If Yes, indicate changes. _____

Check any of the following that are applicable to the proposed undertaking (at least one box under the 'Surface' header must be checked).

Sub-surface

☐ Mineral Lease from Nunavut Tunngavik Incorporated (NTI)

Date (expected date) of issuance: _____ Date of expiry: _____

☐ Mineral Lease from Indian and Northern Affairs Canada (INAC)

Date (expected date) of issuance: _____ Date of expiry: _____

Surface

☒ Crown Land Use Authorization from Indian and Northern Affairs Canada (INAC)

Date (expected date) of issuance: September 20, 2011 Date of expiry:
September 19, 2013

☐ Inuit Owned Land (IOL) Authorization from Kitikmeot Inuit Association (KIA)

Date (expected date) of issuance: _____ Date of expiry: _____

☒ IOL Authorization from Kivalliq Inuit Association (KivIA)

Date (expected date) of issuance: September 13, 2011 Date of expiry:
September 13, 2012

☐ IOL Authorization from Qikiqtani Inuit Association (QIA)

Date (expected date) of issuance: _____ Date of expiry: _____

☐ Commissioner's Land Use Authorization

Date (expected date) of issuance: _____ Date of expiry: _____

☒ Other: Prospecting Permits (INAC) 7780, 7781, 7782, 8104 and 8105

7780, 7781, 7782,

Date (expected date) of issuance: Feb 2, 2009 Date of expiry: Feb 1, 2013

8104, 8105

Date (expected date) of issuance: Feb 1, 2011 Date of expiry: Feb 1, 2014

Is the name of the entity(s) holding authorizations the same as that considered in the existing water licence?

☒ Yes ☐ No

If No, a licence assignment must be completed and approved by the NWB.

Name of entity(s) holding authorizations: _____

7. NUNAVUT PLANNING COMMISSION (NPC) DETERMINATION

Indicate the land use planning area in which the existing project is located.

- | | |
|---------------------------------------|--|
| <input type="checkbox"/> North Baffin | <input checked="" type="checkbox"/> Keewatin |
| <input type="checkbox"/> South Baffin | <input type="checkbox"/> Sanikiluaq |
| <input type="checkbox"/> Akunnig | <input type="checkbox"/> West Kitikmeot |

Does the proposed amendment change the land use planning area?

☐ Yes ☒ No

If yes, indicate the land use planning area in which the amended undertaking is located.

- | | |
|---------------------------------------|---|
| <input type="checkbox"/> North Baffin | <input type="checkbox"/> Keewatin |
| <input type="checkbox"/> South Baffin | <input type="checkbox"/> Sanikiluaq |
| <input type="checkbox"/> Akunnig | <input type="checkbox"/> West Kitikmeot |

Was a land use plan conformity determination required from NPC prior to the issuance of the existing water licence?

☒ Yes ☐ No

If Yes, indicate date issued and attach copy. July 13, 2011

Does the proposed amendment change the original NPC conformity determination or the need to obtain one?

☐ Yes ☒ No

If Yes, indicate date issued (or expected) and attach a copy. _____

If No, provide written confirmation from NPC confirming that a land use plan conformity review is not required.

Vale will forward either the conformity check or the written confirmation from NPC once it is received.

8. NUNAVUT IMPACT REVIEW BOARD (NIRB) DETERMINATION

Was a screening determination required from NIRB prior to the issuance of the existing water licence?

☒ Yes ☐ No

If Yes, indicate date issued and attach copy. September 13, 2011

Does the proposed amendment change the original NIRB screening determination or the need to obtain one?

☐ Yes ☒ No

If Yes, indicate date issued (or expected) and attach a copy. _____

If No, provide written confirmation from NIRB confirming that a screening determination is not required.

Vale will forward either the screening decision or the written confirmation from NIRB once it is received.

9. DESCRIPTION OF UNDERTAKING

Does the proposed amendment change the description of the undertaking?

☒ Yes ☐ No

List and attach plans and drawings or project proposal. Identify proposed changes.

The proposed camp location has been selected and is included in Figure 1 and 2.

10. OPTIONS

Does the proposed amendment change any of the alternative methods and locations that were considered to carry out the project?

☐ Yes ☒ No

Provide a brief explanation of the alternative methods or locations that were considered to carry out the project. Identify proposed changes.

11. CLASSIFICATION OF PRIMARY UNDERTAKING

Indicate the primary classification of undertaking for the existing licence by checking one of the following boxes:

- | | |
|--|--|
| <input type="checkbox"/> Industrial | <input type="checkbox"/> Agricultural |
| <input checked="" type="checkbox"/> Mining and Milling (includes exploration/drilling/exploration camps) | |
| <input type="checkbox"/> Conservation | <input type="checkbox"/> Recreational |
| <input type="checkbox"/> Municipal (includes camps/lodges) | <input type="checkbox"/> Miscellaneous (describe below): |
| <input type="checkbox"/> Power | |

Does the proposed amendment change the classification of primary undertaking?

☐ Yes ☒ No

If Yes, indicate the primary undertaking of the amendment: _____

Information in accordance with applicable Supplemental Information Guidelines (SIG) must be updated and submitted with an Application for Amendment. Indicate which SIG(s) are applicable to your application.

- ☐ Hydrostatic Testing
- ☐ Tannery
- ☐ Tourist / Remote Camp
- ☐ Landfarm & On-Site Storage of Hydrocarbon Contaminated Soil
- ☐ Onshore Oil and Gas Exploration Drilling
- ☒ Mineral Exploration / Remote Camp
- ☐ Advanced Exploration
- ☐ Mine Development
- ☐ Municipal
- ☐ General Water Works
- ☐ Power

12. WATER USE

Indicate, using the boxes below, the types of water use(s) approved in the existing licence.

- | | |
|---|---|
| <input type="checkbox"/> To obtain water for camp/ municipal purposes | <input type="checkbox"/> To divert a watercourse |
| <input type="checkbox"/> To obtain water for industrial purposes | <input type="checkbox"/> To modify the bed or bank of a watercourse |
| <input type="checkbox"/> To cross a watercourse | <input type="checkbox"/> Flood control |
| <input type="checkbox"/> To alter the flow of, or store water | |
- X Other: Drilling

Does the proposed amendment change the type(s) of water use(s)?

X Yes ☐ No

If Yes, indicate using the boxes below, the proposed change(s) to the type(s) of water use(s) noting any water use(s) that are to be added, continued, or removed.

- | | |
|--|---|
| X To obtain water for camp/ municipal purposes | <input type="checkbox"/> To divert a watercourse |
| <input type="checkbox"/> To obtain water for industrial purposes | <input type="checkbox"/> To modify the bed or bank of a watercourse |
| <input type="checkbox"/> To cross a watercourse | <input type="checkbox"/> Flood control |
| <input type="checkbox"/> To alter the flow of, or store water | |
- X Other: Drilling

13. QUANTITY OF WATER INVOLVED

Does the proposed amendment change the source of water?

X Yes ☐ No

Indicate the water source(s). Identify proposed changes.:

The location of the camp was not selected when the original water licence application was submitted. The camp location has been selected next to an unnamed lake at approximately: 64° 45' 43.56"N and 82° 29' 27.24"W. the location is shown on Figure 1 and Figure 2.

(show location(s) on map)

Does the proposed amendment change the quality of the water source and/or its available capacity?

☐ Yes X No

Describe the quality of the water source(s) and the available capacity(s). Identify any changes.:
To the best of Vale's knowledge the water source for the camp and potential water sources for drilling are pristine water bodies.

Does the proposed amendment change the overall quantity of water to be used?

X Yes ☐ No

Provide the overall estimated quantity to be used. Identify proposed changes. : 100 m³/day from 16 in the original application for a period of 2 to 3 months.

Does the proposed amendment change the quantity of water to be used from each source?

X Yes ☐ No

Provide the estimated quantity(s) of water to be used from each source. Identify proposed changes. :

It is estimated that up to 5 m³/day will be used for the camp (from the unnamed lake at approximately 64° 45' 43.56"N and 82° 29' 27.24"W) and up to 95 m³/day for drilling from water sources close to the drilling locations..

Does the proposed amendment change the method(s) of extraction? ☐ Yes ☒ No

Describe the method(s) of extraction. Identify proposed changes. Submersible pump fitted with a screen to prevent the entrapment of fish.

Does the proposed amendment change the quantity(s) of water returned to source(s)?

☐ Yes ☒ No

Estimated quantity(s) of water returned to source(s). Identify proposed changes. : ____0____ m³/day

Does the proposed amendment change the quality(s) of water returned to source(s)?

☐ Yes ☒ No

Describe the quality(s) of water(s) returned to source(s). Identify any changes. : 0, no change from the original application.

14. WASTE

Check the appropriate box(s) to indicate the types of waste(s) approved in the existing licence.

- | | |
|--|--|
| <input checked="" type="checkbox"/> Sewage | <input checked="" type="checkbox"/> Waste oil |
| <input checked="" type="checkbox"/> Solid Waste | <input checked="" type="checkbox"/> Greywater |
| <input type="checkbox"/> Hazardous | <input type="checkbox"/> Sludges |
| <input type="checkbox"/> Bulky Items/Scrap Metal | <input checked="" type="checkbox"/> Contaminated soil and/or water |
| <input type="checkbox"/> Animal Waste | |
| <input type="checkbox"/> Other (describe): _____ | |

Does the proposed amendment change the type(s) of waste(s) to be generated or deposited?

☐ Yes ☒ No

If Yes, indicate using the boxes below, the proposed change(s) to the type(s) of waste(s) to be generated and/or deposited noting the addition, removal or continued generation and/or disposal of waste(s).

- | | |
|--|---|
| <input type="checkbox"/> Sewage | <input type="checkbox"/> Waste oil |
| <input type="checkbox"/> Solid Waste | <input type="checkbox"/> Greywater |
| <input type="checkbox"/> Hazardous | <input type="checkbox"/> Sludges |
| <input type="checkbox"/> Bulky Items/Scrap Metal | <input type="checkbox"/> Contaminated soil and/or water |
| <input type="checkbox"/> Animal Waste | |
| <input type="checkbox"/> Other (describe): _____ | |

15. QUANTITY AND QUALITY OF WASTE INVOLVED

Does the proposed amendment change the quantity(s) of the types of wastes involved?

☒ Yes ☐ No

Does the proposed amendment change the composition(s) of the types of wastes involved?

☐ Yes ☒ No

Does the proposed amendment change the method(s) of treatment for the types of waste involved?

☒ Yes ☐ No

Does the proposed amendment change the method(s) of disposal for the types of waste involved?

☒ Yes ☐ No

If Yes to any of the above, describe the proposed changes: It is anticipated that more grey water will be produced, up to 5 m³/day. Grey water will continue to be disposed in a sump or natural depression. In the original application, Vale proposed to use a modified burn barrel for incineration of non-hazardous, burnable solid waste. Vale now plans to use a two-stage portable incinerator for all non-hazardous, burnable camp wastes. The ash will be packaged and sent to either the Coral Harbour landfill or an appropriate facility.

For each type of waste indicated in Block 14, describe its composition, quantity in cubic meters/day, method of treatment and method of disposal.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
Sewage	Raw sewage	A maximum of 20 people for two to three months a year	Pacto toilet, incineration toilet or equivalent	Discharges from treatment method will be handled as non-combustible waste. Ash from incineration toilet will be disposed with ash from two stage incinerator
Greywater	Domestic wastewater from camp, excluding sewage	Greywater generated will equal the volume of water used for the camp, up to 5 m ³ /day	All soaps and cleaners used in camp will be non-toxic and biodegradable.	All grey water will be directed to a sump or natural depression at a minimum of 30 m from the high water mark of any water body.
Solid waste (combustible)	Combustible solid waste, paper products, paperboard packaging, untreated wood, food wastes and food packaging	A maximum of 20 people for two to three months per year, approximately 3 m ³ for a three month drill program.	Two stage portable incinerator.	Bottom ash from two stage incinerator will be packaged and backhauled to the Coral Harbour landfill.
Solid waste (non-combustible)	Non-combustible waste including bulky items/scrap metal	It is anticipated that very little non-combustible solid waste will be generated, if any.		Back hauled to Coral Harbour for disposal at the Hamlet of Coral Harbour landfill. All necessary tipping fees and access will be negotiated with the Hamlet prior to disposal.

Waste Oil	Waste oil from drill maintenance	Small quantities <20 L		Waste oil will be packaged in sealed plastic containers, clearly labeled and backhauled to Coral Harbour for disposal.
Contaminated Soil and/or Water	From diesel spills	Hopefully none.		All contaminated soil, snow or water will be collected and stored in empty 205 L drums. The drums will be backhauled to Coral Harbour, depending on the level of contamination may be disposed for treatment at the Hamlet landfill or may be shipped south for disposal at an approved facility.

16. OTHER AUTHORIZATIONS

Does the proposed amendment change the need for other authorizations in addition to the sub-surface and surface land use authorizations provided in Block 6?

☐ Yes ☒ No

If Yes, indicate any additional authorizations required, which authorizations are no longer required, and which authorizations continue to be required.

For each provide the following:

Authorization: _____

Administering Agency: _____

Project Activity: _____

Date (expected date) of issuance: _____ Date of expiry: _____

17. PREDICTED ENVIRONMENTAL IMPACTS OF UNDERTAKING AND PROPOSED MITIGATION MEASURES

Does the proposed amendment change the predicted environmental impacts of the undertaking or the mitigation measures?

☐ Yes ☒ No

Describe direct, indirect, and cumulative impacts related to water and waste. Identify any changes.

18. WATER RIGHTS OF EXISTING AND OTHER WATER USERS

Was compensation paid and/or an agreement(s) for compensation been entered into with any existing or other users of water during consideration of the existing licence?

☐ Yes X No

If Yes, provide the names, addresses and the nature of water use by those persons or properties.

Does the proposed amendment adversely affect any known persons or property including those that hold licences for water use in precedence to the application, domestic users, in-stream users, authorized waste depositors, owners of property, occupiers of property, and/or holders of outfitting concessions, registered trapline holders, and holders of other rights of a similar nature?

☐ Yes X No

If Yes, provide the names, addresses and the nature of water use of those persons or properties.

Advise the Board if compensation has been paid and/or an agreement(s) for compensation has been reached with any existing or other water users with respect to the proposed amendment.

19. INUIT WATER RIGHTS

Was compensation paid/ or an agreement(s) for compensation been entered into with any Designated Inuit Organization (DIO) during consideration of the existing licence?

☐ Yes X No

If Yes, which DIO(s) _____

Does the proposed amendment substantially affect the quality, quantity or flow of waters flowing through Inuit Owned Land (IOL)?

☐ Yes X No

If Yes, advise the Board if negotiations have commenced or an agreement to pay compensation for any loss or damage has been reached with one or more DIO(s) with respect to the proposed amendment.

20. CONSULTATION - Provide a summary of any consultation meetings including when the meetings were held, where and with whom. Include a list of concerns expressed and measures to address concerns.

Vale visited Coral Harbour in August 2011. Vale representatives met with the Aiviit Hunters and Trappers Organization, the Hamlet SAO and the Mayor of Coral Harbour and the Community liaison for the Kivalliq Inuit Association (KIA). Vale also held a public meeting in Coral Harbour.

21. SECURITY INFORMATION

Does the proposed amendment change the financial security assessment?

☐ Yes X No

Does the proposed amendment change the estimate of the total financial security for final reclamation?

☐ Yes X No

Provide an estimate of the total financial security for final reclamation equal to the total outstanding reclamation liability for land and water combined sufficient to cover the highest liability over the life of the undertaking. Estimates of reclamation costs must be based on the cost of having the necessary reclamation work done by a third party contractor if the operator defaults. The estimate must also include contingency factors appropriate to the particular work to be undertaken. Identify any changes in the financial security assessment resulting from the proposed amendment.

Where applicable, the financial security assessment should be prepared in a manner consistent with the principals respecting mine site reclamation and implementation found in the *Mine Site Reclamation Policy for Nunavut*, Indian and Northern Affairs Canada, 2002.

22. FINANCIAL INFORMATION

Is the statement of financial security the same as that considered in the existing water licence?

X Yes ☐ No

Provide an updated statement of financial security.

If the applicant is a business entity please answer the questions below:

Is the list of the officers of the company the same as those considered in the existing water licence?

X Yes ☐ No

Provide a list of the officers of the company.

Is the Certificate of Incorporation or evidence of registration of the company name the same?

X Yes ☐ No

Attach a copy of the Certificate of Incorporation or evidence of registration of the company name.

23. STUDIES UNDERTAKEN TO DATE

List and attach updated studies, reports, research etc.

None have been undertaken.

Provide a compliance assessment and status report including a response to any inspector's reports. The licensee must contact the NWB for licence specific direction in completing the assessment and report.

No work has been done at the site since the water licence has been issued.

If in non-compliance, a licence may not be issued until compliance is achieved. If in non-compliance, attach plans/reports for consideration. Application will not be processed if significant issues of non-compliance exist.

24. PROPOSED TIME SCHEDULE

Does the proposed amendment change the time schedule considered in the existing licence for any phase of development?

☐ Yes ☒ No

Indicate the start and completion dates for each applicable phase of development (construction, operation, closure, and post closure). Identify proposed changes.

Construction

Proposed Start Date: _____ Proposed Completion Date: _____
(month/year) (month/year)

Operation

Proposed Start Date: _____ Proposed Completion Date: _____
(month/year) (month/year)

Closure

Proposed Start Date: _____ Proposed Completion Date: _____
(month/year) (month/year)

Post - Closure

Proposed Start Date: _____ Proposed Completion Date: _____
(month/year) (month/year)

For each applicable phase of development indicate which season(s) activities occur.

Construction

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Operation

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Closure

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☒ All season

Post - Closure

☐ Winter ☐ Spring ☐ Summer ☐ Fall ☐ All season

Vale proposes to setup a camp and carry out a drilling program in the summer of 2012. It is anticipated that drilling programs will occur every summer through the term of the licence. Vale may also do a drilling program in the winter. The same camp and water source would be used in the winter. Drilling waste would be handled the same, whether drilling on ice or on land, drill wastes and drill water would be directed to a sump or natural depression at a minimum of 30 m from any waterbody.

25. PROPOSED TERM OF LICENCE

On what date does the existing licence expire? October 31, 2014

Is the Licensee applying for a combined renewal and amendment of the existing licence?

☒ Yes ☐ No

If Yes, indicate the proposed term of the renewal (maximum of 25 years): 5

Requested date of renewal issuance: March 2012 Requested Expiry Date: Dec/2017
(month/year) (month/year)

(The requested date of renewal issuance must be at least three (3) months from the date of application for a type B water licence and at least one (1) year from the date of application for a type A water licence, to allow for processing of the water licence application. These timeframes are approximate and do not account for the time to complete any pre-licensing land use planning or development impact requirements, time for the applicant to prepare and submit a water licence application in accordance with any project specific guidelines issued by the NWB, or the time for the applicant to respond to requests for additional information. See the NWB's *Guide 5: Processing Water Licence Applications* for more information)

26. ANNUAL REPORTING

Will the proposed amendment change the content of annual reports or the annual report template?

☐ Yes ☒ No

If Yes, provide details regarding the content of annual reports and a proposed outline or template of the annual report.

27. CHECKLIST

The following must be included with the application for Amendment for the water licensing process to begin.

Completed Application for Water Licence Amendment form.

X Yes ☐ No If no, date expected _____

Information addressing Supplement Information Guideline (SIG), where applicable (see Block 11)

X Yes ☐ No If no, date expected _____

Compliance Assessment / Status Report (see Block 23).

☐ Yes ☒ No If no, date expected _____

Indication of Renewal Requirement (see Block 26)

X Yes ☐ No If no, date expected _____

English Summary of Amendment Application.

X Yes ☐ No If no, date expected _____

Inuktitut and/or Inuinnaqtun Summary of Amendment Application.

X Yes ☐ No If no, date expected _____

Application fee of \$30.00 CDN (Payee Receiver General for Canada).

X Yes ☐ No If no, date expected _____

Water Use Fee Deposit of \$30.00 CDN (Payee Receiver General for Canada). The actual water use fee will be calculated by the NWB based upon the amount of water authorized for use in accordance with the Regulations at the time of issuance of the licence.

☒ Yes

☐ No

If no, date expected _____

28. SIGNATURE

<u>Danielle Léves</u>	<u>Manager Admin. Support</u>	<u>[Signature]</u>	<u>Feb. 16, 2012</u>
Name (Print)	Title (Print)	Signature	Date



P.O. Box 119
GJOA HAVEN, NU X0B 1J0
TEL: (867) 360-6338
FAX: (867) 360-6369

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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

EXPLORATION/ REMOTE CAMP SUPPLEMENTARY QUESTIONNAIRE

Applicant: Vale Exploration Canada Inc. **Licence No:** _____
2BE-SIP1114

(For NWB Use Only)

ADMINISTRATIVE INFORMATION

1. Environnement Manager: Clare Goddard Tel: 705-682-8462 Fax: 705-682-8243
E-mail: clare.goddard@vale.com
2. Project Manager: Jason Rickard Tel: 905-403-2548 Fax: 905-403-2600
Email: Jason.rickard@vale.com
3. Does the applicant hold the necessary property rights? Yes
4. Is the applicant an 'operator' for another company (i.e., the holder of the property rights)? If so, please provide letter of authorization. No
5. Duration of the Project
☐ One year or less Start and completion dates: ____
☒ Multi Year:

If Multi-Year indicate proposed schedule of on site activities

Start: March 2012 Completion: December 2017

CAMP CLASSIFICATION

6. Type of Camp
☐ Mobile (self-propelled)
☐ Temporary
☒ Seasonally Occupied: The camp will be occupied in the summer and depending on the results of the exploration program, winter drilling may also occur.
☐ Permanent
☐ Other: _____
7. What is the design, maximum and expected average population of the camp?
The average will be 15 people in camp with a maximum of 20 people.
8. Provide history of the site if it has been used in the past.

There has been Government of Canada geological surveys in the area in 1967, 1972 – 1975, 2007 and 2008. To the best of Vale's knowledge, those are the only geological surveys that have been conducted at the site.

CAMP LOCATION

9. Please describe proposed camp location in relation to biogeographical and geomorphological features, and water bodies.

The location of the camp was selected based on the availability of a water source and a flat level surface for the camp and fuel storage.

10. How was the location of the camp selected? Was the site previously used? Was assistance from the Regional Inuit Association Land Manager sought? Include maps and/or aerial photographs.

The location of the camp is shown on Figures 1 and 2 (Appendix B). To the best of Vale's knowledge this location has never been used for a camp.

11. Is the camp or any aspect of the project located on:

X Crown Lands Permit Number (s)/Expiry Date:
#NC2011C0023/September 19, 2013

☐ Commissioners Lands Permit Number (s)/Expiry Date: _____

X Inuit Owned Lands Permit Number (s)/Expiry Date: KVL111B13/August 3, 2013

12. Closest Communities (direction and distance in km):

Coral Harbour, approximately 65 km southwest of the Project.

13. Has the proponent notified and consulted the nearby communities and potentially interested parties about the proposed work?

Vale visited Coral Harbour in August 2011. Vale representatives met with the Aiviit Hunters and Trappers Organization, the Hamlet SAO and the Mayor of Coral Harbour and the Community liaison for the Kivalliq Inuit Association (KIA). There was also a public community meeting.

14. Will the project have impacts on traditional water use areas used by the nearby communities? Will the project have impacts on local fish and wildlife habitats?

There will be no impacts on traditional water use areas used by the nearby communities.

The project is located in an area identified as a high density denning area for polar bears, according to the Nunavut Wildlife Resource and Habitat Values Report, prepared by Jacques Whitford in October 2008, for the Nunavut Planning Commission. Pregnant female polar bears den in the fall and emerge between February and April with cubs. It is assumed that den fidelity is high (re-using the same den year after year).

The following mitigation measure will be implemented during exploration activities:

- Vale will have a local (preferably from Coral Harbour) wildlife monitor on site at all times. The wildlife monitor will check in the vicinity of the drill sites for evidence of polar bear dens before drilling begins.

PURPOSE OF THE CAMP

15. ☒ Mining (includes exploration drilling)
☐ Tourism (hunting, fishing, wildlife observation, adventure/expedition, etc.)
(Omit questions # 16 to 21)
☐ Other _____
16. Activities (check all applicable)
- ☒ Preliminary site visit
☒ Prospecting
☐ Geological mapping
☒ Geophysical survey
☒ Diamond drilling
☐ Reverse circulation drilling
☐ Evaluation Drilling/Bulk Sampling (also complete separate questionnaire)
☐ Other: _____
17. Type of deposit (exploration focus):
- ☐ Lead Zinc
☐ Diamond
☐ Gold
☐ Uranium
☒ Other: Nickel

DRILLING INFORMATION

18. Drilling Activities
- | | |
|---|---------------------|
| X | Land Based drilling |
| X | Drilling on ice |
19. Describe what will be done with drill cuttings?

For both winter and summer drilling, Vale will direct all drill water and cuttings to a natural depression or sump a minimum of 30 m from any water body. All sumps/natural depressions will be backfilled when drilling the hole is complete.

20. Describe what will be done with drill water?

For both winter and summer drilling, Vale will direct all drill water and cuttings to a natural depression or sump a minimum of 30 m from any water body. All sumps/natural depressions will be backfilled when drilling the hole is complete.

21. List the brand names and constituents of the drill additives to be used? Includes MSDS sheets and provide confirmation that the additives are non-toxic and biodegradable.

Vale will use salt, CaCl_2 and may use bentonite as a drill additive. The MSDS for bentonite can be found in Appendix C.

22. Will any core testing be done on site? Describe.

No.

SPILL CONTINGENCY PLANNING

23. The proponent is required to have a site specific Spill Contingency Plan prepared and submitted with the application This Plan should be prepared in accordance with the *NWT Environmental Protection Act, Spill Contingency Planning and Reporting Regulations, July 22, 1998* and *A Guide to the Spill Contingency Planning and Reporting Regulations, June 2002*. Please include for review.

The Spill Contingency Plan for the project can be found in Appendix C. The Spill Contingency Plan has been updated to include items listed in the water licence and this amendment.

24. How many spill kits will be on site and where will they be located?

There will be two spill kits located at the project site each with a sorbent capacity of 205 L. One will be located with the drill and the other at the camp/fuel cache.

25. Please describe the types, quantities, and method of storage of fuel and chemicals on site, and provide MSDS sheets.

MSDS sheets for diesel can be found in Appendix C of the Spill Contingency Plan, which is located in Appendix C of the application.

Material	Storage Container	Normally On-site		Maximum On-site		Storage Location and Uses
		Fuel Cache	At Drill	Fuel Cache	At Drill	
Diesel Fuel	205 L drums	50 drums (10,250 L)	1-10 drums (205 - 2,050 L)	100 drums (20,500 L)	10 drums (2,050 L)	Fuel cache and adjacent to drill. Diesel will be stored in the fuel cache and daily amounts will be transported as needed with the drill.
Jet B	205 L drums	50 drums (10,250 L)	0 drums	100 drums (20,500 L)	5 drums (5,125 L)	
Propane	100 lb	5 bottles		10 bottles		

WATER SUPPLY AND TREATMENT

26. Describe the location of water sources.

The water sources for the drill locations have not been identified as the drill locations have not been selected. The unnamed lake adjacent to the camp will be used for camp domestic use.

27. Estimated water use (in cubic metres/day):

- X Domestic Use: up to 5 m³/day Water Source: Unnamed Lake at approximately 64°45'43.56" N, 82°29'27.24" W, _____
- X Drilling: up to 95 m³/day Water Source: TBD, close to the drill locations.
- ☐ Other: _____ Water Source: _____

28. Describe water intake for camp operations? Is the water intake equipped with a mesh screen to prevent entrapment of fish? (see *DFO 1995, Freshwater Intake End-of-Pipe Fish Screen Guideline*) Describe:

Water will be pumped from the source by a submersible pump fitted with a screen to prevent the entrapment of fish.

29. Will drinking water quality be monitored? What parameters will be analyzed and at what frequency?

Drinking water will be tested according to the Guidelines for Canadian Drinking Water Quality during the camp setup. While the results are being processed bottled water will be used.

30. Will drinking water be treated? How?

Drinking water will be treated according to the *Public Health Act*.

31. Will water be stored on site?

Water may be stored on site in plastic containers for domestic purposes, up to a maximum of 5 m³/day.

WASTE TREATMENT AND DISPOSAL

32. Describe the characteristics, quantities, treatment and disposal methods for:

- X Camp Sewage (blackwater)

Camp sewage will be contained either in Pacto toilet, incineration toilets or equivalent. As the treatment system for sewage is attached to the input, the camp sewage will contain only raw sewage. _____

- X Camp Greywater

Camp greywater will be disposed in a natural depression or sump located a minimum of 30 m from any water body. The volume of grey water will equal the volume of water used for

domestic purposes in the camp, up to 5 m3/day. The camp will use only biodegradable soaps and detergents.

X Solid Waste

Combustible solid waste, paper products, paperboard packaging, untreated wood, food wastes and food packaging will be burned in two stage incinerator (Environmental Guideline for the Burning and Incineration of Solid Waste GN, 2010).

X Bulky Items/Scrap Metal

Non-combustible waste including bulky items/scrap metal will be back hauled to Coral Harbour for disposal at the Hamlet of Coral Harbour landfill. All necessary tipping fees and access will be negotiated with the Hamlet prior to disposal.

X Waste Oil/Hazardous Waste

Waste oil will be packaged in sealed plastic containers, clearly labeled and backhauled to Coral Harbour for disposal.

X Empty Barrels/Fuel Drums

Empty fuel drums will be backhauled to Coral Harbour, for disposal at an appropriate facility.

☐ Other:

33. Please describe incineration system if used on site. What types of wastes will be incinerated?

Combustible solid waste, paper products, paperboard packaging, untreated wood, food wastes and food packaging will be burned in a in two stage incinerator (Environmental Guideline for the Burning and Incineration of Solid Waste GN, 2010).

34. Where and how will non-combustible waste be disposed of? If in a municipality in Nunavut, has authorization been granted?

Non-combustible waste including bulky items/scrap metal will be back hauled to Coral Harbour for disposal at the Hamlet of Coral Harbour landfill. All necessary tipping fees and access will be negotiated with the Hamlet prior to disposal.

35. Describe location (relative to water bodies and camp facilities) dimensions and volume, and freeboard for all sumps (if applicable).

Locations of sumps/natural depressions to be used for disposal of greywater and drill cuttings/water have not been selected at this time. All sumps/natural depressions used during the project will be located a minimum of 30 m from any water body and the locations of all sumps will be recorded and photographs taken according to the Closure and Restoration Plan.

36. Will leachate monitoring be done? What parameters will be sampled and analyzed, and at what frequency?

No.

OPERATION AND MAINTENANCE

37. Have the water supply and waste treatment and disposal methods been used and proven in cold climate? What known O&M problems may occur? What contingency plans are in place?

Yes, all the water supply and waste treatment and disposal methods have been used and proven in the North. The technologies have been used in the North under similar conditions as the project is proposing, remote mineral exploration project. If the in two stage incinerator does not work as designed, all non-hazardous solid waste may be hauled to Coral Harbour for disposal at the Hamlet landfill. Vale would discuss these plans with the Hamlet prior to hauling any waste off the site.

ABANDONMENT AND RESTORATION

38. Provide a detailed description of progressive and final abandonment and restoration activities at the site.

The project Closure and Restoration Plan can be found in Appendix C of the application documents. The Closure and Restoration Plan has been updated to include this amendment.

BASELINE DATA

39. Has or will any baseline information be collected as part of this project? Provide bibliography.

No baseline information has been collected. There are no plans to collect baseline information at this time.

- ☐ Physical Environment (Landscape and Terrain, Air, Water, etc.)
- ☐ Biological Environment (Vegetation, Wildlife, Birds, Fish and Other Aquatic Organisms, etc.)
- ☐ Socio-Economic Environment (Archaeology, Land and Resources Use,
- ☐ Demographics, Social and Culture Patterns, etc.)
- ☐ Other: _____

REGULATORY INFORMATION

40. At a minimum, you should ensure you have a copy of and consult the documents below for compliance with existing regulatory requirements:

- ✓ ARTICLE 13 – *NCLA -Nunavut Land Claims Agreement*
- ✓ NWNSRTA – *The Nunavut Waters and Nunavut Surface Rights Tribunal Act, 2002*
- ✓ *Northwest Territories Waters Regulations, 1993*
- ✓ NWB - Water Licensing in Nunavut - Interim Procedures and Information Guide for Applicants
- ✓ NWB - Interim Rules of Practice and Procedure for Public Hearings
- ✓ RWED – *Environmental Protection Act, R-068-93- Spill Contingency Planning and Reporting Regulations, 1993*
- ✓ RWED A Guide to the Spill Contingency Planning and Reporting Regulations, 2002
- ✓ NWTWB - Guidelines for Contingency Planning
- ✓ *Canadian Environmental Protection Act, 1999 (CEPA)*
- ✓ *Fisheries Act, RS 1985 - s.34, 35, 36 and 37*
- ✓ DFO - Freshwater Intake End of Pipe Fish Screen Guideline
- ✓ NWTWB - Guidelines for the Discharge of Treated Municipal Wastewater in the NWT
- ✓ Canadian Council for Ministers of the Environment (CCME); Canadian Drinking Water Quality Guidelines, 1987
- ✓ Public Health Act - Camp Sanitation Regulations
- ✓ Public Health Act - Water Supply Regulations
- ✓ *Territorial Lands Act and Territorial Land Use Regulations; Updated 2000*