

**APPLICATION FOR WATER LICENSE AMENDMENT
CONTAMINATED WATER TREATMENT
HAZARDOUS WASTE MANAGEMENT
CONTAMINATED SOIL TREATMENT**

Document presented to



This document is reproduced electronically and contains 112 pages including the cover page

- Application for Water Licence Amendment
- Topographical Map
- Written confirmation from NPC
- Plan layout of water treatment unit
- Cost Estimate spreadsheet
- Certificate of Incorporation and Business License
- English Summary of Application
- Inuktitut and/or Inuinnaqtun Summary of Application



Application for Water Licence Amendment

Document Date: April 2013

Application Submission Date:

February 17, 2016

Month/Day/Year

P.O. BOX 119
GJOA HAVEN, NUNAVUT
XOB 1J0
TEL: (867) 360-6338
FAX: (867) 360-6369

ᐅᐃᐅ ᐅᐃᐅ ᐅᐃᐅ
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)	New NWB logo; request for background information; and change to Block 24	April 2013
(4)		
(5)		
(6)		
(7)		
(8)		
(9)		
(10)		



P.O. Box 119

GJOA HAVEN, NU X0B 1J0

TEL: (867) 360-6338

FAX: (867) 360-6369

ᐃᓄᐱᓄᐱ ᐃᓄᐱᓄᐱ ᐅᐱᓄᐱᓄᐱ

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.

Where possible, provide background information regarding the original licence application or attach previously submitted information.

EXISTING LICENCE NO: 1BR-THI1419 / Type "B"

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.

2. LICENSEE REPRESENTATIVE CONTACT INFORMATION – If different from Block

Name: *Olivier Simard*

Address: *PO Box 1228, Iqaluit, Nunavut, X0A 0H0*

Phone: *867 222-8194*

Fax: *N/A*

e-mail: osimard@genv.ca

Authorization letter is attached in Appendix A

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:
Environmental Waste Processing Facility, Iqaluit

4. LOCATION OF UNDERTAKING

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

☒ Yes ☐ No

Provide the project extents and camp locations.

Project Extents

NW: Latitude: (63° 44' 40" N)

Longitude: (68° 33' 03" W)

NE: Latitude: (63° 44' 40" N)

Longitude: (68° 32' 51" W)

SE: Latitude: (63° 44' 34" N)

Longitude: (68° 32' 51" W)

SW: Latitude: (63° 44' 34" N)

Longitude: (68° 33' 03" W)

Camp Location(s)

N/A

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.

All developments shown are new since Qikiqtaaluk Environmental will be moving all of its operations to the new property (see Appendix B).

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).

6. NATURE OF INTEREST IN THE LAND (suite)

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

☒ Yes ☐ No

If Yes, indicate changes.

Qikiqtaaluk Environmental Inc. will be using the new location for the treatment of water with additional contaminants, and the treatment and management of contaminated soils.

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: _____
Date of expiry: _____
- ☐ 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: _____
Date of expiry: _____
- ☐ IOL Authorization from Qikiqtani Inuit Association (QIA)
Date (expected date) of issuance: _____
Date of expiry: _____
- ☒ Commissioner's Land Use Authorization; *Land Lease w/ GN ED&T*
Date (expected date) of issuance: April 2016
Date of expiry: March 2026 (see Appendix C)
- ☒ Other; City of Iqaluit Development Permit
Date (expected date) of issuance: April 2016
Date of expiry: N/A (see Appendix C)

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 type="checkbox"/> Keewatin |
| <input checked="" 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 - See Appendix D

If Yes, indicate date issued and attach copy.

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. See Appendix D

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 - See Appendix E

If Yes, indicate date issued and attach copy.

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. February/March 2016 (see Appendix E).

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

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. *All operations will be moved to a new site with a new layout. Details are attached in the figures in Appendix B. The same water treatment process will be used for the treatment of contaminated water with the addition of a pre-treatment for metal contamination. We will be adding activities of hydrocarbon contaminated soil treatment and management of waste for disposal in the south.*

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. *The purpose of this project is to reduce the environmental impact of contaminants in Iqaluit. The work methods proposed are those that are the most efficient in reducing the environmental impact. No other open lots with the required zoning are available in Iqaluit.*

11. CLASSIFICATION OF PRIMARY UNDERTAKING

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

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

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 (*New activity*)

- ☐ 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.

- ☐ To obtain water for camp/ municipal purposes
- ☐ To obtain water for industrial purposes
- ☐ To cross a watercourse
- ☐ To alter the flow of, or store water
- ☒ Other: *Hydrocarbon contaminated water collection, treatment and discharge*
- ☐ To divert a watercourse
- ☐ To modify the bed or bank of a watercourse
- ☐ Flood control

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

☒ 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.

- ☐ To obtain water for camp/ municipal purposes
- ☐ To obtain water for industrial purposes (*to be added*)
- ☐ To cross a watercourse
- ☐ To alter the flow of, or store water
- ☒ Other: *Contaminated water collection, treatment and discharge (will continue, with additional parameters added to the treatment process).*
- ☐ To divert a watercourse
- ☐ To modify the bed or bank of a watercourse
- ☐ Flood control

13. QUANTITY OF WATER INVOLVED

Does the proposed amendment change the source of water? ☒ Yes ☐ No

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

Existing licence water source: *Various spill sites around the city of Iqaluit (will continue).*

Proposed amendment:

In addition to the above source, contact water will be collected from the POL reservoir cleaning operations in Iqaluit, containment berms within the city, water from clients that has come into contact with organic and/or metal contaminants and from containment pads at Qikiqtaaluk Environmental's Environmental Waste Processing Facility.

(show location(s) on map) *N/A – All of the City of Iqaluit*

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

☐ Yes ☒ No

Describe the quality of the water source(s) and the available capacity(s). Identify any changes: *Existing licence water source consists of contaminated water obtained from various spills around the City of Iqaluit. Qikiqtaaluk Environmental will add additional sources of contamination in this license. Water source quality/available capacity: N/A*

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

☐ Yes ☒ No

Provide the overall estimated quantity to be used. Identify proposed changes. :

Existing licence: < 15 m³/day (quantities vary according to client needs)

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

☐ Yes ☒ No

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

Existing licence

- *Contaminated water quantity: 15 m³/day (No change)*

Does the proposed amendment change the quantity of water to be used for each purpose?

☒ Yes ☐ No

Provide the estimated quantities to be used for each purpose (camp, drilling, etc.). Identify proposed changes:

Existing licence:

- *Contaminated water: no water use for other purposes from this source.*

Proposed amendment:

- *Contaminated water: Depending on availability and suitability, contaminated water may be added to soils with similar contaminants to assist with the biological degradation of the organic contaminants in the soils. Contaminated water will be tested prior to use to ensure that it will not add more contaminants to the soils to be treated;*
- *Treated water meeting discharge criteria: Treated water may be used for the cleaning of equipment as well as for contaminated soil management and treatment needs. This water will be collected and analyzed at a certified laboratory, and managed according to analytical results.*

Does the proposed amendment change the method(s) of extraction?

☐ Yes ☒ No

Describe the method(s) of extraction. Identify proposed changes.

Existing licence:

- *Contaminated water extraction: a) snow collection using heavy equipment or shovels, b) pumping of contact water from excavations or holding basins;*

Proposed amendment:

- *Contaminated water collection: contact water accumulated in holding basins, wash- and condensate water from reservoirs, contact water from spills in snow and on the ground, and contaminated water from clients. This water will be pumped into either a vacuum trailer or other safe means of transport and brought to our facility.*

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. :

15 m³/day (no change)

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. :

Existing licence: *Water will be treated to meet the discharge criteria that will be determined by the NWB and discharged at a location approved by the City of Iqaluit and other regulatory agencies having jurisdiction; no water will be returned to the source. The only change will be the discharge location which will be relocated to Qikiqtaaluk Environmental's new site.*

14. WASTE

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

- | | |
|--|---|
| <input type="checkbox"/> Sewage | <input checked="" 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 checked="" type="checkbox"/> Other (describe): <i>Treated water tested for discharge criteria</i> | |

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 checked="" type="checkbox"/> Waste oil (<i>will continue</i>) |
| <input checked="" type="checkbox"/> Solid Waste (<i>to be added</i>) | <input type="checkbox"/> Greywater |
| <input checked="" type="checkbox"/> Hazardous | <input checked="" type="checkbox"/> Sludges (<i>to be added</i>) |
| <input type="checkbox"/> Bulky Items/Scrap Metal | <input checked="" type="checkbox"/> Contaminated soil and/or water (<i>soil, to be added</i>) |
| <input type="checkbox"/> Animal Waste | |
| <input checked="" type="checkbox"/> Other (describe):
<i>Treated water tested for discharge criteria (will continue);</i>
<i>Treated soil tested for decontamination criteria (to be added).</i> | |

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:

Qikqtaaluk Environmental is requesting authorization to treat additional parameters in the water, such as metals and other organic chemical contaminants. As a result of this, sludge and other types of waste-filtering media may be generated due to the additional treatment methods.

In addition, Qikqtaaluk Environmental is adding contaminated soil volume reduction and treatment to our operations. This will involve the storage of contaminated soils on lined containment pads until there is a sufficient volume and/or space to treat them. The soils will be treated using a biopile treatment technique, which will eliminate the generation of contact water.

Finally, Qikqtaaluk Environmental will be operating a Hazardous Waste Transfer Centre, licensed by the Government of Nunavut. This will require the repackaging and/or consolidation of waste to be shipped south for disposal. Once packaged, the waste will be stored at our site while awaiting sealift. It is possible that waste be stored over the winter, while awaiting the next available sealift vessel.

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
Contaminated Water	Water is tested to meet discharge criteria.	Varies depending on the source of the contaminated water. Our treatment unit can treat a maximum of 15 m ³ /24 hrs.	<ul style="list-style-type: none"> pH adjustment to precipitate metals, polymers used for flocculation; Oil/water separator; Particulate filter; ULTRASORPTION™ filter; Activated carbon filter. 	Discharge on land 30 m from a waterbody in a location approved by authorities having jurisdiction.
Waste Petroleum, Oil, and Lubricants (POL)	Hydrocarbons collected from the settling tank and oil/water separator or from other clients in Iqaluit.	Varies	<ul style="list-style-type: none"> Segregation; Consolidation; Packaging and labelling. 	Ship south for disposal in accordance with regulations or incineration on-site in a waste oil furnace.
Waste filter media from treatment units and used absorbent materials	<ul style="list-style-type: none"> ULTRASORPTION™ (shredded absorbent); Granular activated carbon; Particulate filters; and Absorbents used during spill response. 	<ul style="list-style-type: none"> Varies depending on volume of water to be treated and level of contamination; Maximum 5 m³/yr of each waste type 	<ul style="list-style-type: none"> Segregation; Consolidation; Packaging and labelling. 	Ship south for disposal in accordance with regulations.
Sludge	Acid and or caustics used for pH adjustment, coagulating agent, metals.	<ul style="list-style-type: none"> Varies depending on volume of water to be treated, metal concentration, and process efficiency; Estimated maximum 15 m³. 	<ul style="list-style-type: none"> Dry; Segregation; Consolidation; Packaging and labelling. 	Disposal in local landfill if meet disposal criteria or ship south for disposal in accordance with regulations.

Type of Waste	Composition	Quantity Generated	Treatment Method	Disposal Method
Contaminated Soils	Soils contaminated by organics and metals.	Varies, maximum 500 m ³ .	<ul style="list-style-type: none"> Soils with organic contaminants: <ul style="list-style-type: none"> treated on-site in a biopile or landfarm after volume reduction if treatment will allow the soils to meet guidelines within a reasonable period of time; Untreatable organics (such as oil, grease creosote and PCBs): <ul style="list-style-type: none"> volume reduction, packaging and labelling; Metal soils: <ul style="list-style-type: none"> packaged and labelled. 	<ul style="list-style-type: none"> Treated soils can be used as backfill or for other purposes approved by INAC; All untreatable contaminated soils will be transported south for disposal in accordance with regulations.
Glycols	Antifreeze agents used in machinery and vehicles, as well as waste antifreeze used for de-icing purposes.	Varies according to client needs.	<ul style="list-style-type: none"> Segregation; Consolidation; Packaging and labelling. 	Ship south for disposal in accordance with regulations.
Batteries	Batteries from vehicles and other equipment.	Varies according to client needs.	<ul style="list-style-type: none"> Segregation; Consolidation; Packaging and labelling. 	Ship south for disposal in accordance with regulations.
Paint and/or paint related materials	Waste paint from building construction or demolition.	Varies according to client needs	<ul style="list-style-type: none"> Segregation; Consolidation; Packaging and labelling. 	Ship south for disposal in accordance with regulations.
Regulated Building Demolition Debris	Ballasts, light bulbs, capacitors, thermostats, asbestos.	Varies according to client needs.	<ul style="list-style-type: none"> Segregation; Consolidation; Packaging and labelling. 	Ship south for disposal in accordance with regulations.
Biohazard, medical waste	Medical sharps	Varies according to client needs.	Biohazard packaged in proper Class 8 containers at hospital or health centre.	<ul style="list-style-type: none"> Containers consolidated in a locked marine container; Ship south for disposal in accordance with regulations.

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.

Existing Licence:

Collection and treatment of contaminated water has a positive impact on the environment (will continue). The soils at the discharge location will be monitored yearly to ensure that these activities do not have a negative environmental impact (will continue). If an increase in contamination in excess of the criteria for the land use at the selected discharge location is detected, then the area will be remediated to below these levels and the entire process will be re-examined to determine the origin of the contamination (will continue).

Proposed Amendment:

Collection and treatment of contaminated water with additional contaminants will have a further positive impact on the environment. The treatment unit will be modified to remove other types of contaminants, producing effluent in compliance with discharge criteria in our water licence. Sludge generated from metal contaminated water will be removed, stored and disposed of at an appropriate facility.

The addition of soil treatment to our activities will result in a lower volume of contaminated soils present in Iqaluit. The re-use of treated soils in approved industrial settings will also reduce the need to produce additional clean fill in the community, which will, in turn, reduce the volumes of soils originating from the local quarries.

The management of hazardous waste will prevent waste from being stored in an unsafe manner within the community, which will result in a reduced risk of spills.

It is not anticipated that these activities will result in a negative impact on the environment.

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 ☒ No

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

Not applicable

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 ☒ No

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

Not applicable

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.

Not applicable

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 ☒ 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 ☒ 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.

No consultation was carried out during the development of this undertaking.

21. SECURITY INFORMATION

Does the proposed amendment change the financial security assessment?

☒ Yes ☐ No

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

☒ Yes ☐ 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.

The following is a combination of the assessment submitted with the existing licence application and that of the proposed amendment:

In the case of abandonment due either to bankruptcy or major failure of the water treatment unit, the unit must be dismantled and the filtering media will need to be containerized for off-site disposal in an authorized facility. Similarly, any impacted untreated water or sludge will be containerized for off-site shipment and disposal. Water treatment facility components (pumps, oil/water separator, tanks) can be dismantled and sold or discarded in the landfill as non-hazardous waste.

Soils at the discharge point would need to be sampled to ensure they meet the guidelines established by the Government of Nunavut Department of Environment. Any impacted soils with concentrations in excess of the guidelines will need to be excavated, containerized and shipped to an authorized facility for disposal.

In addition, the existing stockpile of untreated and treated soils will have to be disposed of in an authorized facility. These soils will be packaged and shipped off-site for disposal in accordance with applicable regulations. The containment pads will be dismantled and the soils underneath will be sampled and managed according to the contaminants found.

Finally, any contaminated waste found on the site will need to be packaged, labelled and disposed of in accordance with applicable regulations.

In a worst case scenario, we assume that 30,000 L of impacted water may remain untreated, and that 250 m.t. of impacted soils may be stored on-site. In addition, another 40 m.t. of waste may be stored on the site. It is estimated that the labour efforts required to restore the site to its original condition, by dismantling the water treatment unit, the management of impacted soils and waste, backfilling excavated areas, the transport of all impacted materials by sealift and disposal of all impacted materials in authorized facilities will require approximately 4 weeks of work, including a manager, a helper, and heavy equipment assistance for the excavation work and the hauling of materials to the barge landing in Iqaluit. The cost estimates for the final reclamation are estimated at \$324,460 as related to this worst case scenario (see attached spreadsheet in Appendix F).

22. FINANCIAL INFORMATION

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

☐ Yes ☒ No

Provide an updated statement of financial security. *See Appendix G.*

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?

☐ Yes ☒ No

Provide a list of the officers of the company.

*Levi Barnabas, Director
Ludy Pudluk, Director
Blandina Tulugarjuk, Director
Alain Sauriol, Director
Jacques Dion, Director, Vice-President
Mario Leathead, Director
Harry Flaherty, President*

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

☒ Yes ☐ No

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

See attached Certificate of Incorporation and Business Licence in Appendix H

23. STUDIES UNDERTAKEN TO DATE

List and attach updated studies, reports, research etc.

No studies have been undertaken related to this activity

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.

The last compliance assessment and status report is attached in Appendix I

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

When are proposed amendments scheduled to be undertaken:

May 2016 – October 2016

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: *May 2016* Proposed Completion Date: *October 2016*
(month/year) (month/year)

Operation

Proposed Start Date: *May 2016*
Proposed Completion Date: *N/A, this is a permanent installation*

Closure

Proposed Start Date: *N/A* Proposed Completion Date: *N/A*
(month/year) (month/year)

Post - Closure

Proposed Start Date: *N/A*
Proposed Completion Date: *N/A*

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

25. PROPOSED TERM OF LICENCE

On what date does the existing licence expire?
August 19, 2019

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):
Licence valid for 5 years from date of issue (2021)

Requested date of renewal issuance: *April 2016* Requested Expiry Date: *April 2021*
(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.

Annual reporting will continue to be done using the 111028 REVISED Standard NWB Annual Reporting Form-FSTE(or the latest version thereof). The applicable sections in the report that cover new activities will be completed.

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.

☒ Yes ☐ No If no, date expected

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

☐ Yes ☒ No If no, date expected

To be submitted by February 19th, 2016, will be submitted as *Appendix J*

Compliance Assessment / Status Report (see Block 23).

☒ Yes ☐ No If no, date expected

See Appendix I

Indication of Renewal Requirement (see Block 26)

☐ Yes ☒ No If no, date expected

Not Applicable_____

English Summary of Amendment Application.

☒ Yes ☐ No If no, date expected

See Appendix K

Inuktitut and/or Inuinnaqtun Summary of Amendment Application.

☒ Yes ☐ No If no, date expected

See Appendix L

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

☒ Yes ☐ No If no, date expected

Cheque sent in mail_____

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
Not Applicable _____

28. SIGNATURE

Greg Johnson, P.Eng.

Name (Print)

Project Director

Title (Print)


Signature

2016-02-17

Date

APPENDIX A

AUTHORIZATION LETTER

January 12, 2016

Nunavut Water Board
15 Stone Marker Road
Gjoa Haven NU X0B 1J0

O/Ref.: QE15-102-2

Subject: Authorization to Act as an Agent for Qikiqtaaluk Environmental Inc.

To whom it may concern:

The purpose of this letter is to authorize for Greg Johnson and Olivier Simard to act as agents for Qikiqtaaluk Environmental Inc. (QE). As such, they may answer any questions related to the application for approvals and licences with the Nunavut Water Board.

If you require additional information, please do not hesitate to contact me.

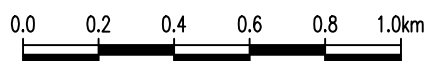
Best regards,



Jacques Dion
Vice President and Member of the Board of Directors
JD/kaf

APPENDIX B

MAPS AND PLANS



Source: GoogleEarth; 2015.

Presented to:



Property located at:
Lease parcels O and Q,
Airport lands in Iqaluit, NU

Figure 1

Regional Site Location

NIRB AND NWB LICENCE APPLICATIONS

Drawn by: J. Bergeron	Verified by: G. Johnson	Approved by: S. Laberge
Date: 2016-02-17	Drawing no.: QE15-102-2-05 A	Geodetic reference: Latitude/Longitude



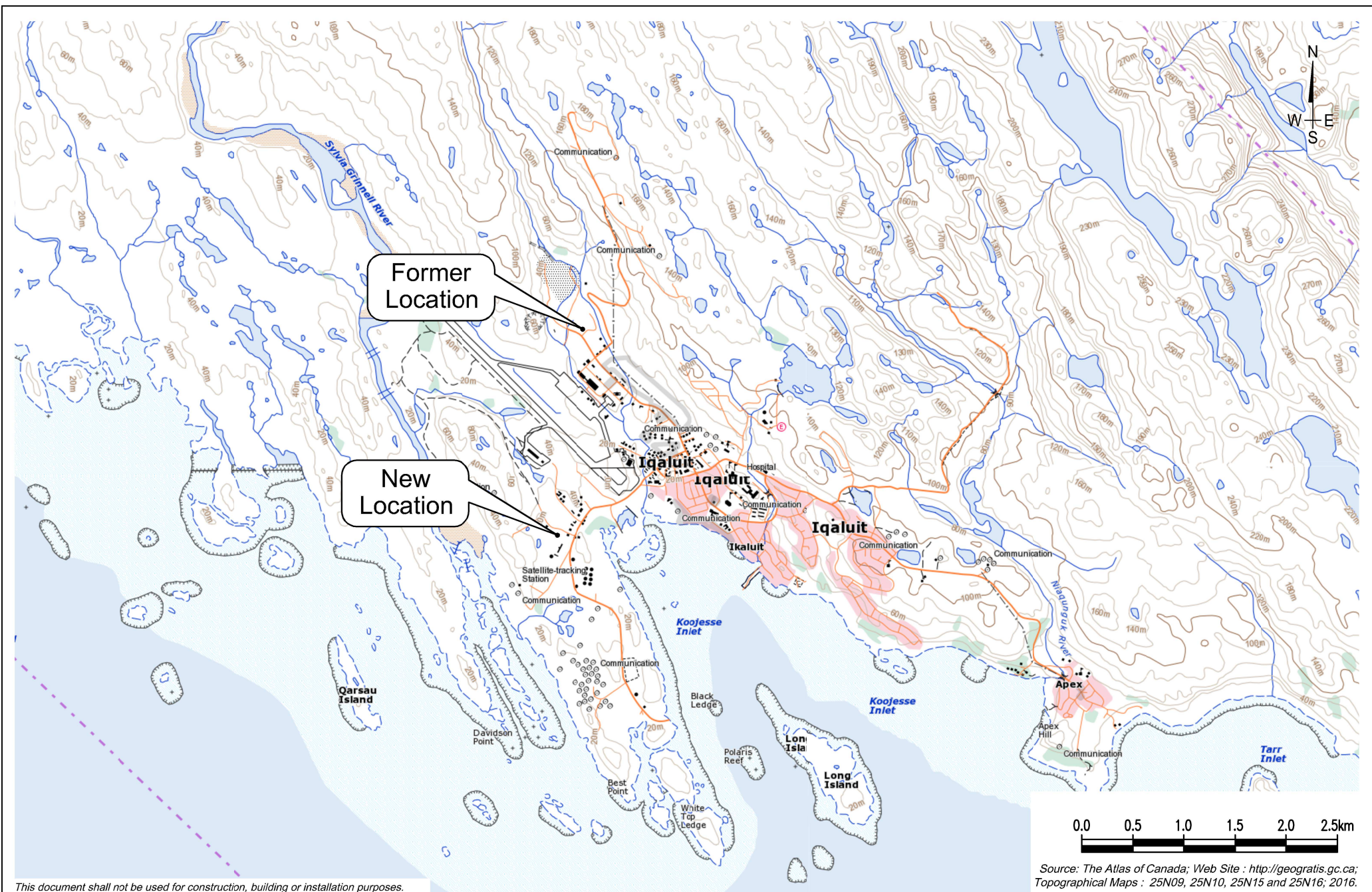
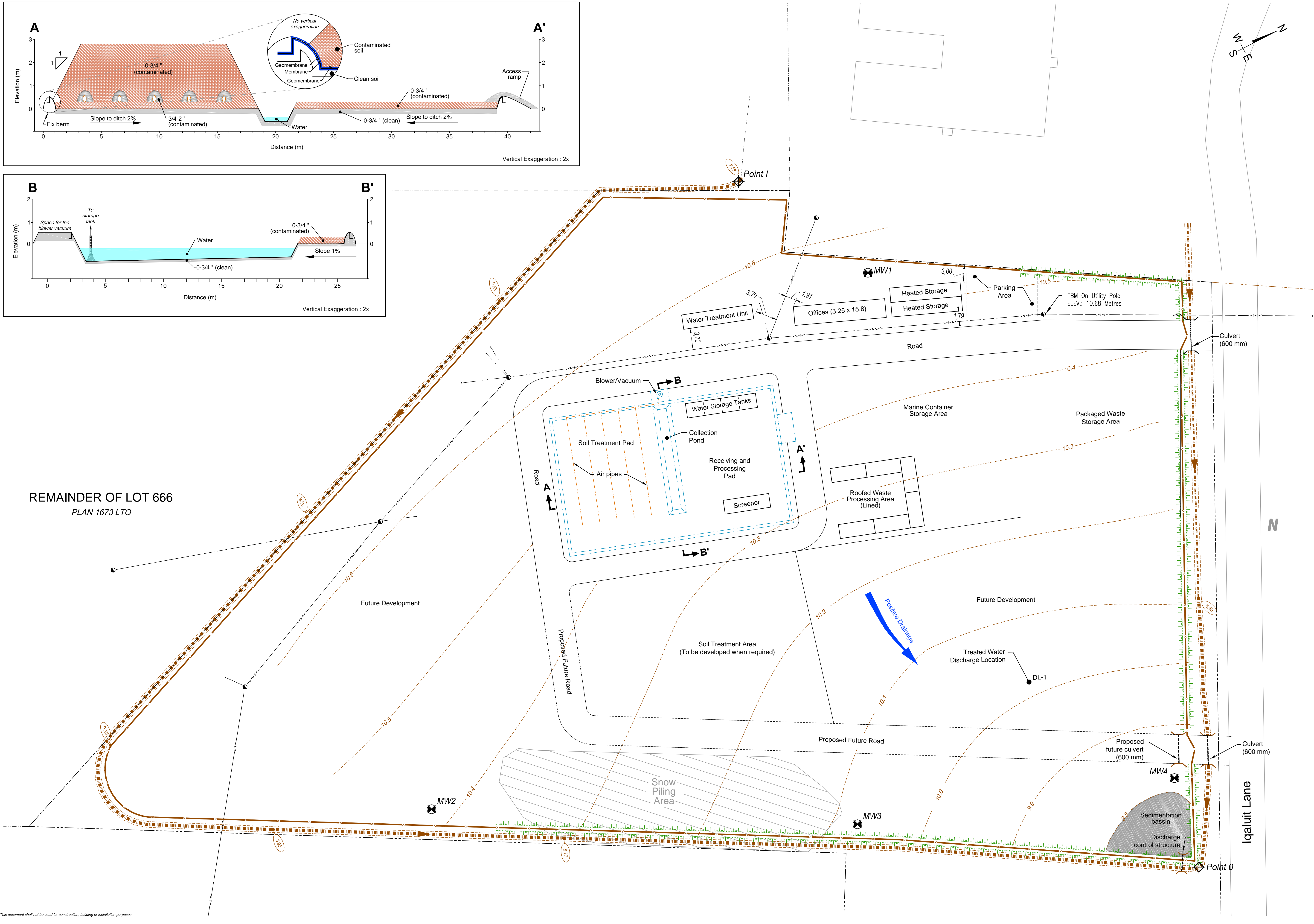
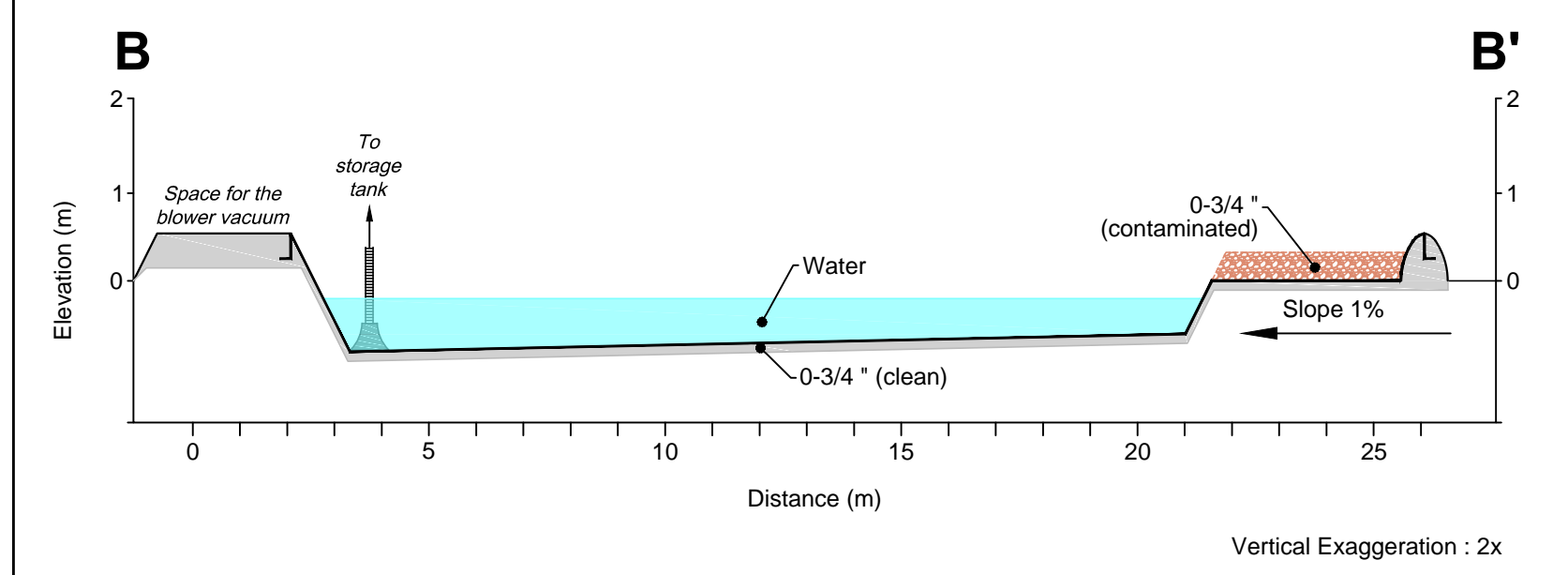
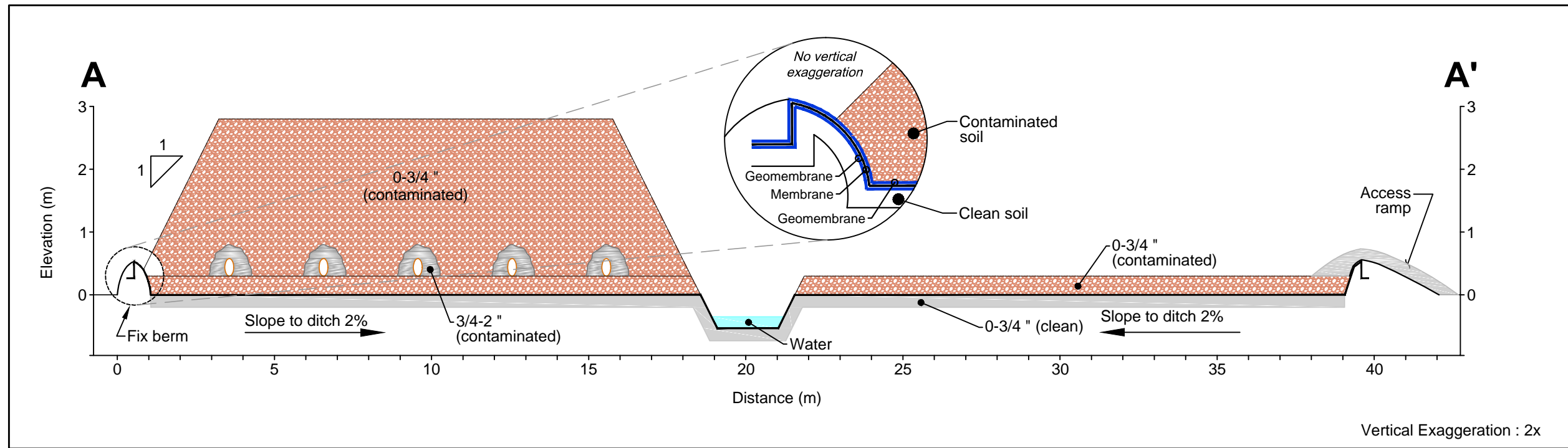


Figure 2
Regional Site Location - scale: 1: 50,000

NIRB AND NWB LICENCE APPLICATIONS

Drawn by: H. Longval	Verified by: G. Johnson	Approved by: S. Laberge
Date: 2016-02-17	Drawing no.: QE15-102-2-04	Geodetic reference: UTM/NAD83 Zone 19





REMAINDER OF LOT 666
PLAN 1673 LTO

Legend

- Proposed monitoring well
- Proposed water quality monitoring point
- Proposed draining ground elevation (m)
- Proposed drainage ditch elevation (m)
- Proposed fence
- Proposed ditch
- Berm to be built to final ground design elevation
- Overhead electrical line
- Utility pole and guy wire
- Lot line
- Parcel identification
- Proposed parcel
- Boundary of lease (approximate location)
- Processing and lines soil treatment area

Source :

- Sub-Arctic Surveys Ltd : File no. 15-206-QE-JL14-TOPO; July 16, 2015;
- Iqaluit - Survey Sketch 001.2015.dwg

Figure 4
Site Plan

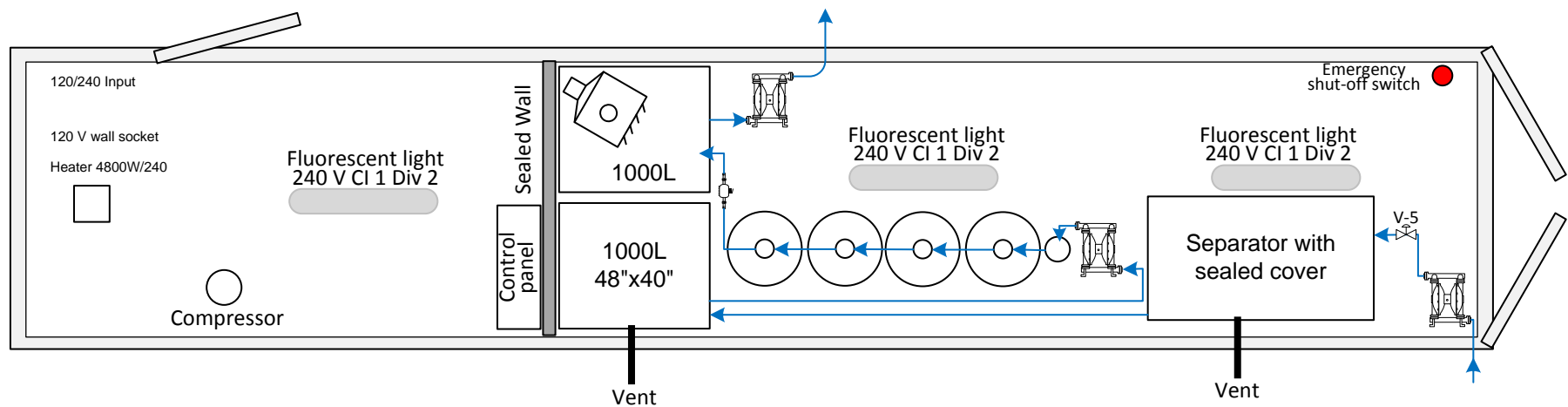
NIRB AND NWB LICENCE APPLICATIONS

Property located at:
Lease parcels O and Q,
Airport lands in Iqaluit, NU

Drawn by: J. Bergeron
Verified by: C. Johnson
Approved by: J. Dion


Date: 2016-02-17
Drawing no.: QE15-102-2-05 | B | MTM/NAD83 Zone 6
Geodetic reference:



Qikiqtaaluk environmental

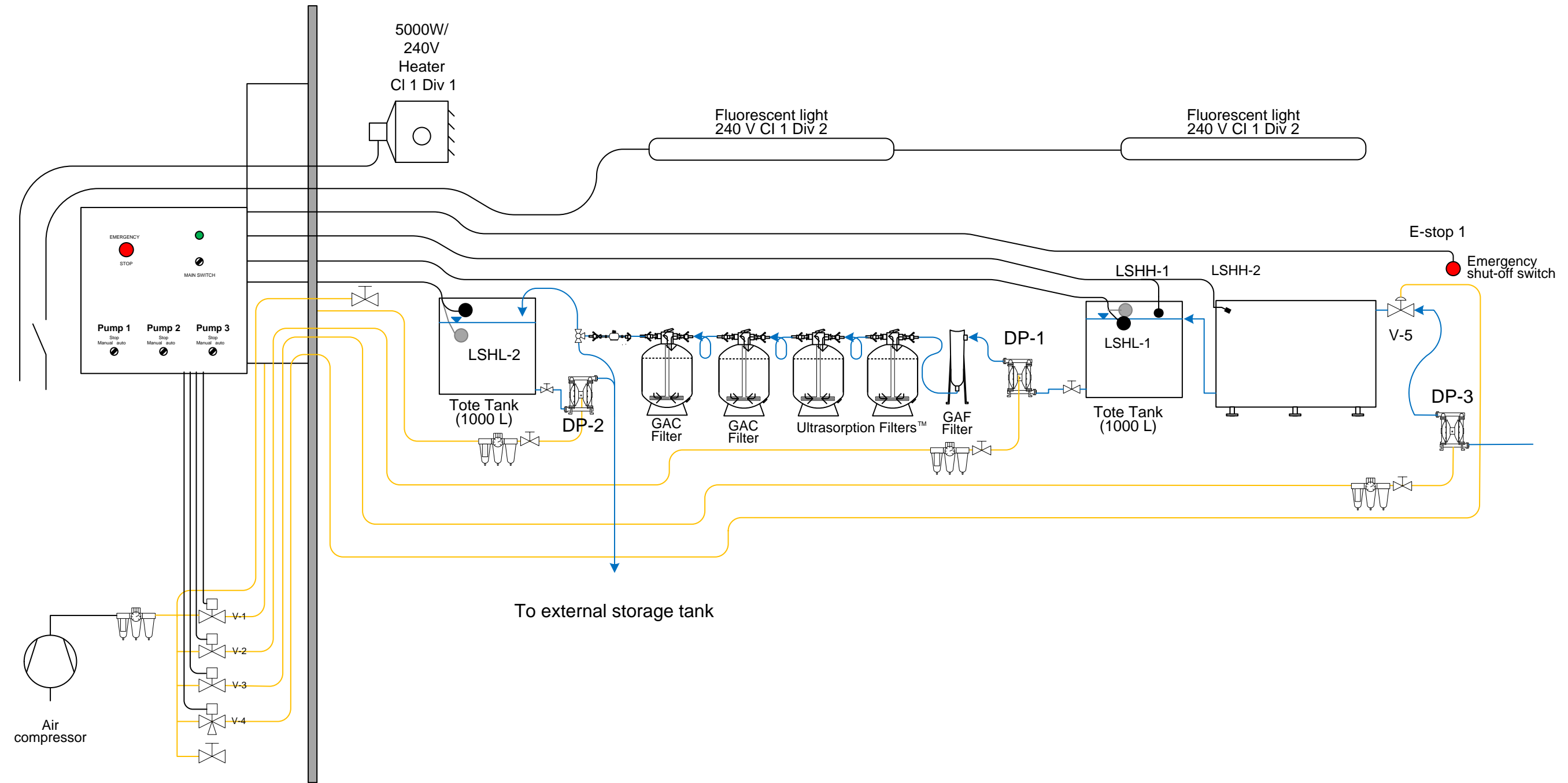


Legend

— Water line

 Diaphragm pump

Presented to:  	Title: Figure 5 Water Treatment Facility Layout		Scale: No scale	Design date: 2015-03-25	Revision date: 2016-02-17
	Project: WATER TREATMENT FACILITY 1571 Kakivak Court, Iqaluit		Drawn by: É. Leblanc	Verified by: O. Simard	Approved by: G. Johnson
			Project n°: QE15-102-2	Drawing n°: QE15-102-2-02.vsd	Layout: A



Legend

- Water line
- Air line
- Electrical connection
- Float switch
- Pressure regulator
- Diaphragm Pump
- Valve

Title: Figure 6 Water Treatment Facility Flow Diagram		
Project: WATER TREATMENT FACILITY 1571 Kakivak Court, Iqaluit		
Scale: No scale	Design date: 2015-03-25	Revision date: 2016-02-17
Drawn by: É. Leblanc	Verified by: O. Simard	Approved by: G. Johnson
Project n°: QE15-102-2	Drawing n°: QE15-102-2-01.vsd	Layout: A

Presented to:

Presented by: