O/Ref.: RQ11-114-2

## **APPENDIX C**

## **ACTIVE PERMITS AND LAND USE AUTHORIZATIONS**



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City of Iqaluit
Box 460
Iqaluit, Nunavut
X0A 0H0
Phone (867) 979-5600
Fax (867) 979-5922

C.P. 460 Iqaluit, Nunavut X0A 0H0 Tél. (867) 979-5600 Télécop. (867) 979-5922

Ville d'Iqaluit

admin@city.iqaluit.nu.ca www.iqaluit.nu.ca August 14th, 2015

Oliver Simard P.O. Box 1228, Iqaluit, NU XOA 0H0

-Sent by email - osimard@qenv.ca -

## **NOTICE OF DECISION – 15-024**

Re: Development Permit Application No. 15-024 (Plan 1673, Block 0, Lot 666)

I am pleased to inform you that your application for a Development Permit 15-014 to permit a Water Treatment Facility on Plan 1673, Block 0, Lot 666 (Parcels O and Q of SK-IQAL-001-2015) has been conditionally approved. The conditionally approved site work is shown on the Site Plan dated August 10<sup>th</sup>, 2015, received by the City August 11<sup>th</sup>, 2015.

Construction shall not begin until a Development Permit is issued. The following needs to be completed prior to issuance of the Development Permit:

#### **DECISION APPEAL PERIOD**

The decision on Application 15-024 is subject to a fourteen (14) days appeal period. Any person claiming to be affected by the decision has fourteen (14) days from the date the notice is posted to appeal the decision.

If there are no appeals filed with the City at the end of the 14 days, and if all the relevant conditions of the permit are met the Development Permit will be issued by the City.

The Notice of Decision will be posted on the property on August 14<sup>th</sup>, 2015. The appeal period will complete on August 28<sup>th</sup>, 2015.

A draft copy of the Development Permit conditions is attached to this letter for reference.

Should you have any questions, please do not hesitate to contact the planning department at 979-6363 ext. 227.

Yours truly,

Mélodie Simard Development Officer City of Iqaluit

desiel !

## **SPECIAL CONDITIONS**

## Future Development

1)The Developer/Lessee shall submit revised drawings and amend the Development Permit prior to any development, except for site grading, on the areas identified as "Future Development" on the Site Plan.

## Subject to an Airport Lease

2)The Developer/Lessee shall obtain the approval from GN Airports Division of the final plans submitted with the Development Permit application, prior to the City issuing the Development Permit. The approval shall be in letter format and shall reference the application number and identify the name and dates of the plans approved for development.

#### Drainage

3)The Developer/Lessee will be responsible for ensuring drainage functions as proposed on the Site Plan and that there is no impact on adjacent properties. Any required remedial works required on-site or off-site that result from the relocated drainage patterns shall be at the cost of the Developer.

#### **Culverts**

4)The Developer/Lessee shall place a minimum 450mm diameter culvert across the driveway accesses in accordance with the Iqaluit Municipal Design Guidelines (January 2005).

## **STANDARD CONDITIONS**

#### Damage to City Property

1. The Developer shall reinstate at its expense and to the satisfaction of the Development Officer, any City property including but not limited to roads, service vaults and signage, which may be damaged as a result of this development.

#### Grading & Drainage

2.All surface drainage where fill is introduced shall be contained within the limits of the lot and directed to a municipal drainage ditch in the adjacent road allowance.

#### Servicing

- 3. Water fill and sewage pump out connections, associated overflow vents, and the water tank level indicator shall be installed in accordance with the City of Iqaluit Municipal Design Guidelines and shall remain clear of obstructions at all times.
- 4. Water use shall not exceed 2,000 litres per day.
- 5. The Developer/Lessee shall install a water meter to the approval of the Superintendent of Public Works.

#### Fire Marshal

6.The Developer/Lessee shall meet all the requirements of the GN Fire Marshal <u>prior to</u> issuance of a Building Permit.

#### Signs

7. The Developer/Lessee shall erect signs, as may be required by the Development Officer.

## Building Permit (if applicable)

8. The Developer/Lessee shall obtain a Building Permit prior to commencement of construction.

## Lot Development Standards

- 9. The Developer shall install and maintain the following <u>water-saving devices</u> throughout the building:
  - a. All toilets to be water-saver or ultra-low flush toilet units using 6 litres/flush (1.3 imp. Gal./flush) or less.
  - b. All showerheads to be low-flow showerheads using 9.8 litres/min (2.2 imp. gal./min) or less when tested at 551 kPa (80 psi).
  - c. All washroom and kitchen faucets to use 8.3 litres/min (1.8 imp. gal./min.) or less when tested at 413 kPa (60 psi).
- 10.All <u>exterior lighting</u> installed on the lot or attached to a building will face downward and not illuminate beyond the boundary of the lot.
- 11. The Developer shall ensure that a <u>construction waste bin</u> is on the lot during construction to contain debris.



August 7, 2015

Qikiqtaaluk Environmental Inc. P.O. Box 1228 Iqaluit, NU XOA OHO

## Re: Application for Lease Land - Igaluit International Airport

I have reviewed the application for land on Lot 666, Play 1673 which has been labelled lots Q and O for the purposes of surveying.

You have received conditional approval for the lease, however in order to prepare the documentation we will need the following:

- 1. Finalized survey from the City of Iqaluit, once it has been completed. In the interim, we will utilize the information on Sketch number SK-IQAL-001-2015 Map 2;
- 2. A workplan which identifies:
  - a. the type of work that will be done on the lot;
  - b. the equipment that will be used;
  - c. the dates of the phasing of the work;
  - d. the permits from the City or other parties if you will be impacting on roads, utilities or areas leased by other tenants;
  - e. any other pertinent details which may impact upon the airport, roadway, or surrounding lands.
- Confirmation from you in writing that any storage building constructed on site will need to be reviewed at the planning and design stage, and then reviewed and approval issued from the GN Office of the Fire Marshall, as well as the Iqaluit International Airport prior to construction.
- 4. Documentation from the City of Iqaluit approving of the development in principle, and then once completed, a copy of the actual development permit;
- 5. A copy of your Environmental Protection plan for the development.

The current market rate for this land is \$1.26 per square meter. Development and preparation of the lot will be at the cost of the tenant. Tying into all utilities and services is also the cost of the tenant.

If you have questions about the above requirements, or any of the other requirements throughout the process of finalizing the lease, please contact me at 867-877-1970.

Yours truly,

Kathleen Henderson

Associate Services Director



# REGISTRATION FORM HAZARDOUS WASTE MANAGEMENT FACILITY

## Instructions

Section 1 - Identification

- The following information must be provided in order to register as a hazardous waste management facility in Nunavut and obtain a management facility number. Incomplete applications will be returned to the applicant.
- 2. Completed registration forms are to be forwarded to the Manager of Pollution Control, Department of Environment, Government of Nunavut, Box 1000, Station 1360, Iqaluit, Nunavut, X0A 0H0. Electronic registration forms are preferred and may be forwarded to <a href="mailto:EnvironmentalProtection@gov.nu.ca">EnvironmentalProtection@gov.nu.ca</a>.
- 3. Use additional pages to provide information as required.
- 4. Applicants should refer to the accompanying users' guide for further assistance on completing the management facility registration form.

Applicant (Legal Name) Qikiqtaalu	uk Environme	ental Inc.		
	Building 922, Nia	qunngusiaq Roa	ıd, Iqaluit (Nunavut)	
			Postal Code XOA 0H0	
Facility Address Iqaluit (Nunavut)				
			Postal Code XOA 0H0	
Principle Contact Person Harry Flaherty			Title President	
Phone 867-979-8406			Email hflaherty@qcorp	.ca
Alternate Contact Person Jacques	Dion		Title Vice President	
Phone 514-940-3332			Email jdion@qenv.ca	
Site Location(s) where Waste is Man	aged <u>Building</u>	g 1571, Federa	al Road, corner of Kakiv	ak Court, on Lot 3
Shipping Name (Description)	TDG Number	TDG Class	Quantity Managed each Month (L or Kg)	Frequency of Acceptance
see attached list				

## Section 2 - Continued

Attach a complete description of the proposed facility, safety measures, equipment and management processes to be used. Include engineered drawing where applicable.

Section 3 - Waste Managemen	t Information	
Type of Business (check all that apply) Type of Activity (check all that apply)		Manage Self-generated Waste Transfer X
Treat X	Recycle	Dispose
Hazardous Waste Generator(s) Used	Qulliq Energy Corporation, Ci	ity of Iqaluit, Uqsuq Oil, small businesses,
Hazardous Waste Carriers(s) Used NE Veolia (Quebec), Solva-Rec (Quebe	EAS, NSSI ec)	
	Response and Spill Contingend	cy Plan? Yes (attach copy) No _X
Section 4 - Certification		
I certify that the information provided		, ,
Signature of Contact Person	mesti	Date (dd/mm/yy) 15/07/11
Print Name of Contact Person Jacque		Title Vice President
Phone 514-940-3332		ion@qenv.ca
For Department Use Only Management Facility Number NUF#	400006 Approved by	Pale 2011-08-23

GN DoE Waste Generator and Transporter Registration

De: Eno, Robert [REno@GOV. NU. CA]

Envoyé: 31 août 2011 14:07

À: 'Karl Côté'

Objet: RE: application for waste carrier and waste generator

Hello Karl,

You registration numbers are as follows:

Generator: NUG 100045 Carrier: NUC 200011

With respect to the carrier number, you should be aware that you will be expected to consult with

Transport Canada and/or the Motor Vehicles Division of Community and Government

with respect to TDGR for road transport. DoE does not administer TDGR so I cannot speak to

the requirements.

If you have any questions, please do not hesitate to get in touch with me.

#### Robert

-----

Robert Eno Director, Environmental Protection Division Chief Environmental Protection Officer Dept. of Environment Gov't of Nunavut Iqaluit, NU 867-975-7729

From: Karl Côté [mailto:kcote@sanexen.com] Sent: Wednesday, August 31, 2011 11:18 AM

To: Eno, Robert

Subject: application for waste carrier and waste generator

Hi Robert,

Here are the 2 registration forms.

Karl

# REGISTRATION FORM HAZARDOUS WASTE RECEIVER



#### Instructions

- 1. The following information must be provided in order to register as a hazardous waste receiver in Nunavut and to obtain a receiver number. Incomplete applications will be returned to the applicant.
- 2. A receiver who operates a commercial business for the purpose of collecting, storing, transferring, treating, recycling or disposing of hazardous waste may be required to register the facility as a hazardous waste management facility. Refer to section 3.2.2 of the *Environmental Guideline for the General Management of Hazardous Waste* for further information.
- 3. Completed registration forms are to be forwarded to the Manager of Pollution Control, Department of Environment, Government of Nunavut, Box 1000, Station 1360, Iqaluit, Nunavut, X0A 0H0. Electronic registration forms are preferred and may be forwarded to <a href="mailto:EnvironmentalProtection@gov.nu.ca">EnvironmentalProtection@gov.nu.ca</a>.
- 4. Use additional pages to provide information as required.
- 5. Applicants should refer to the accompanying users' guide for further assistance on completing the receiver registration form.

Section 1 - Identification				
Receiver (Legal Name) Qikiqtaal	uk Environm	ental Inc.		
			q Road, Iqaluit (Nuna	vut)
			Postal Code X0A 0H0	
Principle Contact Person Harry Fl	nherty		Title President	
Phone 867-979-8406			Email hflaherty@qcorp	o.ca
Alternate Contact Person Jacque	es Dion		Title Vice President	
Phone 514-940-3332			Email jdion@qenv.ca	
Section 2 - Description of W	Building		al Road, corner of Kaki	
Shipping Name (Description)	TDG Number	TDG Class	Quantity Received each Month (L or Kg)	Frequency of Acceptance
see attached list				

Attach a brief description of the proposed facility.

Section 3 - Waste Management Information						
General Type of Business Environmental Contractor and Consultant						
General Type of Activity Environmental site remediation and hazardous waste management						
Hazardous Waste Generator(s) Used Qulliq Energy Corporation, City of Iqaluit, Uqsuq Oil, small businesses,						
garages, schools, households						
Hazardous Waste Carriers(s) Used NEAS, NSSI,						
Veolia (Quebec), Solva-Rec (Quebec)						
Hazardous Waste Management Facilities Used Qikiqtaaluk Environmental Inc.,						
Veolia (Quebec), Solva-Rec (Quebec)						
Do you have an approved Emergency Response and Spill Contingency Plan? Yes (attach copy) No _X						
Section 4 - Certification						
I certify that the information provided on this formyls correct, accurate and complete.						
Signature of Contact Person Date (dd/mm/yy) 15 / ot / 1]						
Print Name of Contact Person Acques Dion Title Vice President						
Phone 514-940-3332						
For Department Use Only Receiver Number NUR# 300001  Approved by Solet Eno Date 2011-08-23						

File No.: 1BR-THI1419

August 20, 2014

Greg Johnson, Director C/o Qikiqtaaluk Environmental Inc. 9935 Ave Catania, Entrance 1, Suite 200 Montreal, QC J4Z 3V4

Email: gjohnson@qenv.ca

**RE:** NWB Water Licence No. 1BR-THI1419

Dear Mr. Johnson:

Please find attached Licence No. **1BR-THI1419** issued to Qikiqtaaluk Environmental Inc. by the Nunavut Water Board (NWB) pursuant to its authority under Article 13 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada (Nunavut Land Claims Agreement or NLCA).* The terms and conditions of the attached Licence related to Water use and waste deposit are an integral part of this approval.

If the Licensee contemplates the renewal of this Licence, it is the responsibility of the Licensee to apply to the NWB for its renewal. The past performance of the Licensee, new documentation and information, and issues raised during a public hearing, if the NWB is required to hold one, will be used to determine the terms and conditions of the Licence renewal. Note that if the Licence expires before the NWB issues a new one, then Water use and waste disposal must cease, or the Licensee may be in contravention of the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*. However, the expiry or cancellation of a licence does not relieve the holder from any obligations imposed by the licence. The NWB recommends that an application for the renewal of this Licence be filed at least three (3) months prior to the Licence expiry date.

If the Licensee contemplates or requires an amendment to this licence, the NWB may decide, in the public interest, to hold a public hearing. The Licensee should submit applications for amendment as soon as possible to give the NWB sufficient time to go through the amendment process. The process and timing may vary depending on the scope of the amendment; however, a minimum of sixty (60) days is required from time of acceptance by the NWB. It is the responsibility of the Licensee to ensure that all application materials have been received and are acknowledged by the Manager of Licensing.

The NWB strongly recommends that the Licensee consult the comments received from interested persons on issues identified. This information is attached for your consideration. 1

Sincerely,

Thomas Kabloona Nunavut Water Board

Chair

TK/sa/ri

Enclosure: Licence No. 1BR-THI1419

Comments - AANDC

Cc: Qikiqtani Distribution List

 $^{\rm 1}\,$  Aboriginal Affairs and Northern Development Canada (AANDC), May 27, 2014.

#### **DECISION**

#### **LICENCE NUMBER 1BR-THI1419**

This is the decision of the Nunavut Water Board (NWB) with respect to an application, dated March 15, 2014, for a new Water Licence made by:

## QIKIQTAALUK ENVIRONMENTAL INC.

to allow for the disposal of waste during the operation of a commercial Hydrocarbon Impacted Water Treatment Facility located within the City of Iqaluit, Nunavut, generally at the following geographical coordinates:

Latitude: (63° 45' 45" N) Longitude: (68° 32' 36" W)
Latitude: (63° 45' 45" N) Longitude: (68° 32' 35" W)
Latitude: (63° 45' 44" N) Longitude: (68° 32' 44" W)

Latitude: (63° 45' 44" N) Longitude: (68° 32' 41" W) (Water Treatment Facility Extents)

#### **DECISION**

After having been satisfied that the application was for a location that falls outside of an area with an approved Land Use Plan<sup>2</sup> and exempt from the requirement for screening as described within Schedule 12-1 by the Nunavut Impact Review Board<sup>3</sup> in accordance with Article 12 of the *Nunavut Land Claim Agreement (NLCA)*, the NWB decided that the application could proceed through the regulatory process. In accordance with s.55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act (Act)* and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the applicant and considering the representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *NLCA* and of the *Act*, waived the requirement to hold a public hearing, and determined that:

Licence No. 1BR-THI1419 be issued subject to the terms and conditions contained therein. (Motion #: 2014-B1-016)

Signed this 15<sup>th</sup> day of July 2014 at Gjoa Haven, NU.

Thomas Kabloona

Nunavut Water Board, Chair

TK/sa/ri

<sup>&</sup>lt;sup>2</sup> Nunavut Planning Commission Land, Use Conformity Determination, July 26 2013.

<sup>&</sup>lt;sup>3</sup> Nunavut Impact Review Board Screening Exemption Decision, April 28 2014.

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#### INTRODUCTION

Between September 2013 and March 2014, the Board received, from Qikiqtaaluk Environmental Inc. (the Licensee or Proponent), an application and supporting information (Application) for a Type "B" Licence to construct and operate a proposed Water Treatment Facility (WTF) for the purpose of treating hydrocarbon impacted Water generated from spills occurring within the City of Iqaluit, Nunavut.

The WTF is expected to include the following main components:

- an oil/Water separator;
- particulate filters;
- activated carbon filters;
- patented ultra-sorption filters;
- Water pumps; and
- treated effluent storage reservoirs (from which the effluent will be sampled and analyzed prior being discharge).

The waste generated from the treatment process, including oil, lubricants, sludge, waste filter, and contaminated soil, is expected to be treated and/or disposed of at an approved facility in accordance with applicable regulations.

#### PROCEDURAL HISTORY

The following is a list of the submissions received by the Board in support of the Application:

## **September 12, 2013**

- General Water Licence Application;
- Abandonment and Remediation Plan, Hydrocarbon Impacted Water Treatment, dated September 2013;
- Qikiqtaaluk Environmental Inc., Certificate of Incorporation, Industry Canada;
- Hydrocarbon Impacted Water Treatment, Cost Estimate in Case of Abandonment for Security;
- Cover letter, dated on September 12, 2013, in English and Inuktitut;
- Layout of Water Treatment Unit (two drawings);
- Spill Contingency Plan Hydrocarbon Impacted Water Treatment, dated September 2013;
- Table of Contents; and
- City of Iqaluit, Topographical Map.

## Received on March 17, 2014

Updated Water Licence Application, Hydrocarbon Impacted Water Treatment dated March 15, 2014, containing:

- General Water Licence (Application for a New Water Licence);
- Figure 4: Water Treatment Unit;
- Figure 5: Water Treatment Unit;
- Hydrocarbon Impacted Water Treatment Cost Estimate in Case of Abandonment for Security;
- Industry Canada, Certificate of Incorporation;
- Executive Summary (English), dated September 12, 2013;

- Executive Summary, Inukitut;
- Spill Contingency Plan Hydrocarbon Impacted Water Treatment, dated September 2013:
- Abandonment and Remediation Plan Hydrocarbon Impacted Water, dated September 2013; and
- Supplementary Information Requirements, Re: File No. 1BR-THI---, Type "B" Application by Qikiqtaaluk Environmental Inc. for a Hydrocarbon Impacted Water Treatment Project, dated March 14, 2014.

Following an internal review, the NWB distributed the Application on April 23, 2014 for a thirty (30) day public comment period with a deadline for submissions set for May 23, 2014. Due to administrative matters associated with some of the information provided, the deadline for submission was extended to May 27, 2014. On or before the extended deadline, a submission was received from Aboriginal Affairs and Northern Development Canada (AANDC). In its submission, AANDC provided comments and recommendations with respect to measures that the Proponent could implement to minimize potential impacts of the project on the receiving environment; however, it did not provide any written objections to the potential issuance of a licence.

Apart from the comments received from AANDC, the Board received the NPC Land Use Conformity Determination for the project on September 12, 2013, which states that the Project proposal is located outside the boundaries of the two currently approved land use plans. In addition, the Board received on April 28, 2014, the NIRB determination for the project, which states that the Application is exempt from screening pursuant to Schedule 12-1 of the NLCA.

Copies of the submission received as well as all documents related to this Application can be accessed through the NWB's ftp site using the following link (**Username**: public and **Password**: registry):

ftp://nunavutWaterboard.org/1%20PRUC%20PUBLIC%20REGISTRY/1%20INDUSTRIAL/1B/1BR%20-%20Remediation/1BR-THI----%20Qik%20Env/.

#### GENERAL CONSIDERATIONS

#### **Term of the Licence**

In accordance with the Nunavut Waters and Nunavut Surface Rights Tribunal Act, s. 45, the NWB may issue a licence for a term not exceeding twenty-five (25) years. The Proponent requested in its Application a twenty five (25) year term for the licence. However, the Board has granted a five-year-term licence to the Project, which is generally granted for new licences for this type of an undertaking. AANDC also provided comments within their submission regarding a shorter term and that a five year licence term is recommended to allow an earlier opportunity to reconsider licence terms and conditions. The Board believes that the term granted will provide the Licensee with adequate opportunity to consistently demonstrate its ability to comply with the requirements in the Licence in advance of any future renewal and/or consideration of a longer term licence by the Board.

#### **Annual Report**

Under the reporting section of the Licence, Part B, Item 1, the Licensee is required to submit, on an annual basis, a report that describes the Licensee's activities as they relate to waste deposition during the preceding year. The Board makes annual reporting information available to interested persons upon request in addition to making the information available in its public registry. Public access to annual information reporting submitted by all licensees is made available through the NWB's ftp site using the following link (**Username**: public and **Password**: registry): <a href="ftp://nunavutwaterboard.org/1%20PRUC%20PUBLIC%20REGISTRY/">ftp://nunavutwaterboard.org/1%20PRUC%20PUBLIC%20REGISTRY/</a>.

## **Security**

As part of its Application, the Proponent included a financial estimate of \$79,340 for potential reclamation activities that might be associated with the proposed project in the document entitled Hydrocarbon Impacted Water Treatment, Cost Estimate in Case of Abandonment for Security, received September 12, 2013. AANDC in its submission indicated that it believes that the cost estimate provided by the Proponent is reasonable and should be considered by the Board. While the Board welcomes the information on reclamation security provided by the Proponent, the Board has decided to exclude, at this time, requirements in the licence related to posting of reclamation security for the Project. The Board understands that reclamation security for this type of undertaking has to be examined in a holistic manner and in accordance with the type of undertaking so as to avoid a tiered approach to reclamation security requirements for similar undertakings. The Proponent is, however, required to update the security estimate provide, as needed, to reflect the scope of and operational conditions for the project over time, under Part C, Item 2 in the Licence. In addition, should the Project scope change or further reviews of subsequent applications and information provided through Annual Reports and Inspection Reports warrant the need, and the Board approach to reclamation security broaden, the requirements for providing a total reclamation security for site liability may be required.

#### **Deposit of Waste**

Details provided in the Application indicate that, in addition to the treatment of hydrocarbon contaminated Water/snow/ice and the discharge of effluent in accordance with the licence conditions and Effluent quality criteria under Part E, Item 10, the following waste types will potentially be generated by the Water Treatment Facility (WTF): waste fuel and filters; oil, lubricants and liquid sludge; contaminated Water; contaminated soil; and other hydrocarbon contaminated waste. All waste generated will require management in accordance with the terms and conditions in this licence and/or applicable legislations and guidelines for wastes generated and proposed to be removed from site to an approved hazardous waste management facility.

Under Part E, of the Licence, the Licensee is required to manage primary waste and residual waste generated from its undertaking in accordance with applicable regulations including the Government of Nunavut - Department of Environment, *Environmental Guideline for Used Oil and Waste Fuel* (June 2012). Additional conditions have been included under Part E of this Licence to address overall waste management practices.

#### **Spill Contingency Plan**

Under Part H, Item 1 of the Licence, the Board has approved the Spill Contingency Plan submitted as additional information with the Application. The Licensee is, however, required

to address and submit, with its 2014 Annual Report, a revised plan as outlined in Item 2, that addresses comments and recommendations provided by AANDC during comment period and any other revisions that may become apparent in carrying out the activities associated with the undertaking.

#### **Abandonment and Restoration Plan**

The Board has approved the Interim Abandonment and Restoration (A&R) Plan that was submitted as additional information with the Application under Part I, Item 1 in the Licence. The licensee is required to annually review the Plan and to update the A&R plan on an ongoing basis to reflect any changes in operational conditions and scope of activities associated with the project.

## **Monitoring**

Petroleum products or petroleum hydrocarbons (PHC) is a general term used to describe mixtures of organic compounds found in or derived from substances such as oil, bitumen and coal. These products released to soil and water can lead to contaminants entering into the environment through volatilization, adsorption to solid organic matter, leaching by rainwater and dissolution into groundwater, or through contaminated surface runoff migration to oceans, lakes, rivers and streams.

Accordingly to the Application, treated water previously impacted by petroleum products, will be discharged at the Final Discharge Point, with the effluent Final Discharge Point location yet undetermined.

To ensure that effluent generated from the facility does not exceed specific criteria, the Board has included general Effluent quality limits for the treated effluent, at the point of discharge, under Part E, Item 10. Parameters not included under Part E, Item 10 but relevant to the undertaking must not exceed values set in the Canadian Council of Ministers of Environment (CCME) Canadian Water Quality Guidelines for the Protection of Aquatic Life.

Furthermore, characterization of effluent, soil and Waters at the Final Point of Discharge, in addition to the information of contaminants levels, would help on determining if the discharged effluent had an impact on the environment and, if contamination is identified, would help to determine those parameters that shall be tracked during the remediation process.

Analysis recommended for soil and water characterization where petroleum hydrocarbon contamination is suspected<sup>4,5</sup> include Total Petroleum Hydrocarbon (TPH), Polycyclic Aromatic Hydrocarbons collectively referred as PHAs, benzene, toluene, ethylbenzene and xylenes collectively referred as BTEX and Canadian Wide Standards for petroleum hydrocarbon in soil fractions, CWS-PHC fractions. These contaminants are usually accompanied by heavy metals such as chromium, copper, lead, manganese, nickel and zinc that are commonly found in used lubricating oil from friction wear on engine parts.

Therefore, under Part J, Item 4 of the Licence, the Board has established a list of additional

<sup>4</sup> Federal Guidelines for Landfarming Petroleum Hydrocarbon Contaminated Soils, Federal Contaminated Sites Action Plan (FCSAP), 2013

<sup>5</sup> Guideline for the Dismantling and Removal of Petroleum Storage Tank Systems, Manitoba, 2007

parameters that the licensee is required to monitor for the purposes of developing site-specific effluent quality criteria and/or limits given that such criteria and limits may be more reflective of operational conditions for the treatment processes involved and the receiving environment at the final point of discharge.

And, under Part J, Item 6, the Board has included conditions that require the Licensee to submit a Monitoring Plan to the Board for approval, within sixty (60) days following the date of issuance of this Licence. To ensure that monitoring is conducted in accordance with established practices, the Board has included conditions requiring the Licensee to submit a Quality Assurance / Quality Control (QA/QC) Plan along with a cover letter from an accredited laboratory confirming acceptance of the Plan.

## **Operation and Maintenance Plan**

To ensure that documented procedures pertaining to the operation of the facility for the undertaking are developed, the Licensee is required to submit an Operation and Maintenance (O&M) Plan for the WTF, to address the collection, treatment, and discharge of petroleum hydrocarbon impacted snow/ice/water and the handling of wastes generated from the undertaking requiring shipment off-site to an approved hazardous waste handling facility. Part G, Item 4 addresses the requirement to submit an O&M Plan within sixty (60) days from the date of issuance of this licence.