



September 2, 2016

Mardy Semmler
Executive Director
Inuvialuit Water Board
P.O. Box 2531
125 Mackenzie Road
Suite 302, Professional Building
Inuvik, NT X0E 0T0

**Re: Hamlet of Ulukhaktuk
Water Licence Application – N7L3-1525
Type B Municipal Water Licence
Request for Review and Comments**

Dear Mr. Semmler,

The Department of Environment and Natural Resources (ENR), Government of the Northwest Territories (GNWT) has reviewed the application at reference based on its mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Forest Protection Act*, the *Species at Risk (NWT) Act*, the *Waters Act* and the *Wildlife Act* and provides the following comments and recommendations for the consideration of the Board.

Topic 1: Spill Contingency Plan (SPC) - Section 1.11 Hazardous Materials Stored on Site

Comment(s):

Table 2 lists the types of hazardous materials stored on-site, the type of storage container, the normal and maximum storage quantities and the storage locations. One of the items in the table is listed simply as drum waste.

Recommendation(s):

- 1) Please define the types of wastes that are stored in drums on-site, as well as the quantities of each.

Topic 2: SPC - Section 1.12 Preventive Measures

Comment(s):

In this section it is stated that operators should be trained in safe handling and disposal procedures.

Recommendation(s):

- 1) Please provide additional details on the training that is required.

Topic 3: SPC - Section 5 Training Program

Comment(s):

This section mentions training being provided by ENR to the community without providing any specific details.

Recommendation(s):

- 1) Provide details of any training that has occurred including dates, locations, instructors. The syllabus used in the training courses should be included in an Appendix.

Topic 4: SCP - Appendix B Material Safety Data Sheets (MSDS)

Comment(s):

This section of the plan does not contain any information.

Recommendation(s):

- 1) A complete set of MSDS sheets for all products listed in Table 2 should be included in Appendix B.

Topic 5: Hazardous Waste Management Plan (HWMP) - Section 3.2 Design of Temporary Storage Site

Comment(s):

The HWMP states the following:

*The following design features for temporary hazardous waste storage sites come from the **Environmental Guideline for the General Management of Hazardous Waste (Department of Environment, Government of Nunavut, 2010)**. These design features should be applied to the temporary hazardous waste containment site at the Ulukhaktok solid waste facility.*

The HWMP references the Government of Nunavut Guideline, however ENR-GNWT has a [similar guideline](#) but not exactly the same. It is important to reference the [Guideline for the General Management of Hazardous Waste in the NWT](#).

Recommendation(s):

1) Revise the document to reference the following document:

[Guideline for the General Management of Hazardous Waste in the NWT](#).

Topic 6: HWMP - Section 3.2 - Unacceptable Hazardous Waste

Comment(s):

This section does not clarify what is unacceptable beyond pathogenic, radioactive, and asbestos. Residents generate household hazardous waste in relatively small quantities and the industrial commercial and institutional (ICI) sector is required to transport their hazardous waste to appropriately registered receiving facilities. The Hamlet of Ulukhaktok, despite the accumulation of historic hazardous waste stockpiles, is not registered as a receiver of hazardous waste from the ICI sector. ENR has developed a guide for developing a HWMP that outlines a decision making process for determining what commonly encountered hazardous wastes are acceptable and unacceptable from either residents or the ICI sector. This guide may be obtained by emailing Gerald_enns@gov.nt.ca.

The section also states the following:

To some extent, the acceptability of large quantities of wastes must be at the site owner's discretion, depending on the ability to accommodate disposal without deterioration in the level of service. In cases where unacceptable wastes are identified, site staff will attempt to identify allowable management alternatives to material haulers.

It is not clear what is considered “large quantities” and does not provide clarity for Hamlet staff or decision makers about what is acceptable or what “allowable management alternatives” may be.

Recommendation(s):

1) That the Hamlet of Ulukhaktok reference the *Guideline for Developing a Hazardous Waste Management Plan* to further clarify what is unacceptable hazardous waste.

Topic 7: HWMP - Section 3.4 - Method and Treatment of Disposal of Hazardous Wastes

Comment(s):

This section includes selective references from the [Guideline for the General Management of Hazardous Waste in the NWT](#) (not Nunavut) that may be misunderstood when not read in context with the entire [section 4.2](#) which does not prescribe certain methods of treatment and disposal but states the following:

*Treating hazardous waste to reduce or eliminate their hazard is the final option after implementing appropriate pollution prevention options. It is the responsibility of the generator to treat or dispose of their hazardous waste properly. Although a discussion of treatment and disposal methods is beyond the scope of this guideline, **the following are general points for consideration:***

For example it may not be practical to rinse empty containers and manage rinsings in Ulukhaktok.

Recommendation(s):

- 1) Revise the wording in this section to reference the *Guideline for the General Management of Hazardous Waste in the NWT*.
- 2) Revise the wording to clarify that these are not prescriptive methods of treatment and disposal but are general points for consideration.
- 3) If referencing the guideline requires quoting sections, that the entire section be included and not selective points.

Topic 8: HWMP - Section 3.4.1.2 Vehicles (Snowmobiles, ATVs, Cars, Trucks)

Comment(s):

The following guides are step by step resources for removing these pollutants in a northern setting that have been made publically available in recent history:

- a) Protecting the Land A Practical Guide to ELV Recycling in the North
<http://summerhillimpact.org/site/wp-content/uploads/TTB-Guidebook-v1aug2014.pdf>
- b) Quick Reference Instruction Sheets

<http://summerhillimpact.org/site/wp-content/uploads/TTB-Guidebook-QR-v1aug2014.pdf>

- c) Vehicle Mercury Switches and ABS sensors
www.switchout.ca

Recommendation(s):

- 1) Include reference to the recently developed guides for depollution end of life vehicles.

Topic 9: HWMP - Section 3.4.2.1 - Waste Batteries

Comment(s):

The section on stockpiling provides different guidance on the storage of waste batteries with respect to storage in drums or on pallets. ENR understands that vehicle type batteries are typically stored on good quality pallets with non-conductive barriers between the layers. Broken batteries need to be secured in leak proof containers to contain any fluid.

Recommendation(s):

- 1) This section needs clarification to ensure Hamlet staff will be trained to be cognizant of what type of storage is required for vehicle batteries.

Topic 10: HWMP - Section 3.4.2.1 - Used Oil and Waste Fuel

Comment(s):

The HWMP states the following:

Transporting to a recycling facility will involve shipping waste oil out of the community via truck. Hazardous waste/recyclable manifests will need to be completed.

Recommendation(s):

- 1) This statement should be revised to reflect Ulukhaktok's location and that barge transport will also be required.

Topic 11: HWMP - General Comments

Comment(s):

- 1) The document includes multiple reference to guidance documents developed in Nunavut that are also developed in the NWT and available for download on the Department of Environment and Natural Resources website at the following link:

<http://www.enr.gov.nt.ca/programs/hazardous-waste>

- 2) The document does not discuss the management of contaminated soil generated within the community. Similar to other types of hazardous waste, contaminated soil has the potential to release contaminants. Table 1 on page 4 does not indicate the quantity of contaminated soil/snow/water being stored, and the plan does not indicate acceptable thresholds for accepting contaminated soil/snow/water. MACA's revised solid waste operators course guide provides basic information on treating hydrocarbon contaminated soils and can be practically applied to small residential spills, however large scale remediation projects do require qualified professionals to carry out soil testing and treatment.

Recommendation(s):

- 1) That the HWMP reference the guidelines developed in the NWT for the appropriate context.
- 2) That the HWMP outline:
 - a) acceptable quantities and thresholds for accepting contaminated soil/snow/water;
 - b) indicate if the bermed area is lined; and
 - c) provide approximate dimensions or photograph's of this area.

Topic 12: CIMP Funded Study - *"Municipal Water Monitoring in Lutsel K'e and Trout Lake"*

Comment(s):

Given that this project involves the use of water and disposal of waste for municipal purposes, ENR wanted to bring a related NWT CIMP funded study to the attention of the Board: *"Municipal Water Monitoring in Lutsel K'e and Trout Lake"*. The goal of this project was to communicate the role of Water Licenses in guiding municipal wastewater management and to build confidence in water monitoring with the community broadly. As such, it may provide assistance in the Board's decision. The report can be found on the Discovery Portal at the following website:

http://sdw.enr.gov.nt.ca/nwtdp_upload/Municipal%20Water%20Monitoring%20in%20Lutsel%20Ke%20and%20Trout%20Lake%20March%202012.pdf.

Recommendation(s):

No Recommendation.

Topic 13: Methods to Control Effluent Discharge Quality

Comment(s):

As part of the renewal application, an “Additional Information document” was provided. The document states the following for the Solid Waste Disposal Facility (SWDF):

“In 2013, ditches were constructed along the north side of the solid waste site to intercept surface run-off draining from north of the site. Previously, the site had a large problem with surface run-off pooling in the solid waste site, covering almost the entire active disposal area. The ditches have redirected the runoff to flow away from the solid waste site and follow a drainage path that eventually leads to the Beaufort Sea. This has reduced the amount of water pooling in the active cell significantly. There are no other methods in place to control effluent”.

As per the above statements, it appears the issue with the ponding of water within the disposal site was natural runoff from north of the SWDF, and not runoff from within the SWDF. This needs to be confirmed. If in fact, the runoff is natural from the north of the SWDF (not contaminated), then the proposed ditch can function as designed. If there are confirmed contaminants within this runoff water from the SWDF, then there should be mechanisms to control this runoff and prevent contamination of the receiving environment.

Recommendation(s):

- 1) The water that is diverted by the runoff ditches should be confirmed to be natural runoff as described in the statements above.
- 2) The renewed Water Licence should include SNP monitoring in the drainage ditches to confirm quality and ensure it is natural runoff only.
- 3) If the results of the monitoring confirm that contamination from the SWDF is influencing the quality of runoff water, then remedial measures or methods should be developed and implemented for the drainage ditch.

Topic 14: Contaminated Soil and Snow Management

Comment(s):

The “Additional Information document” indicates the Contaminated Soil and Snow Facility is bermed. Contaminated soil and snow is placed and stored within the bermed area for treatment by natural attenuation. However, there appears to be no management system to prevent the contaminated runoff water from the soil or snow from potentially entering groundwater or seepage to surface water through the berms.

Furthermore, the site plan or berm construction is not described in the SWDF Operations and Maintenance Plan (O&M Plan). The location and maintenance of the facility is also not described. It is not clear what is done to ensure water from within the facility has been remediated prior to release.

Recommendation(s):

- 1) That the Hamlet verifies to reviewers, and in the application, that the facility is fully capable of storing and treating contaminated soil and snow.
- 2) The Hamlet should indicate to reviewers, and in the application, if water is allowed to accumulate in the facility and what is done to remove the water, and how it is decided that the water is safe for release.
- 3) That the Hamlet indicates to reviewers, and includes in the application, a description of the estimated volumes, and the management strategies for the contaminated soil and snow.
- 4) That the Hamlet include in the SWDF O&M Plan a Site Plan indicating the location of the contaminated soil and snow management area. This should be indicated to reviewers, and in the application, and with a schematic of the area to show height and width of berms and how the berms were constructed and their composition.
- 5) It is recommended the Board include a SNP station within the facility to monitor the quality of collected water and set EQC for its release.

Topic 15: Water Licence Deficiencies

Comment(s):

The 2015 Annual inspection from ENR’s Water Resource Officer (WRO) provide comments and recommendations to the Hamlet regarding the submission of Annual

Reports and required plans. ENR acknowledges that outstanding Annual Reports have been submitted since the 2015 inspection.

Recommendation(s):

- 1) ENR encourages the Hamlet, as part of the Water Licence renewal process, to proceed with implementing the WRO's recommendations and submit any remaining plans that are outstanding. Further, the Hamlet must ensure it performs the SNP sampling as directed by the Board, and as per the renewed Water Licence.

Comments and recommendations were provided by ENR technical experts in the Water Resources Division, the Environment Division, the Conservation, Assessment and Monitoring Division and the Inuvik Region and were coordinated and collated by the Environmental Impact Assessment Section, Conservation, Assessment and Monitoring Division (CAM).

Should you have any questions or concerns, please do not hesitate to contact Patrick Clancy, Environmental Regulatory Analyst at (867) 767-9233 Ext: 53096 or email patrick.clancy@gov.nt.ca.

Sincerely,



Patrick Clancy
Environmental Regulatory Analyst
Environmental Impact Assessment Section
Conservation Assessment and Monitoring Division
Department of Environment and Natural Resources
Government of the Northwest Territories