

## Elaine Briere - MVLWB

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**From:** Angela Plautz - MVLWB [aplautz@mvlwb.com]  
**Sent:** Friday, December 04, 2009 9:47 AM  
**To:** 'Peters, Ann'; sao@fortliard.com  
**Cc:** permits@mvlwb.com  
**Subject:** MV2009L3-0025: Comments received on WL Application  
**Attachments:** INAC comments - Fort Liard Renewal application.pdf; MV09L3-25 - DFO's comments.pdf; MV09L3-25 ENR's Dvlp\_Comm\_Haz\_Mgmt\_Plan\_2009\_08.docx; MV2009L3-0025 ENR Comment Extension Request Approval 09-26-09.docx; MV2009L3-0025 Fort Liard Water Licence Renewal Comments (EC) .pdf

Good morning,

The Board received comments from the Department of Environment and Natural Resources (ENR), Indian and Northern Affairs Canada (INAC), Department of Fisheries and Oceans (DFO) and Environment Canada (please see attached). In particular, can you address INAC's question about the appropriate frequency for sampling backwash discharge (on page 1) and ENR's comment with respect to the Hamlet not accepting outsourced industrial waste or providing a revised projection of waste volumes (page 5)? How much time do you need to respond to these questions and other comments?

Thank you and have a great day,

Angela



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File: MV2009L3 - 0025  
Hamlet of Fort Liard

November 27<sup>th</sup> 2009

To: Angela Plautz  
Regulatory Officer  
Mackenzie Valley Land and Water Board  
P.O. Box 2130  
Yellowknife, NT X1A 2P6

**SEND BY FAX:** (867) 873-6610

**RE: HAMLET OF FORT LIARD – TYPE B MUNICIPAL WATER LICENCE  
RENEWAL APPLICATION**

Indian and Northern Affairs Canada (INAC) has reviewed the Hamlet of Fort Liard Type B Water Licence Renewal Application and related documents. INAC would like to submit the following comments for the consideration of the Board.

**GENERAL**

The information provided by the Hamlet of Fort Liard within its application is useful and complete. INAC would like to thank the Hamlet of Fort Liard for providing this information with the application. INAC would like to note that due to its familiarity with the site, the comments provided herein are based on the application as well as experience and familiarity with the site.

**WATER TREATMENT**

- The application states that Backwash Water is being collected in a sump and subsequently pumped into the Liard River. Presently no sampling of the backwash water is performed prior to discharge. INAC recommends that Backwash Water be sampled prior to discharge and tested for a basic suite of parameters including chlorine and metals. The frequency of backwash discharge was not identified in the application. INAC recommends the Hamlet of Fort Liard provide this information to determine appropriate sampling frequency. Following a review of the sampling results, disposal options should be evaluated to confirm

whether or not direct discharge to the Liard River is the most appropriate disposal method.

## **SEWAGE DISPOSAL**

- The application states that in 2009, Cell 2 and 3 will be decanted and flow direction will be reversed. The application also notes that future operation of the lagoon will include Cell 2, 3 and 4 only and that Cell 1 will be decommissioned. INAC recommends that the Operation and Maintenance Manual for the Sewage Disposal Facility be updated to reflect this change. The Closure and Reclamation Plan for the site should also be updated to include reclamation of Cell 1.
- The application states that the Hamlet is not recording the quantity of sewage that is being discharged into the lagoon. INAC recommends that this information be collected and reported in the annual report.
- The Hamlet identifies that the ideal volume of all cells occurs when the freeboard is only 0.5m. INAC would like to note that the freeboard limit contained within water licences is generally a minimum of 1.0m and INAC recommends that with respect to this application, the freeboard limit should remain at 1.0m.
- The Canadian Council for the Ministers of the Environment (CCME) recently signed a Canada-Wide Strategy (the Strategy) to regulate Municipal Wastewater Effluent (MWE) across Canada. Within this Strategy, a period of 5 years is allocated to identify National Performance Standards appropriate to remote or Northern conditions. The current treatment system operated by the Hamlet appears to have no problem meeting the new recommended requirements of 1000 CFU/100ml, 40mg/l BOD, and 30mg/l TSS. Since no Northern Standards have been set by the CCME, INAC suggests that the above criteria may be appropriate for this application and assist in the development of northern performance standards.

INAC would also like to note that a Northern Research Working Group (NRWG) co-chaired by INAC and Environment Canada has been formed to facilitate understanding of municipal wastewater effluent and site conditions in the North by providing a communication forum and a technical base of expertise on Northern municipal wastewater issues. For more information about the NRWG, please contact Ms. Catherine Mallet at [Catherine.Mallet@inac-ainc.gc.ca](mailto:Catherine.Mallet@inac-ainc.gc.ca) or Ms. Anne Wilson at [Anne.Wilson@ec.gc.ca](mailto:Anne.Wilson@ec.gc.ca).

## **SOLID WASTE DISPOSAL**

- A new solid waste facility is planned to be constructed in the near future. INAC recommends that a final Solid Waste Facility design be submitted to the Board for review and approval. The Plan should include where the site will be located and the environmental conditions at that location (substrate, drainage patterns, etc.), as

well as how the site will be constructed and operated (monitoring, maintenance, etc.).

Once the Hamlet decides to decommission the current solid waste disposal site, it is recommended that a Closure and Reclamation Plan be submitted to the Board for review and approval as described in Part F, Section 1.

- It is INAC's understanding that the Hamlet of Fort Liard has been storing hazardous materials onsite for an extended period of time and has not been regularly shipping these wastes for offsite for proper disposal. INAC would like to note the importance of proper disposal of Hazardous Wastes such as used oil, waste fuel and batteries. It is necessary to ensure the proper long term management and operation of the Hamlet's solid waste disposal facility, as well as prevent negative long term impacts to the environment.

## **WATER LICENCE CONDITIONS**

In addition to the recommendations above, INAC would like to provide the following recommendations with respect to terms and conditions to be placed within the water licence. If possible, INAC would appreciate the opportunity to review the draft water licence prior to issuance.

- Part B. General Conditions  
Item 1 should also include the annual quantities of Sewage disposed in the Wastewater Treatment Facility.
- Part I: Spill Contingency Planning  
Item 1 should refer to INAC's new "Guidelines for Spill Contingency Planning" April 2007. Copies of the Guidelines can be obtained from the Water Resources Division by contacting Chelsea Janz at [Chelsea.Janz@inac.gc.ca](mailto:Chelsea.Janz@inac.gc.ca) or (867) 669-2654.

## **SURVEILLANCE NETWORK PROGRAM**

- The application notes that in 2009, Cell 2 and 3 will be decanted and flow direction will be reversed. SNP Station 1478-4 and SNP Station 1478-5 should be relocated to reflect this change.
- INAC recommends that 1478-7 be sampled to monitor the quality of backwash water prior to discharge.
- An additional SNP station should be added to sample the runoff from the Solid Waste Disposal Site. Site location should be determined in conjunction with the INAC Inspector. INAC recommends that sampling be performed once a year during periods of flow and analyzed for pH, total suspended solids, hydrocarbons and total metals.

- INAC recommends that a map of SNP sampling locations as well as GPS coordinates of SNP Stations be provided. Proper signage should also be installed at the new SNP sites.

Thank you for the opportunity to provide comments on this application. If you have any questions or concerns please contact either Ms. Catherine Mallet at (867) 669-2402 [Catherine.Mallet@inac-ainc.gc.ca](mailto:Catherine.Mallet@inac-ainc.gc.ca) or Mr. Troy Searson at (867) 695-2626 [Troy.Searson@inac-ainc.gc.ca](mailto:Troy.Searson@inac-ainc.gc.ca)

Sincerely,



*for*  
Carole Mills  
Manager  
Water Resources Division  
Indian and Northern Affairs Canada

November 26, 2009

File: MV2009L3-0025

Mr. Todd Paget

Government of the Northwest Territories - Environment and Natural Resources

PO Box 1320

YELLOWKNIFE NT X1A 2L9

Fax: (867) 873-0221

Dear Mr. Paget:

**Review Comment Extension Request Approval**

Thank you for your phone call dated November 26, 2009 regarding a request for a five-day extension for the public comment deadline. The Mackenzie Valley Land and Water Board (the Board) staff has extended your comment deadline until 5:00 on December 2, 2009. Any comments made after this date will not be considered by the Board.

Please keep in mind that our Information Review Policy states:

Any comments and/or information provided after the submission deadline will not be considered as part of the information and evidence for the Board's decision making; however, any relevant information or comments provided after the submission deadline will be placed on the Public Registry.

If you have any questions, please contact me at (867) 669-0506 or email [permits@mvlwb.com](mailto:permits@mvlwb.com).

Yours sincerely,

Angela Plautz  
Regulatory Officer

# Developing a Community Based Hazardous Materials Management Plan

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## Developing a Community Based Hazardous Materials Management Plan

### Introduction

Hazardous materials in Municipal Solid Waste Disposal Facilities (MSWDF) present a management problem. It is good practice to remove all quantities of hazardous waste from regular garbage. The goal of a hazardous waste management plan is to ensure that hazardous materials are managed in a manner that protects human health and the environment.

Some of the potential problems associated with hazardous, or unacceptable waste are as follows,

- Liability due to the release of contaminants,
- Liability to remediate contamination at solid waste site,
- Worker injury,
- Adverse reactions against facility from neighbors and general public.
- Contravention of the NWT *Environmental Protection Act*,

The objective of this document is to consolidate the Department of Environment and Natural Resources (ENR) regulatory requirements for hazardous waste in a decision making format that facilitates the development of community based hazardous waste management plans.

### Regulatory Authority

The Environment Division (ED) of ENR is responsible for initiatives which control the discharge of contaminants and their impact on the natural environment. ENR is responsible for ensuring that environmentally acceptable management procedures, emission levels and disposal methods are maintained. By practise, ENR programs are applied primarily to Commissioner's Land, and lands administered by municipal governments or at GNWT undertakings.

Section 2.2 of the *Environmental Protection Act* (EPA) gives the Minister of ENR of the Government of the Northwest Territories (GNWT) the authority to develop, coordinate and administer guidelines. ENR registers generators, carriers and receivers of hazardous waste and tracks the movement of hazardous waste to final disposal according to the Guideline for the General Management of Hazardous Waste<sup>1</sup>. Guidelines for different wastes have been developed by ENR and are available at the following website.

[http://www.enr.gov.nt.ca/live/pages/wpPages/Waste\\_Management\\_Program\\_publications.aspx](http://www.enr.gov.nt.ca/live/pages/wpPages/Waste_Management_Program_publications.aspx).

- [Guideline for Agriculture Waste](#)
- [Guideline for Ambient Air Quality Standards for Sulphur Dioxide and Total Suspended Particulate](#)
- [Guideline for Biomedical Waste in the NWT](#)
- [Guideline for Dust Suppression](#)
- [Guideline for the General Management of Hazardous Waste](#)



- [Guideline for Industrial Waste Discharges](#)
- [Guideline for Site Remediation](#)
- [Guideline on Ozone Depleting Substances and Halocarbon Alternatives](#)
- [Guideline on Waste Antifreeze](#)
- [Guideline on Waste Asbestos](#)
- [Guideline on Waste Batteries](#)
- [Guideline on Waste Lead and Paint](#)
- [Guideline on Waste Paint](#)
- [Guideline on Waste Solvents](#)

The Used Oil and Waste Fuel Management Regulations allow used oil and waste fuel to be consigned to businesses with registered waste oil furnace the NWT. The regulations and plain language guide can be found at the following website.

[http://www.justice.gov.nt.ca/PDF/REGS/ENVIRON\\_PROTEC/Used\\_Oil\\_and\\_Waste\\_Fuel\\_Mgmt.pdf](http://www.justice.gov.nt.ca/PDF/REGS/ENVIRON_PROTEC/Used_Oil_and_Waste_Fuel_Mgmt.pdf)  
[http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/Used\\_Oil\\_Guide.pdf](http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/Used_Oil_Guide.pdf)

These guidelines do not replace the regulatory requirements of the community's water license or any other federal regulatory requirement.

### **Recordkeeping and Reporting**

Municipal Governments are registered as hazardous waste receivers for the wastes they plan to accept, and generators for the hazardous waste they transport out of their community disposal facilities.

Hazardous waste generators are required to track the movement of their waste on federally produced movement documents (waste manifest). The purpose of obtaining, and forwarding these documents is to ensure that waste is properly managed from generator to receiver. The information and documentation is also useful in determining and potentially avoiding liability if hazardous characteristics of waste are misrepresented.

Besides being a minimum regulatory requirement, maintaining the required recordkeeping and documentation is a prudent management practice. A sample movement document and user guide can be found in Appendix I.

### **Hazardous Waste Categories**

Clearly stating the hazardous materials a MSWDF will, and will not accept provides direction for residents, businesses, industries, and government agencies.

The decision to accept and not accept designated hazardous materials is best made by the municipal government. The municipal government knows the disposal needs of their community and the ability of their facilities to receive selected wastes and/or the ability of generators to transport hazardous materials outside the community.

Hazardous waste generated within a community is divided into two broad sectors;

- **Household Hazardous Waste (HHW) from residents,**

- **Institutional Commercial Industrial (ICI) hazardous waste.**

### **HHW**

Residents generate hazardous waste from activities like vehicle maintenance, painting, cleaning, lawn and garden care. This type of waste is called household hazardous waste (HHW) and residents need a community based disposal option for the various types of waste generated. Disposal options can take the form of retailer take back programs, HHW collection events, HHW pick-up request forms, or HHW drop off areas. Household hazardous waste is a very diverse waste stream and requires close attention to existing Acts and Regulations to handle them accordingly. There are public safety and law enforcement considerations when unexpected chemicals and products are brought to HHW collection events. Please reference the community based HHW guide for options related to managing HHW.

### **ICI Hazardous Waste**

ENR registers Industrial, commercial, and Institutional (ICI) generators of hazardous waste and they are required to ensure their hazardous waste reaches registered receiving facilities, either in the NWT or other provinces. The Guideline for the General Management of Hazardous Waste outlines the roles and responsibilities of generators, carriers, and receivers of hazardous waste in the NWT. Design and control considerations and requirements for municipal waste management facilities are of a different scale and nature than those required for industrial waste management facilities

### **Outsourced Industrial Waste and Third Party Waste Disposal in Municipal Facilities**

Municipal/community facilities are not designed, operated, licenced, or financed to accommodate the complex treatment, storage, and disposal requirements for waste streams originating from Industrial wastes sourced from outside the communities. These outsourced industrial wastes will often require complex and specialized treatment and disposal options that may require transportation to facilities that are specially designed, managed and licenced for industrial waste treatment and disposal. The disposal of these industrial wastes in the community facilities transfers the economic and environmental costs and liabilities, and increased risks related to the presence of unknown contaminants to the communities and the GNWT. Community based contractors hired by outside industrial waste generators to haul and dispose of waste from operations located in areas under federal jurisdiction to nearby communities, can significantly impact the nature and volume of wastes coming into municipal disposal facilities.

The purpose of municipal/community facilities is to accommodate the treatment, storage, and disposal requirements for waste streams originating from the community. These facilities are intended to be designed, operated, licenced, and financed for that purpose to protect the community and the environment from adverse environmental impacts that may result from community generated wastes. Existing Water Licences are scoped and issued for that purpose.

## **Hazardous Materials**

The following materials are generated by both the ICI and residential sector. They are hazardous waste commonly encountered at disposal facilities.

- **Asbestos**
- **Batteries (Lead Acid)**
- **Glycols (Antifreeze, Heating Fluid)**
- **Heating Oil Tanks**
- **Household Hazardous Waste**
- **Hydrocarbon Contaminated Soil / Snow / Water**
- **Mercury Containing Materials**
- **Oil Debris**
- **Old Fuel**
- **Ozone Depleting Substances**
- **Paint**
- **Propane Tanks**
- **Residue fuel tanks/drums**
- **Used Oil**
- **Vehicles Containing Batteries, Fluids, Mercury Switches**

### **Asbestos**

ENR recommends communities establish an Asbestos Disposal Protocol for asbestos generated by residents and the ICI sector within the community. Properly packaged Asbestos simply needs to be buried in a designated location, and disposal does not involve complex treatment methods. Further details can be referenced in ENR's Asbestos guideline<sup>ii</sup>.

### **Batteries (Lead Acid)**

Batteries may be a liability in some NWT communities and have value in others depending on their access to scrap metal dealers outside the NWT. The primary method of managing batteries is storage (see Appendix II) until sufficient quantities make disposal feasible. Movement documents are required when receiving ICI batteries and when sufficient quantities warrant the movement of batteries from the community to registered receivers. Further details can be referenced in ENR's Battery guideline<sup>iii</sup>.

### **Construction and Demolition Waste**

Construction and demolition waste is generated by both the residential and the ICI sector. There may be a variety of hazardous materials inside a building require removed prior to disposal. Screening methods need to be used to ensure that the hazardous materials are removed prior to disposal. The generators or building owners are responsible for the removal of materials listed in Appendix III prior to disposal.

### **Glycols (Antifreeze, Propylene Glycol)**

Waste antifreeze (Ethylene Glycol) is generated by residents and the ICI sector from vehicle maintenance. Propylene glycol is more common to the ICI sector where it is used for heating larger buildings. Glycols can be recycled locally where facilities exist. The primary method of managing glycols is storage until sufficient quantities warrant disposal. Further details can be referenced in ENR's Antifreeze guideline<sup>iv</sup>.

### **Heating Oil Tanks**

Heating oil tanks are generated by residents and the ICI sector. Prior to disposal as scrap metal the tanks need to have the hydrocarbon residue cleaned out. They are best managed in a similar manner to empty fuel drums and tanks.

### **Household Hazardous Waste (HHW)**

Household hazardous waste (HHW) is generated from residential activities like vehicle maintenance, household maintenance, and lawn and garden care. HHW collection has taken place in communities throughout the NWT in the last 20 years at different times. Regular collection events or plans have not been established for each community in the NWT. ENR's goal is to establish regular HHW events for each community in the NWT.

Household hazardous wastes are discarded materials (liquids, solid, and aerosols) which may harm human health and the environment. They require special treatment due to their hazardous characteristics such as being corrosive, flammable, reactive or toxic. Household hazardous waste is a very diverse waste stream such as the materials listed in Appendix IV.

### **Hydrocarbon Contaminated Soil / Snow / Water**

Hydrocarbon contaminated (H.C.) soil/snow/water (materials) that result from spills or contaminated sites are managed as a hazardous waste in the NWT. This requires that H.C. materials be transported from registered generators via carriers to receivers according to the Guideline for the General Management of Hazardous Waste.<sup>v</sup>

A soil remediation facility must be registered as a receiver with ENR as a waste management facility other than storage. The general guideline provides generic information on registering any treatment facility. Containment or storage is not a long term solution and hydrocarbon contaminated soils need to be treated and tested by an accredited third party to meet acceptable remediation criteria. ENR's main objectives are to ensure that the;

- contaminated materials are being tracked on federally produced movement documents prior to transport to the receiving facility.
- receiving facility is designed, and operated to prevent the release of contaminants.
- contaminated materials have been remediated prior to movement off the facility.

Specific guidance with respect to siting, plans, and operating a H.C. material treatment facility can be obtained by referencing the documents listed in Appendix V.

### **Mercury Containing Equipment**

The GNWT is a signatory to *Canada-Wide Standards for Mercury Emissions* that mercury releases into the environment are slated for virtual elimination. Thermostat's, thermometers, and fluorescent lamps all contain mercury. Fluorescent bulbs are generated by residents and the ICI sector. ENR can provide assistance with training and equipment for the capture of the mercury vapour from fluorescent bulbs. Other types of mercury containing lamps (MCL's) like street lamps, high intensity discharge lamps from the ICI sector require specialized disposal methods. They require specialised disposal methods and should be screened out of community disposal facilities.

### **Oil Debris**

Oily debris can consist of rags, sorbent material, or containers used to store or clean up oil. These materials are contaminants that cannot be added to a typical soil treatment facility. They are generated by both the residential and the ICI sector. The proper segregation and storage of these materials can prevent the release of contaminants from the disposal facility.

### **Old Fuel**

Residents generate old fuel from the use of gas powered equipment and require a local disposal option. The disposal of old fuel from residents can be facilitated by bulking it into UN approved steel drums at HHW collection events or on a daily basis. The decision to accept old fuel from residents on a daily basis requires appropriate screening methods to screen out incompatible materials from residents and excessive volumes of fuel or solvents from the ICI sector.

### **Ozone Depleting Substances (ODS's)**

ODS's are chemicals mainly used in air conditioning, refrigeration and fire extinguishing equipment. Alternatives to ODS's also make significant contributions to global warming and, therefore require management and control. Community disposal facilities do not typically discriminate between residential or ICI waste containing ODS's and apply a flat disposal fee for the costs associated with the recovery of ODS's. Technician's servicing equipment containing ODS's and halocarbon alternatives must be appropriately trained and follow acceptable servicing procedures as required by ENR's ODS guideline<sup>vi</sup>.

### **Paint**

**Regardless of the type of paint, using it for the intended purpose is the preferred management method.** The best disposal option for waste alkyd and speciality paint is to bulk it in UN approved 205 litre steel or plastic drums, in a condition suitable for shipping. Less than 5 litres of alkyd paint can be allowed to dry fully and taken to the landfill. Fully dried out quantities of latex paints may be disposed of at a landfill or

placed in the garbage for collection. Paint can be air dried by spreading it out on a board, plastic sheet or other flat surface until all the liquid has evaporated. Consideration will be given to proposals for alternate management methods that provide a level of environmental protection equivalent to complying with the Waste Paint and Waste Lead and Lead Paint guidelines<sup>viiiviii</sup>. Paint from the ICI sector can consist of chemicals not commonly encountered in the residential waste stream and require specialized treatment and disposal methods. Management of specialty coatings is determined by the hazard characteristics of each product as identified in the Material Safety Data Sheets (MSDS). Screening methods are required to keep ICI paint out of disposal facilities that require specialized treatment methods or accumulate in excessive quantities.

### **Propane Tanks**

Propane tanks and aerosol cans are regulated as a dangerous good and are a potential explosion hazard at all times, making them dangerous to disposal facility operators as well as the public. They are generated by residents and the ICI sector. Where facilities exist, propane tanks can be returned to the retailer or supplier for safe storage and transport. In many cases trained staff can safely evacuate the propane gas, and rendering the tanks safe for scrap metal. Large propane tanks and other compressed gas canisters from the ICI sector need to be screened out or they can become a liability for the community if allowed to enter disposal facilities.

### **Residue Fuel Tanks / Drums**

Fuel storage tanks and drums are most frequently generated by the ICI sector. The water that is allowed to accumulate in empty drums that are stored over time is contaminated and needs to be treated prior to disposal. Empty drums should always be stored on their sides to prevent water from accumulating. Screening methods are required to prevent the collection of contaminated liquids inside residue drums. Prior to disposal as scrap metal the tanks/drums need to be cleaned according to ENR's drum disposal protocol that can be referenced in Appendix VI.

### **Used Oil**

Used oil is generated by residents and the ICI sector and can be utilized as a feedstock for the purpose of heat recovery in the NWT according to the Used Oil and Waste Fuel Management Regulations<sup>ix</sup>. Used Oil can be collected from residents and bulked in clearly labelled good quality tanks or drums. Screening methods are required to ensure the feedstock does not become contaminated with excessive amounts of glycol, solvents, or excessive volumes from the ICI sector. Used Oil must be tested prior to burning in a registered used oil furnace to ensure the feedstock meets the criteria set out in Schedule A of the regulations.

### **Vehicles**

Old discarded vehicles contain antifreeze, batteries, fuel, mercury switches and other lubricating fluids that are hazardous waste and need to be removed. Ideally all the scrap metal including vehicles are removed from the disposal facility once sufficient quantities accumulate. Scrap metal dealers often accept vehicles and manage the hazardous materials at a cost. If scrap metal is not being removed from the community the hazardous materials from the vehicle need to be removed prior to disposal.

### **Storage, Packaging, Labelling**

**The storage of hazardous waste is not an acceptable long term waste management solution.**

#### General Requirements for Storage Facilities

Hazardous waste must be stored in a safe and secure manner. In general, hazardous waste should be stored according to the following:

- Drainage into and from the site is controlled to prevent spills or leaks from leaving the site and to prevent run off from entering the site.
- Incompatible wastes are segregated by chemical compatibility to ensure safety of the public, workers and facility.
- In a secure area with controlled access. Only persons authorized to enter and trained in waste handling procedures should have access to the storage site.
- Regular inspections are performed and recorded. Containers are placed so that each container can be inspected for signs of leaks or deterioration. Leaking or deteriorated containers should be removed and their contents transferred to a sound container.
- Containers are of good quality suitable for the waste being stored
- Containers are labelled according to WHMIS and TDGR
- Maintain a record of the type and amount of waste in storage.
- Storage sites have emergency response equipment appropriate for the hazardous waste stored on site.
- Where the site is to be used for long term storage and the amount of waste in storage exceeds the quantity requirements set out in Schedule I, the site should be registered in accordance with Section 3.4 of the Guideline for the General Management of Hazardous Waste.
- Storage sites are expected to meet all local bylaw and zoning requirements. It is recommended that the local Fire Chief be advised of the storage facility and its content for emergency planning and response purposes.

#### **Off-Site Disposal**

**The responsibility for proper waste management rests with the generator and should be considered part of the cost of doing business.**

Once the community has accumulated sufficient quantities of a hazardous waste to warrant off-site disposal the materials must be transported to appropriately registered receivers of hazardous waste. At this point the MSWDF becomes the generator and is required to track the consignment on federally produced movement documents (waste manifest).

When selecting a disposal company to handle hazardous waste consider the following criteria,

- They have a current registration number with the province or territory of destination,
- The materials are tracked on movement documents before the materials leave the site, and
- They are properly trained to handle dangerous goods according to Transportation of Dangerous Goods Regulations (TDGR).

The Environment Division will consider alternative management options that exist, including recycling.

### **Waste Segregation Training**

The ability to recognize hazardous waste from non hazardous waste will facilitate the consolidation of hazardous wastes for transport to appropriately registered hazardous waste receiving facilities.

The comingling of hazardous wastes without proper segregation can lead to disastrous situations endangering human health and life. Suitable training for staff for all activities associated with the community disposal facilities will enhance worker and public safety.

ENR can provide assistance with segregation and characterization of materials through correspondence on a continual basis. ENR is also willing to assist at HHW collection events where larger volumes of HHW need to be segregated and packaged on site.

### **Hazardous Waste Management Plan**

A plan that clearly states the hazardous materials a MSWDF will, and will not accept from residents and/or the ICI sector provides direction for residents, businesses, industries, and government agencies.

In some communities a well established plan has already been used within a community for designated materials. A consistent format for developing a plan between communities can facilitate regional strategies for managing hazardous waste.

ENR requests that the O&M plan or a separate plan demonstrating how each of the following materials (listed on Page 5) are being managed within the MSWDF.

- **Asbestos**
- **Batteries (Lead Acid)**
- **Mercury containing equipment**
- **Glycols (Antifreeze, heating fluid)**
- **Heating Oil Tanks**
- **Household hazardous waste**
- **Hydrocarbon Contaminated Soil / Snow / Water**
- **Mercury containing lamps (MCL's)**
- **Oily Debris**
- **Old Fuel**



- **Ozone Depleting Substances**
- **Paint**
- **Propane Tanks**
- **Residue fuel tanks / drums**
- **Used Oil**
- **Vehicles containing batteries, fluids, mercury switches**

The community should define both acceptable and unacceptable wastes and it should be reviewed annually or more often as needed. Appendix VII contains a chart that summarizes waste management considerations for each of the materials listed above.

The following are steps the community should take in developing the hazardous waste management plan. It is recommended the community develop the plan using community based knowledge.

### **Asbestos**

- I. Will the MSWDF accept waste Asbestos from the residential sector?*  
Y [ ] / N [ ]
- II. If No, what other facilities exist within the community to facilitate the proper handling of waste asbestos?*
- III. Will the MSWDF accept waste Asbestos from the ICI sector?*  
Y [ ] / N [ ]

If Yes to either I, or III the following information is required.

- Location of burial within the facility
- Method of disposal
- Expected quantities
- Plan for record keeping, mapping, and reporting
- Contact for record keeping & reporting
- Tipping fee's associated with the management of waste asbestos from the residential and/or ICI sector.

### **Batteries (Lead Acid)**

- I. Will the MSWDF accept waste batteries from the residential sector?*  
Y [ ] / N [ ]
- II. If No, what other facilities exist within the community to facilitate the proper handling of waste batteries?*
- III. Will the MSWDF accept waste batteries from the ICI sector?*  
Y [ ] / N [ ]

If Yes to either I, or III the following information is required.

- Maximum amount of batteries to be stored at any one time.
- Methods used to
  - Store batteries
  - Secure access

- Maintain a record of the amount of batteries in storage
- Maintain regular inspections and record of inspections
- Methods used to prevent;
  - Spills and leaks
  - Drainage from entering or leaving the site
- Contact for record keeping & reporting
- Tipping fee's associated with the management of batteries
- Plan for ultimate disposal

### **Construction and Demolition Waste**

- I. *Will the MSWDF accept construction and demolition waste from the residential and the ICI sector?* Y [ ] / N [ ]
- II. *If No, what other facilities exist within the community to facilitate the proper handling of ICI construction and demolition waste?*

If Yes the following information is required.

- Screening methods used to ensure hazardous materials are removed prior to disposal.
- Methods used to manage unacceptable waste inside the disposal facility.

### **Glycols (Antifreeze, heating fluid)**

- I. *Will the MSWDF accept waste glycols from the residential sector?* Y [ ] / N [ ]
- II. *If No, what other facilities exist within the community to facilitate the proper handling of waste glycols?*
- III. *Will the MSWDF accept waste glycols from the ICI sector?* Y [ ] / N [ ]

If Yes to either I, or III the following information is required.

- Maximum amount of glycols to be stored at any one time.
- Methods used to
  - Store glycols
  - Secure access
  - Maintain a record of the volume of glycols in storage
  - Maintain regular inspections and record of inspections
- Methods used to prevent;
  - Spills and leaks
  - Drainage from entering or leaving the site
- Contact for record keeping & reporting
- Tipping fee's associated with the management of glycols
- Plan for ultimate disposal

### **Heating Oil Tanks**

- I. Will the MSWDF accept waste heating oil tanks from the residential sector?  
Y [ ] / N [ ]
- II. If No, what other facilities exist within the community to facilitate the proper handling of waste heating oil tanks?
- III. Will the MSWDF accept waste heating oil tanks from the ICI sector?  
Y [ ] / N [ ]

If Yes to either I, or III the following information is required.

- Criteria for accepting heating oil tanks (e.g. cut in half, drained, steam cleaned, etc.)
- Methods used to clean tanks prior to disposal if disposal facility accepts uncleaned heating oil tanks.
- Methods used to prevent;
  - Spills and leaks
  - Drainage from entering or leaving the site
- Contact for record keeping & reporting
- Tipping fee's associated with the management of waste heating oil tanks
- Plan for ultimate disposal

### **Household hazardous waste**

ENR will assist communities with the development and promotion of adequate opportunities for residents to safely dispose of their hazardous waste. The promotion of hazardous waste reduction through public education is an integral part of hazardous waste collection activities.

The form of hazardous waste collection can vary between communities with different populations and geographic locations. Below are three general forms, or combination of forms of collection that can be used to collect HHW from residents.

#### **A. Daily Collection of HHW**

Daily collection of HHW provides the best level of environmental protection because it provides residents the opportunity to dispose of the materials when it is convenient for them, especially if they are moving locations. It is strongly recommended that communities offer this service to the disabled people in the community. A HHW collection depot that is visible on a daily basis also reinforces the message that not all materials are safe for disposal in the open face of a landfill.

Daily collection requires trained staff to screen, segregate, label, and store the wide variety of HHW that residents generate. It also requires means of containment (pallets, drums, pails, bags, tanks, etc.) to be present on site at all times to properly store HHW until quantities warrant disposal.

#### **B. HHW Collection events**

HHW collection events can happen on a yearly, monthly, or weekly basis at the discretion of the community. In the past collection events have taken place in

community parking lots or fire halls periodically throughout different regions in the NWT. These events can bring in larger quantities at one time but do not capture the HHW from residents that are moving or are away during the events.

C. HHW disposal request forms

HHW disposal request forms can be used by residents to give advance notice to the community and ENR that they have HHW needing disposal. By submitting a form to the community it allows disposal staff to research the product and prepare adequate space as well as means of containment to accept the waste. This method may be used in smaller communities where HHW quantities are low. It can also be used in larger communities as a supplement to collection events to assist people who are moving or for other reasons are not able to attend HHW collection events. (See Appendix VIII for a sample form)

The decision to not collect HHW may result in contamination of land and waters within your community. To assist your community with HHW collection, ENR requires the community to decide what form or combination of HHW collection forms is most suitable. Please consult the HHW program guide for more details.

- I. *What form, or combination of forms of HHW collection will the community participate in?*

**Hydrocarbon Contaminated (H.C.) Soil / Snow / Water**

- I. *Has the community developed a H.C. soil/snow/water treatment pad within it's disposal facility.* Y [ ] / N [ ]

If no, are there alternate receiving facilities for H.C. soils in the community?

If yes, the following information is required,

- The supporting documentation that outlines the engineering details of the treatment pad.
- Criteria for accepting H.C. soil / snow / water(e.g. laboratory analysis, movement documents, etc.)
- Methods used to prevent drainage from entering or leaving the site
- Contact for record keeping & reporting
- Disposal fee's associated with the management of H.C. soil / snow / water.

**Mercury containing equipment**

- I. *Will the MSWDF accept waste mercury containing equipment or fluorescent MCL's from the residential sector?* Y [ ] / N [ ]
- II. *If No, what other facilities exist within the community to facilitate the proper handling of waste MCL's?*

III. Will the MSWDF accept mercury containing equipment or waste fluorescent MCL's from the ICI sector? Y [ ] / N [ ]

If Yes to either I, or III the following information is required.

- Methods used to
  - Store mercury containing equipment
  - Store fluorescent bulbs in dry conditions
  - Secure access
  - Maintain a record of the amount of bulbs in storage
  - Maintain regular inspections and record of inspections
- Methods used to prevent breakage of mercury containing equipment
- Contact for record keeping & reporting
- Tipping fee's associated with the management of mercury containing equipment.

ENR can provide assistance for the disposal of fluorescent MCL's utilizing a drum top bulb crusher. The crushed glass is still hazardous waste and needs to be transported to receivers for recycling.

#### **Oil debris**

I. Does the community segregate oily debris from general garbage? Y [ ] / N [ ]

If No, is there an alternate disposal site in the community for oily debris?

If Yes the following information is required,

- Methods used to store oily debris,
- Methods used to prevent;
  - Spills and leaks
  - Drainage from entering or leaving the site
- Contact for Record Keeping & Reporting,
- Tipping Fee's associated with the management of oily debris, and
- Plan for ultimate disposal.

#### **Ozone Depleting Substances**

I. Will the MSWDF accept waste ozone depleting substances (ODS's) from the residential sector? Y [ ] / N [ ]

II. If No, what other facilities exist within the community to facilitate the proper handling of waste ODS's?

III. Will the MSWDF accept waste ODS's from the ICI sector? Y [ ] / N [ ]

If Yes to either I, or III the following information is required.

- Methods used to segregate and store ODS's

- Methods used to prevent spills and leaks
- Contact for record keeping & reporting
- Tipping fee's associated with the management of ODS's
- Plan for ultimate disposal

**Paint**

I. Will the MSWDF accept waste paint from the residential sector?

Y [ ] / N [ ]

II. If No, what other facilities exist within the community to facilitate the proper handling of waste paint?

III. Will the MSWDF accept waste paint from the ICI sector?

Y [ ] / N [ ]

If Yes to either I, or III the following information is required.

- Methods used to screen out or, segregate specialty paints
- Methods used to store paint, and prevent
  - Spills and leaks
  - Drainage from entering or leaving the site
- Contact for record keeping & reporting
- Tipping fee's associated with the management of paint
- Plan for ultimate disposal

**Propane Tanks**

I. Will the MSWDF accept waste propane tanks from the residential sector?

Y [ ] / N [ ]

II. If No, what other facilities exist within the community to facilitate the proper handling of waste propane tanks?

III. Will the MSWDF accept waste propane tanks from the ICI sector?

Y [ ] / N [ ]

If Yes to either I, or III the following information is required.

- Methods used to segregate and store propane tanks
- Contact for record keeping & reporting
- Tipping fee's associated with the management of waste propane tanks
- Plan for ultimate disposal

**Residue fuel tanks / drums**

I. Will the MSWDF accept waste residue fuel tanks / drums from the residential sector?

Y [ ] / N [ ]

II. If No, what other facilities exist within the community to facilitate the proper handling of waste residue fuel tanks / drums?

III. Will the MSWDF accept waste residue fuel tanks / drums from the ICI sector?  
Y [ ] / N [ ]

If Yes to either I, or III the following information is required.

- Criteria for accepting waste residue fuel tanks / drums (e.g. punctured, drained, steam cleaned, etc.)
- Methods used to clean tanks prior to disposal if disposal facility accepts residue fuel tanks / drums
- Methods used to prevent;
  - Spills and leaks
  - Drainage from entering or leaving the site
- Contact for record keeping & reporting
- Tipping Fee's associated with the management of waste residue fuel tanks / drums.
- Plan for ultimate disposal

**Used Oil**

I. Will the MSWDF accept used oil from the residential sector?  
Y [ ] / N [ ]

II. If No, what other facilities exist within the community to facilitate the proper handling of used oil?

III. Will the MSWDF accept used oil from the ICI sector?  
Y [ ] / N [ ]

If Yes to either I, or III the following information is required.

- Methods used to store used oil
- Methods used to prevent;
  - Spills and leaks
  - Drainage from entering or leaving the site
- Contact for record keeping & reporting
- Tipping fee's associated with the management of used oil
- Plan for ultimate disposal

**Vehicles containing batteries, fluids, mercury switches**

I. Will the MSWDF accept vehicles from the residential sector?  
Y [ ] / N [ ]

II. If No, what other disposal facilities exist within the community to facilitate the proper handling of vehicles?

III. Will the MSWDF accept vehicles from the ICI sector?  
Y [ ] / N [ ]

If Yes to either I, or III the following information is required.

- Methods used to remove hazardous materials from vehicles,
- Methods used to prevent;
  - Spills and leaks
  - Drainage from entering or leaving the site
- Contact for record keeping & reporting,
- Tipping fee's associated with the management of vehicles
- Plan for ultimate disposal of the vehicles and,
- Plan for the ultimate disposal of hazardous materials inside vehicles.

### **Waste Screening**

Screening waste before it enters the disposal facility prevents unacceptable waste from entering and the potential for inappropriate disposal. Inappropriate management and disposal of wastes can lead to effluent and leachate that contaminates surface and groundwater. Monitoring and surveillance of municipal disposal facilities should include both proactive (prevention) and reactive (cure) components: being proactive includes screening and having controls over what is allowed in a disposal facility; reactive measures include managing unacceptable wastes, monitoring effluent and leachate contamination. Proper monitoring and surveillance can proactively prevent inappropriate management and disposal of wastes that cause contamination.

Nearly all waste screening and monitoring initiatives are void if the disposal facility does not have gate control or staff present during operating hours.

### **When does a hazardous material become a hazardous waste?**

**Hazardous waste guidelines apply to hazardous materials that will be discarded, or are likely to be discarded.<sup>x</sup>**

#### **Example I**

Virgin fuel is a contaminant and a hazardous material. When the fuel is contaminated with moisture or stale dated it is managed as a hazardous waste even though it can be utilized as a feedstock in a used oil furnace. Businesses operating used oil furnaces are registered as receivers in the NWT.

#### **Example II**

Lead based paint may be high in lead and not meet industrial waste discharge criteria. Materials that do not meet the industrial waste discharge criteria as an effluent or as a leachable waste are also hazardous waste. When a waste is released in a disposal facility it has the potential to leach out toxic levels of chemical compounds. To predict if a substance has a potential toxicity problem, a lab test called the Toxicity Characteristic Leaching Procedure (TCLP) is utilized to make a determination.

### **Waste Screening for Facility-specific unacceptable wastes**



A plan to screen out wastes can be made once a waste acceptance protocol has been established.

The fundamentals of successful waste screening are as follows<sup>xi</sup>,

- Know your generators and haulers (carriers)
- Preventative measures
- Develop standard procedures for waste screening at your disposal facility
- Train disposal site staff in those procedures
- Practice random load checking
- Educate generators and carriers
- Require movement documents for hazardous waste acceptance

A general outline of waste screening procedures can be referenced in Appendix IX. They can be applied in all disposal facilities in the NWT to some extent. The details of the waste screening procedure are best developed by the individual community.

### **Management of Unacceptable Wastes**

#### **Planning for Unacceptable wastes**

When unacceptable waste enters the disposal facility, a plan that is available to facility staff can be referenced to deal with the situation. Unacceptable waste is any waste the MSWDF has stated is prohibited from the disposal facility, or any waste the MSWDF does not have a plan to manage.

Unknown and unacceptable hazardous materials need to be pulled aside and stored properly to await proper disposal or further testing. Further inspection may uncover the original generator. The drawback of returning the material directly to the hauler is that the proper disposal of waste is not ensured, and the material may return undetected, as well it might violate Department of Transportation regulations. It is good practice to work with the carrier or hauler to identify the generator. If the carrier refuses to cooperate, they may be held responsible for the cost of disposal.

The carrier is likely able to identify the potential source of the waste. The carrier may not be responsible unless it can be shown that they knowingly transported regulated waste. ENR believes the carrier should give maximum assistance in locating and identifying the generator.

The generator may have violated territorial or federal law by sending hazardous materials to a facility not permitted to accept this waste. The generator, if identified, will be responsible for providing the management and disposal of the waste (including all associated costs).

The responsibilities of the MSWDF, in the event of the disposal of unacceptable waste are as follows:

- Notify appropriate regulatory agency
- Secure the waste to prevent contamination
- Secure the waste against disturbance

- Keep and maintain the necessary records

The responsibility for disposing of the waste may fall to the MSW facility if the generator cannot be located.

### **Temporary Storage of Unacceptable Wastes**

Unacceptable wastes that have been separated need to be stored in a safe, temporary storage location.

The temporary storage area should:

- Be located in a secure location,
- Have separate areas for different types of waste,
- Have proper ventilation, and
- Have safety and emergency response equipment readily available.

### **Recordkeeping Procedures**

Suggested items for Record Keeping:

- Date and time of waste inspection
- Hauler name and company
- Type of waste detected
- Waste generator(s) if able to identify
- Actions taken to manage materials
- Facility employee in charge of waste screening

A sample inspection form can be referenced in Appendix X.

- I. What methods will the community use to screen out unacceptable wastes?*
- II. How will the disposal facility manage unacceptable wastes inside the facility?*
- III. How will the disposal facility temporarily store unacceptable wastes?*

## **Appendix I Movement Documents**

### **USER'S GUIDE FOR HAZARDOUS WASTE MOVEMENT DOCUMENTS IN THE NWT**

#### **WHAT IS A HAZARDOUS WASTE MOVEMENT DOCUMENT?**

The federally produced movement documents, previously called waste manifest, is a form which when completed provides:

- detailed information on the types and amounts of hazardous wastes being shipped;
- a record of the various firms or individuals involved in the shipment; and,
- information on the treatment, storage, and/or disposal of hazardous wastes when they reach their final destination.

#### **WHEN MUST A MOVEMENT DOCUMENT BE USED?**

The movement document must be used for all shipment of hazardous wastes as defined in the,

- Province or territory of destination or origin,
- Interprovincial Movement of Hazardous Waste Regulations, or
- Export and Import of Hazardous Waste and Hazardous Recyclable Material Regulations, for International shipments.

Movement document can be obtained from the appropriate provincial authority. A complete listing of all such authorities is provided on the reverse side of the movement document form.

#### **WHO MUST COMPLETE THE MOVEMENT DOCUMENT?**

The movement document is made up of three separate parts.

- I. Part A must be completed by the generator (consignor) of the hazardous waste;
- II. Part B, by the carrier of the waste shipment; and
- III. Part C, by the receiver (consignee) of the hazardous waste.

Individuals completing the movement document form must print clearly and press hard.

#### **GENERATOR'S (Consignor) RESPONSIBILITIES**

The generator (consignor) is responsible for

- properly completing Part A of the movement document form and,
- providing copies 3, 4, 5, and 6 to the carrier,
- distributing copy 1 (or copies of copy one) to the appropriate federal, provincial or territorial authority. and,
- retaining copy 2 of the movement document form for a period of two years.

#### **CARRIER'S RESPONSIBILITIES**

The carrier is responsible for

- properly completing Part B of the movement document form,
- retaining copies 3, 4, 5, and 6 and providing them to the receiver,
- retaining copy 4 of the movement document form for a period of two years

If more than one carrier will be used to ship a particular consignment, there are additional requirements for filling out multiple carrier forms.

### **RECEIVER'S (Consignee) RESPONSIBILITIES**

The Receiver is responsible for,

- properly completing Part C of the movement document form and for distributing copies 3, 4, and 6 to the appropriate regulatory authority, carrier, and generator respectively.
- retaining copy 5 of the movement document form for two years.

### **GENERAL INFORMATION**

If more than four types of hazardous wastes are shipped from the same generator, additional movement document forms must be completed. The person completing the additional form(s) must include the first movement document reference number on the additional form(s) in the space provided at the upper right hand corner of the form.

Each movement document form is printed in six (6) copies, which must be copied / distributed / retained as follows.

- Copy 1**      Returned by the generator to the territory/province of origin of the waste (in most cases this will be the NWT).
- Copy 2**      Retained by the generator for 2 years after the wastes have reached their final destination.
- Copy 3**      Returned to appropriate authority of the province of origin of the waste after Part C has been completed and signed by the receiver.
- Copy 4**      Retained by the carrier for 2 years after the wastes have reached their destination.
- Copy 5**      Retained by the receiver for 2 years after the wastes have reached their destination.
- Copy 6**      Mailed by the receiver to the generator after the wastes have reached their destination

## INSTRUCTIONS TO FILL IN MOVEMENT DOCUMENTS

### Part A – Consignor (Generator) Instructions

**Box 1 Generator Number Provincial ID No:**

This number is a unique number assigned to the generator by the Northwest Territories, Department of Environment and Natural Resources, Environment Division (867) 873-7654.

**Company Name (consignor):** Enter the business name or name of the generator.

**Mailing Address:** Enter the business mailing address of the consignor/generator.

**E-mail address:** Enter an e-mail address if available.

**Shipping Site address:** Enter the physical site address, not a post office box.

**Box 2 Intended Receiver (consignee):** Enter the name of the Receiver and their receiver registration number issued by the province or territory of destination. The generator is responsible for obtaining this number from the receiver.

**Mailing address of Receiver:** Enter the mailing address of the receiver.

**Receiving Site Address:** Enter the physical location of the receiving site.

**Box 3 Provincial Code:** This space is used by some provinces to identify wastes according to an independent waste numbering system. This is not applicable in the NWT.

**Box 4 Shipping name:** Enter the shipping name of any waste listed in the definition of hazardous waste in the province or territory of destination, or in Schedule 1 of the *TDG Regulations*.

**Box 5 Class:** For TDG classified wastes, enter the primary classification followed in parentheses by any applicable subsidiary classifications [e.g. 3 (6.1)].

**Box 6 UN Number:** Enter the product identification number (PIN) for wastes classified under the *TDG Regulations*. This number is found in Column I of the lists in Schedule I. For shipments of leachable waste to Alberta, the PIN is NA9500.

**Box 7 Packing Group:** Enter the packing group where applicable for TDG classified wastes. The packing group is a Roman numeral (i.e. I, II or III) assigned to indicate a level of hazard for some classes of dangerous goods and special waste. Not all classes have packing groups. Packing groups are determined according to the criteria found in Part III of the *TDG Regulations*.

**FOR NON TDG REGULATED WASTE BOXES 5, 6, & 7 CAN BE FILLED IN AS “NR” (NON-REGULATED).**

**Box 8 Quantity Shipped and Units:** Enter the quantity of waste being shipped in metric units. Indicate the units used as either kilograms (kg) or litres (L). If the exact amount of waste is not known enter “est.” before the number for an estimated amount.

**Box 9 Packaging Number and 18 Packaging Codes:** Enter the number of individual packages used to ship the special waste in the column headed “No.”. This helps the receiver to check that containers were not added or lost en route.

Enter the codes for the type of packaging used in the shipment in the column headed “Codes”.

Code	Container
01	Drum
02	Tank
03	Bulk (e.g., Vac Truck, End Dump)
04	Carton
05	Bag
06	Roll off or lugger
07	Other (e.g., pail, palette)

**Box 10 Physical State:** Enter the physical state of the waste as solid, liquid or gas (S/L/G).

**BOXES 11-19 APPLICABLE ONLY TO INTERNATIONAL SHIPMENTS, CONTACT ENVIRONMENT CANADA.**

**<http://www.ec.gc.ca/drqd-wrmd/default.asp?lang=En&n=6DD358F4-0>**

**Box 20 Print, Signature, Telephone Number of authorized person:**

Print or type, and sign the name of the generator, or a person authorized to act on behalf of the generator, in the space provided. This person must be accountable for the generator's responsibilities.

**Enter the full telephone number of the authorized person, including area code.**

**Box 21 Shipping Dates:**

**Date Shipped:** Enter the shipping date numerically in the year-month-day format.

**Time Shipped:** Record the exact time the shipment leaves the consignor's possession.

**Scheduled arrival date:** Indicate the expected date of arrival of the shipment at the receiving site

**Box 22 Special handling:** Provide 24-hour emergency response number for dangerous goods or ERAP number.

**Box 27 Number of Manifests Used for Shipment:** Indicate the numbers of other manifests associated with the shipment, if more than one manifest is required to describe a waste shipment.

## Part B - Carrier Instruction

**Box 23 Carrier Information:**

**Carrier Registration No.:** Provincial/territorial carrier number.

**Carrier Name:** Enter the name of the waste carrier as it appears on the transport licence.

**Mailing Address of Carrier:** Enter the business mailing address of the carrier. Ensure the postal code is correct.

**Box 24 Vehicle Registration Number:** Identify each vehicle involved in a special waste shipment by a number such as the licence plate number for road vehicles.

**Box 25 OR INTERNATIONAL USE ONLY**

**Box 26 Name of Authorized Person:** Type or print, and sign the name of the person authorized to act for the carrier. In most cases this is the driver or other person responsible for the shipment while it is en route.

**Telephone Number:** Enter the full telephone number of the carrier, including area code.

**Date of Shipment:** Enter the date that the carrier takes charge of the waste shipment.

**Part C – Consignee (receiver) Instructions**

**Box 28 Receiver Registration Number:**

The provincial/territorial receiver number is placed here.

**Receiver Name :** Enter the name of the consignee/receiver. If the information is the same as that provided in Part A then this section does not need to be completed.

**Mailing Address:** Enter the business mailing address of the consignee/receiver.

**E-mail Address:** Enter an e-mail address if one is available.

**Receiving Site Address:** Enter the physical location of the receiving site.

**Box 29 Date / Time Received:**

**Date Received:** Enter the date and time on which the receiver accepts the shipment (year-month-day).

**Time Received:** Record the time of acceptance of the shipment and mark A.M. or P.M. as appropriate.

**Box 30** If waste or recyclable material to be transferred, specify intended company name and Provincial Registration No..

**Box 31** Identify the quantity received and the units in units in kg of L.

**Box 32** Identify any shipment discrepancy problems.

**Boxes 33 & 36** Identify the final handling method

Code	Handling Method
01	Storage
02	Thermal Treatment
03	Chemical Treatment
04	Physical Treatment
05	Biological treatment
06	Secure landfill
07	Recycling
08	Solidification
09	Other (Specify Box 36)

**Box 34** Indicate whether or not the shipment was accepted or refused.

**Box 35** Identify whether decontamination of packaging or the vehicle has been carried out by checking the appropriate box.

**Box 37** The receiver authorized person shall print their name and telephone number and sign the form certifying that the information given in Part C is correct and complete.

**MOVEMENT DOCUMENT / MANIFEST**  
**DOCUMENT DE MOUVEMENT / MANIFESTE**

This Movement document/manifest conforms to all federal and provincial transport and environmental legislation.  
 Ce document de mouvement/manifeste est conforme aux législations fédérale et provinciale sur l'environnement et le transport.

**SAMPLE FOR ILLUSTRATION ONLY**

**2486089-2**

Movement Document / Manifest Reference No.  
 N° de référence du document de mouvement/manifeste

<b>A Generator / consigneur</b> Producteur / expéditeur		1		Registration No. / Provincial ID No. N° d'immatriculation - d'id. provincial		23		27		27	
Company name / Nom de l'entreprise				Company name / Nom de l'entreprise				Reference Nos. of other movement document(s)/manifest(s) used / N° de référence des autres documents de mouvement/manifestes utilisés			
Mailing address / Adresse postale		City / Ville		Province		Postal code / Code postal		Mailing address / Adresse postale		City / Ville	
E-mail / Courrier électronique		Tel. No. / N° de tél.		E-mail / Courrier électronique		Tel. No. / N° de tél.		Receiver / consignee information same as in Part A Les renseignements du réceptionnaire / destinataire est la même qu'à la Partie A <input type="checkbox"/> Yes / Oui <input type="checkbox"/> No, complete the box below / Non, remplir la case ci-dessous			
Shipping site address / Adresse du lieu de l'expédition				Vehicle / Véhicule		Registration No. / N° d'immatriculation		24			
City / Ville		Province		Postal code / Code postal		Trailer - Rail car No. 1 1 <sup>re</sup> remorque - wagon		Prov. 24			
Intended Receiver / consignee Réceptionnaire / destinataire prévu		2		Registration No. / Provincial ID No. N° d'immatriculation - d'id. provincial		25		25			
Mailing address / Adresse postale		City / Ville		Province		Postal code / Code postal		Port of entry / Point d'entrée International use only / Point de sortie International use only			
E-mail / Courrier électronique		Tel. No. / N° de tél.		E-mail / Courrier électronique		Tel. No. / N° de tél.		26			
Receiving site address / Adresse du lieu de l'expédition		City / Ville		Province		Postal code / Code postal		Carrier Certification : I certify that I have received waste or recyclable material from the generator / consigneur for delivery to the receiver / consignee as set out in Part A and that the information contained in Part B is complete and correct. Attestation du transporteur : J'atteste avoir reçu les déchets ou matières recyclables du producteur / expéditeur en vue de leur livraison au réceptionnaire / destinataire, tels qu'ils figurent à la partie A et que les renseignements inscrits à la partie B sont exacts et complets.			
Year / Année		Month / Mois		Day / Jour		Signature :		29			
Prov. code / Code prov.		3		Shipping name / Appellation réglementaire		4		Class / Classe / Sub. class(es) / Sub. class(es)		5	
UN No. / N° NU		6		Packing / risk gr. / Gr. d'emballage/ de risque		7		Quantity shipped / Quantité expédiée		8	
Units / Unités		9		Packaging/Contenant / Codes Int-ext		10		Phys. state / État phys.		10	
Quantity received / Quantité reçue		31		Comments / Commentaires		32		Handling / Code / Code de manutention		33	
Shipment / Envol		34		Decont. / Veh.		35		If waste or recyclable material to be transferred, specify intended company name / Si les déchets ou matières recyclables doivent être transférés, préciser le nom du destinataire			
11-19		11		12		13		14		15	
Notice Line No / N° de ligne de la notification		Shipment / Envol		Of / De		D or R code / Code É ou R		C code / Code C		Basel Annex VIII or OECD Code / Annexe VIII de Bâle ou Code OCDE	
H code / Code H		Y code / Code Y		National code in country of / Code du pays		Export / Import		Customs code(s) / Code(s) de douanes		19	
International use only		16		17		18		19		36	
Generator / consigneur certification: I certify that the information contained in Part A is correct and complete. Attestation du producteur / expéditeur: J'atteste que tous les renseignements à la partie A sont exacts et complets.		Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)		Signature		20		Tel. No. / N° de tél.		20	
Special handling / Manutention spéciale		21		22		22		Receiver / consignee certification: I certify that the information contained in Part C is correct and complete. Attestation du réceptionnaire / destinataire: J'atteste que tous les renseignements à la partie C sont exacts et complets.			
Attached / Ci-joint		As follows / Ci-contre		22		22		Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)			
Date shipped / Date d'expédition		21		Time / Heure		21		Scheduled arrival date / Date d'arrivée prévue			
Year / Année		Month / Mois		Day / Jour		A.M. / P.M.		Year / Année			
Month / Mois		Day / Jour		A.M. / P.M.		Day / Jour		Month / Mois			



Appendix II Lead-Acid Battery Storage Plan

Community Protocol for Managing Spill Contingency Plan for Lead Acid Batteries

“(a) the name, address and job title of the owner or person in charge, management or control;”

Municipality \_\_\_\_\_ Receiver No.: \_\_\_\_\_

Mailing Address: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Phone : \_\_\_\_\_ Fax: \_\_\_\_\_

“(b) the name, job title and 24-hour telephone number for the persons responsible for activating the spill contingency plan;”

Name: \_\_\_\_\_ Job Title: \_\_\_\_\_

24–Hour Telephone Number: \_\_\_\_\_

“(c) a description of the facility including the location, size and storage capacity;”

Facility Location: \_\_\_\_\_

Facility Size: \_\_\_\_\_

Storage Capacity : \_\_\_\_\_

“(d) a description of the type and amount of contaminants normally stored at the location described in paragraph (c);”

Type of Batteries Stored

<u>Lead-Acid:</u>	<u>Amount</u>	<u>Dry Cell:</u>	
Automotive /		Nickel Cadmium	[ ]
Residential	[ ]	Nickel Metal Hydride	[ ]
Deep Cycle	[ ]	Alkaline (Disposable)	[ ]
Industrial	[ ]	Button Cell	[ ]
		Lithium	[ ]
Amount: _____	palltetes or kg	Lithium Ion	[ ]

“(e) a site map of the location described in paragraph (c);”

“(f) the steps to be taken to report, contain, clean-up and dispose of contaminants in the case of a spill;”

**Example**

- *Tend to any medical emergencies.*
- *Wear protective clothing (rubber gloves, apron, and safety glasses).*
- *NOTE: Do NOT touch the spilled material with unprotected hands.*
- *Stop the leak if there is not risk to yourself or others, i.e., turn the batteries up right to event any more acid from spreading.*
- *Neutralize the spilled battery acid with the soda ash; spread the soda ash liberally over the acid.*
- *Using the shovel, dike the spilled acid to prevent it from entering the waterways, sewers, basement or confined areas.*
- *Call XXX – XXXX for assistance.*
- *Call (867) 920-8130 (collect) to report spills greater than 5 L or 5 kg for Corrosive Substances*
- *Daily Inspection Schedule*

“(g) the means by which the spill contingency plan is activated;”

---

---

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“(h) a description of the training provided to employees to respond to a spill;”

---

---

“(i) an inventory of and the location of response and clean-up equipment available to implement the spill contingency plan;”

<b>Inventory</b>	<b>Location</b>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>
<hr/>	<hr/>

“(j) the date the contingency plan was prepared.”: \_\_\_\_\_

## **Appendix III Construction/Demolition Hazardous Materials Check List**

### **Physical Building / Structure**

- Basement/ foundation sumps (may contain waste dangerous goods)
- Asbestos tiles, wall board, pipe wrap, pipe elbows
- Asbestos fire break (kitchen, furnace room)
- Lead shields (x-ray shielding) health centres
- Fume hood asbestos siding (schools, health centres)
- Fume hood filters, carbon or paper (depending on the use, may contain hazardous chemical residue)
- UFFI (urea formaldehyde foam insulation)

### **Grounds / Structure**

- Transformers, pole mounted or otherwise (possible PCB's)
- Steel tanks or other steel structures coated with lead paint
- Pesticide storage sheds or historic use on property
- Soil contamination in fuel storage area
- Wood treated with preservative (ensure it is not buried)
- Asbestos cementous board siding
- Utilidor system (asbestos insulation)
- Fuel lines – confirm empty
- Fuel storage – confirm empty
- External heat source (antifreeze solution)
- Exterior air conditioner (Freon) etc.

### **Contents**

- Cleaning and maintenance chemicals
- Paint and solvents
- Institutional chemicals

### **Building Mechanical / Systems**

- Boiler equipment and boiler cleaning chemicals
- Thermostats (possible mercury)
- Heating system antifreeze (ethylene glycol, propylene glycol)
- Fire extinguishers (some older units use carbon tetrachloride)
- Inside transformer vault, possible PCB's
- Batteries for emergency power or generator back-up
- Fluorescent lamp ballasts, PCBs if manufactured before 1982
- High intensity discharge lamp ballasts, PCBs (street lights)
- Telecommunication equipment and other electrical equipment with transformers usually have capacitors with PCB's, ie. Teletype, card readers, transmitters, etc.
- Refrigeration equipment, Freon, ammonia, etc.
- Air conditioning, freezer cooler equipment containing PCB's, and ozone depleting substances

## Appendix IV      Common Household Hazardous Wastes

Abrasive cleaners	Kerosene
Acetone	Laundry stain removers
Aerosol paints and sprays	Laundry starch
Air fresheners (aerosol)	Lighter Fluid
All-purpose cleaners (solvent based)	Liquid cleaners
Ammonia	Lye
Ant/wasp spray	Mildew removers
Antifreeze	Muriatic acid
Autobody filler	Nail polish and remover
Barbecue starters	Oven cleaners
Batteries (Alkaline)	Paint
Batteries (Lead Acid)	Pharmaceuticals
Batteries (Lead Acid)	Photographic chemicals
Batteries (Rechargeable)	Power Steering Fluid
Bleach	Propane gas cylinder
Brake fluid	Rubbing alcohol
Butane refills	Septic tank degreaser
Car waxes and polishes	Shoe polish
Carbon tetrachloride	Silver and brass polish
Contact Cement	Solvents, turpentine, varnish, lacquers
Degreasers (petroleum based)	Spa and pool chemicals
Disinfectants	Spot Removers
Drain cleaners	Thermostats, Thermometers
Fertilizers Liquid	Toilet cleaners
Fertilizers Solid	Transmission fluid
Floor wax strippers	Tub and tile cleaners
Fluorescent light tubes	Used Oil
Fuel	Weed killers
Fuel additives	Windshield washer solution (methyl alcohol)
Grease	Wood Preservatives
Hair sprays (Aerosol)	
Insecticides	

### Hazardous Wastes not accepted at HHW collection events

- X** No waste from business's or industries or institutions
- X** No explosives,
- X** No compressed gases (except aerosols) \*
- X** No infectious materials
- X** No biomedical waste
- X** No radioactive waste
- X** No ammunition

\*Special arrangements may be made if you call in advance.

Please call (867) 920-8044

## **Appendix V            Hydrocarbon Contaminated Material Treatment Facilities**

### The Development and Operation of Hydrocarbon Contaminated Material Treatment Facilities

Hydrocarbon contaminated (H.C.) soil/snow/water (materials) that result from spills or contaminated sites are managed as a hazardous waste in the NWT. This requires that H.C. materials be transported from registered generators, carriers, and receivers according to the General Guideline for the Management of Hazardous Waste in the NWT.<sup>xii</sup>

A soil remediation service would be registered as a receiver with the Environment Division as a waste management facility other than storage. The general guideline provides generic information on registering any treatment facility. Specific guidance with respect to siting, plans, and operating a H.C. material treatment facility can be obtained by referencing the following documents.

- I.     Generic Plans and Operating Procedures of a Remediation Facility for Hydrocarbon Contaminated Materials in the NWT. Environmental Protection Division GNWT (August 1995)

The above mentioned document provides instructions for different options and guidance for operating a H.C. material treatment facility but is not a regulation.

- II.    Code of Practice for Land Treatment of Soil Containing Hydrocarbons. Alberta Environment (September 2008)<sup>xiii</sup>

In the absence of a specific GNWT guidance document on H.C. material treatment facilities, the Environment Division would review the proponent's plans according to the Code of Practice developed by the Alberta Environment. Where the Alberta Code of Practice would not apply to conditions in the NWT, a rationale is to be provided by the proponent for review by ENR.

- III.   Environmental Guideline for Contaminated Site Remediation. Environment Division GNWT (November 2003).<sup>xiv</sup>

ENR has developed a guideline that outlines residential, commercial criteria to which soil must be remediated for residential, commercial, and industrial land uses. The guideline is developed for contaminated site remediation but the criteria for soil remediation would apply to H.C. soil treatment facilities.

Where the facility is located on federal lands or a facility under a water license, federal approvals are required prior to registration with ENR. ENR's main objectives are to ensure that the;

- contaminated materials are being documented prior to transport to the receiving facility.
- receiving facility is designed, and operated to prevent the release of contaminants.
- contaminated materials have been remediated prior to movement off the facility.

The next steps would be to contract a qualified professional to develop plans and choose an appropriate location for the H.C. material treatment facility. ENR staff is available to review plans during the early stages of development.

## **Appendix VI            Drum Disposal Protocol For Municipal Landfill**

Commercial and institutional supplies, as well as fuel, arrive in the north in drums or in bulk containers. Most containers are recyclable but rising fuel and transport cost generally means that unwanted drums or unusable tanks are taken to the local landfill for disposal.

Landfills in the NWT are not designed to receive liquid waste. Precipitation in the form of rain and snow do dissolve waste and create leachate which percolates down through the soils. If chemical or fuel residues have been deposited in the landfill surface and ground water could become contaminated.

The attached guide provides the requirements for acceptance of drums and tanks at municipal landfill. The municipal authority must also provide approval prior to landfill disposal.

All large containers and tanks that previously held Dangerous Goods are required to be emptied and cleaned prior to landfill disposal or returned to manufacturers or recyclers. These containers are hazardous and must be handled accordingly.

The *NWT Environmental Protection Act* prohibits the release of contaminants into the environment. Liquids are not allowed into landfills in the NWT.

Further information on landfill design and operation refer to the Guidelines for the Planning, Design, Operations and Maintenance of Modified Landfills in the NWT, Department of Municipal and Community Affairs. This document is on the ENR website. For further information contact Environmental Protection Division at 873-7654 or visit their website at <http://www.enr.gov.nt.ca/eps/leg.htm>.

## DRUM AND TANK CLEANING FOR MUNICIPAL DISPOSAL

### Definitions:

Small container - containers with a liquid capacity of 205 litres or less

Large container - containers with a liquid capacity greater than 205 litres

Empty container - A small container that has been emptied, to the greatest extent possible, using regular handling procedures, but its contents shall not exceed 1% of the container's original capacity or 2 litres, whichever is less.

### Small Containers

Small containers taken to landfill for disposal should be emptied to the greatest extent possible, using regular handling procedures. Containers that previously held dangerous goods should be crushed or be pierced to prevent reuse. Barrels containing only rust and sediment shall be treated as empty containers.

### Tanks and Large Containers

If approved for landfill disposal by municipal authorities, tanks and large containers that previously held Dangerous Goods must be cleaned to remove all residuals. Cleaning can be undertaken by contracting commercial cleaning companies to undertake one of the following procedures, solvent rinsing, steam cleaning or high pressure rinsing with appropriate cleaning agents.

The risings are hazardous waste and must be collected and managed according to their characteristics (i.e. flammable, corrosive, acidic, etc.). The Guideline for the General Management of Hazardous Waste in the NWT details the requirements for management of these wastes.

Petroleum product container rinsing may be acceptable for treatment at municipal or commercial landfarms designed to treat hydrocarbon contaminated soils. These landfarms generally operate on a fee for service basis. For further information contact Environmental Protection Division, Environment and Natural Resources at 873-7654 or visit the website at <http://www.enr.gov.nt.ca/eps>.

## Appendix VII Hazardous Material Management Considerations

Table 1 Hazardous Material Management Considerations	Primary Management Method	generators		On-site Disposal possible	On-site treatment possible	Movement Documents Required	
		Residents	ICI			Residents	ICI
Asbestos	Burial	Y	Y	Y	N/A	N	Y
Batteries (Lead – Acid)	storage on palettes	Y	Y	N	N	N	Y
Construction and Demolition Waste	Removal of hazardous materials prior to disposal	Y	Y	Y	N/A	N	N
Glycols (Antifreeze, heating fluid)	Bulking	Y	Y	N	N	N	Y
Heating Oil Tanks	Draining, Cleaning, Storage	Y	Y	Y	Y	N	N
Household hazardous waste	segregation and storage in drums	Y	N	N/A	N/A	N	N/A
Hydrocarbon Contaminated Soil	treatment pads	Y	Y	N/A	Y	Y	Y
Mercury containing equipment	Storage & Vapour Capture	Y	Y	N	N	N	N
Oily debris	bulking	Y	Y	N	N	N	Y
Old Fuel	bulking	Y	Y	N	N	N	Y
Ozone Depleting Substances	serviced by technicians	Y	Y	N	Y	N	Y
Paint	re-use, bulking, air drying	Y	Y	Y	Y	N	Y
Propane Tanks	venting, purging	Y	Y	Y	N/A	N	N
Residue fuel tanks/drums	Draining, Cleaning, Storage	N	Y	Y	Y	N	Y
Used Oil	bulking	Y	Y	N	N	N	Y
Vehicles containing batteries, fluids, mercury switches	Removal of hazardous materials & storage	Y	Y	Y	N/A	N	N



## Appendix VIII      HHW Disposal Request Form

You can prevent the release of contaminants by segregating HHW from regular garbage. Please fill out and submit the form below to notify your community about your hazardous wastes that need special handling.

*Community Contact Information*

Community  
Address  
Name

Telephone No.  
Email:  
Fax No.

DATE		ADDRESS	
NAME			
TEL NO.		COMMUNITY	
EMAIL		POSTAL CODE	
REQUESTED DATE OF DISPOSAL			

**TYPE OF WASTE**

Some common types of HHW are as follows;  
Batteries, paint, solvents, oil, fuel, aerosol cans, pesticides, cleaners, mercury, fluorescent lamps, etc.

**Type Container**

Describe as bottle, jar, jug, can, box, bag, or suitable description

**Quantity**

Number of Containers

**Size**

For liquids estimate container size as ml, L, or oz., Qt.

For solids estimate amounts as g, kg, or oz., lbs.

TYPE OF WASTE	TYPE OF CONTAINER	QUANTITY	SIZE

These forms are intended to facilitate the collection of residential Household Hazardous Waste. Industries, commercial businesses, and institutions are required to dispose of their hazardous waste according to ENR guidelines and not utilize public programs.

Please sign below to affirm that your materials are household in origin.

Signature \_\_\_\_\_ Date (M/D/Y) \_\_\_\_\_

**Appendix IX            Waste Screening Procedures**

To be developed

**Appendix X**

**Sample Waste Load Inspection Report**

Date: \_\_\_\_\_

Carrier Number if applicable: \_\_\_\_\_

Time in: \_\_\_\_\_ Time out: \_\_\_\_\_

Driver Name: \_\_\_\_\_

Name of Inspector: \_\_\_\_\_

License Number: \_\_\_\_\_

Hauler: \_\_\_\_\_

Location of Sort: \_\_\_\_\_

Truck Type (eg. Pick-up, 3 ton, 5 ton, End dump, Roll Off, Front Loader, etc.):

Waste Generator: \_\_\_\_\_

Front of Load	Back of Load
A	C
B	D

Comments \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Enforcement Officer:			
Time		Date	
Location			

## References

---

- i [http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/General\\_management.pdf](http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/General_management.pdf)
- ii <http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/asbestos.pdf>
- iii <http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/batteryguideline.pdf>
- iv <http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/antifreezeguideline.pdf>
- v [http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/General\\_management.pdf](http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/General_management.pdf)
- vi <http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/ozonedepleting.pdf>
- vii <http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/paintguideline.pdf>
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- ix [http://www.justice.gov.nt.ca/PDF/REGS/ENVIRON\\_PROTEC/Used\\_Oil\\_and\\_Waste\\_Fuel\\_Mgmt.pdf](http://www.justice.gov.nt.ca/PDF/REGS/ENVIRON_PROTEC/Used_Oil_and_Waste_Fuel_Mgmt.pdf)
- x <http://www.unh.edu/ehs/pdf/HWMP.pdf>
- xi SWANA Solid Waste Association of North America, WASTE SCREENING AT MSW MANAGEMENT FACILITIES, Training 2009
- xii [http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/General\\_management.pdf](http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/General_management.pdf)
- xiii <http://www.gp.alberta.ca/documents/codes/HYDROCARBONS.pdf>
- xiv <http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/siteremediation.pdf>



Environment Canada  
Environnement Canada

Environment Canada  
Prairie and Northern Region  
Nova Coast Plaza  
P.O. Box 2310  
Yellowknife, NT X1A 2P7

November 24<sup>th</sup>, 2009

Your File: MV2009L3-0025  
Our File: 4782 052

Angela Plautz  
Regulatory Officer  
Mackenzie Valley Land and Water Board  
P.O. Box 2130  
Yellowknife, NT X1A 2P6

**Re: Hamlet of Fort Liard – Water Licence Renewal Application MV2009L3-0025**

On behalf of Environment Canada (EC), I have reviewed the information submitted with the above-mentioned application. The following specialist advice has been provided pursuant to Environment Canada's mandated responsibilities for the enforcement of the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

The Hamlet of Fort Liard is applying to renew their water license for up to a 10 year term to allow for the municipal use of water and deposit of waste. The Sewage Treatment Facility consists of a 3-celled system with twice annual decant to a forested area that eventually drains into the Petitot River. Cell 1 is newly constructed to increase retention time, resulting in flow reversal and decommissioning of the previous cell 1. The Solid Waste Facility consists of segregated bulky waste, hazardous waste and construction waste. The Hamlet is currently reviewing design options for a new Solid Waste Facility with a 40-year lifespan.

Environment Canada recommends that the following conditions be applied throughout the duration of the license:

**General**

- The Hamlet must ensure that any effluent discharged from the system's final discharge point is in compliance with Section 36(3) of the *Fisheries Act*. According to the *Fisheries Act*, Section 36(3), the deposition of deleterious substances of any type in water frequented by fish, or in any place under any conditions where the deleterious substance, or any other deleterious substance that results from the deposit of the deleterious substance, may enter any such water, is prohibited.
- It is recommended that total volumes of sewage be tracked and recorded to ensure adequate management and planning for tracked volumes. Records could be generated by tracking the number of full or partial sewage truckloads per day/week/year with the associated volume of the sewage trucks tanks.
- Environment Canada recommends that proper signage is in place indicating the locations of the SNP sites for the sewage lagoon and solid waste facility, as well as for the relevant segregated waste materials (ie, bulky waste, hazardous waste, etc).
- An updated Operations and Maintenance Manual should be submitted for approval as a condition of the water licence to reflect the operation and maintenance of the New Sewage Treatment Facilities and the resulting reconfiguration of Solid Waste Facilities. Generally the plan should include:

**Canada**

- A description of how facilities are operated and maintained;
- How often these tasks are performed; and
- The personnel responsible for their completion.
- All applicable Territorial Guidelines

### **Sewage Treatment Facilities Management**

- A Closure and Reclamation Plan should be submitted for approval as a condition of the water licence for the decommissioned sewage cell.
- A minimum 1 m of freeboard should be maintained within the sewage lagoon at all times.
- Maintenance should include removal and disposal of sewage sludge. Estimates should be made of the quantities of sludge likely to be produced, the required frequency of extraction from the lagoons; and operational procedures developed for environmentally sound removal and disposal. These procedures should include characterization to ensure disposal options are appropriate. Environment Canada recommends that prior to desludging occurring, the proponent submit for approval a Sewage Sludge Management Plan that clearly outlines the chemical composite.

### **Solid Waste Management**

- A Hazardous Waste Management Plan needs to be developed and implemented, and should cover handling and storage, as well as identify ultimate disposal of hazardous wastes.
- An Abandonment and Restoration Plan is needed for the solid waste site if this is not already in place.

### **Monitoring and Compliance**

- It is very important that monitoring of the effluent from the sewage lagoon is carried out as per the Surveillance Network Program within the Water Licence. Proper and regular monitoring allow for evaluation and management of the current system and will help to prevent deleterious discharge to the receiving environment. EC notes the requirement for weekly sampling during decant. If the decant period is less than 7 days, sampling requirements should reflect this and be changed to require samples on the first and last day of decant.
- In order to properly monitor the system over time, it is important to collect SNP samples from the same location. SNP 1478-5 should have an explicit description or provide the GPS or UTM location. In Part D.4 of the licence, the location is described as “the East end of cell three (3) of the Sewage Disposal Facilities” which should be revised to reflect the current configuration.
- Site visits, inspection reports and the map provided entitled “Existing Sewage Treatment Lagoons and Solid Waste Disposal Site” note the presence of ponded water at the Solid Waste Site. EC recommends an additional SNP station is added to characterize the surface water leachate in order to develop adequate disposal methods. It is noted that groundwater wells exist in the vicinity of the facility. These should be monitored as well to properly manage the extent of the sewage plume.
- EC notes that the CCME Strategy for the Management of Municipal Wastewater has been signed, and that northern jurisdictions can expect performance standards for BOD5 and TSS to be regulated following a five year period which starts in 2009. We anticipate that the standards for these parameters may be higher than the 25 mg/L for each that is proposed for the southern jurisdictions and the Yukon, and that they will be lower than the NWT ‘Guidelines for the discharge of treated municipal wastewater in the Northwest Territories’ guideline levels. Also, it should be noted that carbonaceous Biological Oxygen Demand (cBOD) will be the regulated parameter, and it would be prudent to add this to the list of licence parameters now, in order to gain some idea of the system track record over the next five years.

**Spill Contingency**

- **All** spills must be documented and reported to the **NWT Spill Line at (867) 920-8130**.
- The Hamlet should produce an updated Spill Contingency Plan for approval which includes the new operations and infrastructure. The plan should facilitate response to spills which might occur during construction and operation and decommissioning of the project. The plan should include a list of available spill response equipment and the names of trained personnel who will be on-site and available in the case of a spill. If a Spill Plan is not already in place, the Hamlet should submit a Spill Plan for approval.

If there are any changes in the proposed activities, EC should be notified, as further review may be necessary. Please do not hesitate to contact me with any questions or comments with regards to the foregoing at (867) 669-4715 or by email at [mary.kelly@ec.gc.ca](mailto:mary.kelly@ec.gc.ca)

Yours truly,

Mary Kelly  
Physical Science Officer – Wastewater Specialist  
Environmental Protection Operations

cc: Carey Ogilvie, Head EA North, Environment Canada  
Anne Wilson, Water Pollution Specialist, Environment Canada  
Savanna Levenson, Environmental Assessment Specialist, Environment Canada



Fisheries  
and Oceans

Pêches  
et Océans

Fish Habitat Management  
Suite 101, 5204-50<sup>th</sup> Avenue  
Yellowknife, Northwest  
Territories  
X1A 1E2

Your file *Votre référence*

MV2009L3-  
0025

Our file *Notre référence*  
SC01175

November 23, 2009

Mackenzie Valley Land and Water Board  
7<sup>th</sup> Floor, 4910 – 50<sup>th</sup> Avenue  
Yellowknife, NT X1A 2P6

Attention: Angela Plautz

**RE: Water License MV2009L3-0025; Renewal of N3L4-1478  
Hamlet of Fort Liard Municipal Water Licence**

Fisheries and Oceans Canada - Fish Habitat Management Program (DFO) received the above mentioned proposal on November 3, 2009, put forth by the Hamlet of Fort Liard. The proposal has been reviewed to determine whether it is likely to result in impacts to fish and fish habitat which are prohibited by the habitat protection provisions of the *Fisheries Act* or those prohibitions of the *Species at Risk Act* that apply to aquatic species.

From the proposal, we understand that the proponent plans to pump a maximum of 50,000 m<sup>3</sup> of water from two groundwater wells located adjacent to the Liard River. The proponent is requesting that the Water Licence be valid from 2010 to 2020. After reviewing the proposal, DFO can conclude that the proposal is not likely to result in impacts to fish and fish habitat.

However in anticipation of future works, DFO would like to offer the following comment:

It is stated throughout the application that relocation of some municipal infrastructure and decommissioning of existing structures may occur within the applied timeframe for the requested Water Licence. If the Hamlet of Fort Liard decides to make these changes to municipal infrastructure, DFO recommends that a formal amendment application be submitted to ensure appropriate mitigation measures are in place at all sites to protect fish and fish habitat.

Regarding the question of exemption of this application from preliminary screening, we feel that this decision is under the jurisdiction of the MVLWB based on applicable legislation. We have no comment in this regard.

Please be advised that any impacts to fish and fish habitat which result from a failure to implement the proposal as described or incorporate the additional

**Canada**



mitigation measures included in this letter could lead to corrective action such as enforcement.

If you have any questions please contact me at (867) 669-4926, by fax at (867) 669-4940, or by email at [Rick.Walbourne@dfo-mpo.gc.ca](mailto:Rick.Walbourne@dfo-mpo.gc.ca).

Sincerely,

*Rick Walbourne*

Rick Walbourne  
Habitat Biologist  
Fish Habitat Management  
Department of Fisheries and Oceans - Western Arctic Area

Cc: Lorraine Sawdon, DFO  
John McKee, SAO, Hamlet of Fort Liard