

Elaine Briere - MVLWB

From: Shannon Hayden - MVLWB [shayden@mvlwb.com]
Sent: Wednesday, December 02, 2009 4:51 PM
To: permits@mvlwb.com
Cc: 'Michael Richardson'; molenkamp@hayriver.com; 'Ron Kent'
Subject: FW: Town of Hay River Written Intervention - MV2009L3-0005
Attachments: 12-02-09 - ENR Letter to Board - Town of Hay River - MV2009L3-0005 - Submission of Written Intervention (ver 2).docx; Dvlp_Comm_Haz_Mgmt_Plan_2009_08.docx

ENR Intervention

From: Patrick Clancy [mailto:Patrick_Clancy@gov.nt.ca]
Sent: Wednesday, December 02, 2009 4:51 PM
To: Shannon Hayden - MVLWB
Subject: Town of Hay River Written Intervention - MV2009L3-0005

Hello,

Please find attached ENR's written intervention due today.

Thank you,

Patrick Clancy
Environmental Regulatory Analyst
Environmental Assessment and Monitoring
Environment and Natural Resources
GNWT
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December 2, 2009

Shannon Hayden
Regulatory Officer
Mackenzie Valley Land and Water Board
7th Floor – 4910 50th Avenue
P.O. Box 2130
Yellowknife, NT
X1A 2P6

Dear Ms. Hayden,

**Re: Town of Hay River
 Water Licence Renewal
 MV2009L3-0005
 Submission of Written Intervention**

The Department of Environment and Natural Resources (ENR) has reviewed the above noted project based on its mandated responsibilities under the *Environmental Protection Act*, the *Forest Management Act*, the *Forest Protection Act* and the *Wildlife Act* and provides the following written intervention and recommendations for consideration by the Board.

Should you have any questions or concerns with regards to ENR's comments and recommendations, please do not hesitate to contact me at (867) 920-6591 or patrick_clancy@gov.nt.ca.

Sincerely,

Patrick Clancy
Environmental Assessment Analyst
Environmental Assessment and Monitoring
Department of Environment and Natural Resources

ENR Written Intervention

Contents

1. Hazardous Waste Management	2
2. Lifespan of the SWF	3
3. Closure and Reclamation	4
4. Fencing.....	5
5. Frequency of Cover, solid waste cells	6

ENR staff met with Town of Hay River staff at the Technical Session facilitated by Mackenzie Valley Land and Water Board (MVLWB) staff on November 13, 2009. ENR's intent was to elaborate on the intent of ENR's recommendations, and to reach an agreement on a consolidated list of the recommendations to the MVLWB. Some of ENR's recommendations, as provided to the MVLWB in ENR's letter of comment dated October 7, 2009, have been resolved based on the Town's commitments made at the Technical Session. However, other issues remain outstanding.

ENR submits the following recommendations to the MVLWB for its inclusion in the Terms and Conditions of the Water Licence. ENR has provided reference to the Town's commitments where applicable.

1. Hazardous Waste Management

ENR, in its comment letter dated October 7, 2009, recommends that the Proponent develop a site specific hazardous waste management plan that identifies hazardous material accepted at the Solid Waste Facility (SWF) and plans for its management. The town has made a commitment in this regard.

At the Technical Session the following commitments were made by the Town and MVWLB (Letter, MVLWB, Nov 18, 2009, Re: Technical Session Commitments):

- "MVLWB staff committed that the Water Licence could include instruction to use ENR Hazardous Waste Guidelines as components of the Hazardous Waste management Plan."
- "A commitment to begin using ENR's hazardous waste manifesting system in the immediate future."
- "A commitment....by March 31, 2010....a hazardous waste management plan."

Final Recommendation:

The Town has committed to developing and submitting a Hazardous Waste Management Plan by March 31, 2010. However, the commitments made by the

Town do not indicate if the Hazardous Waste Management Plan will explicitly state which hazardous wastes the town accepts, and which it does not.

ENR Recommends:

- Manifesting Hazardous Waste; and
- A site specific Hazardous Waste Management Plan (Plan) prepared and submitted to the MVLWB by March 31, 2010, and the use of the ENR document "Developing a Community Hazardous Waste Management Plan" in its development, and to develop the Plan in consultation with ENR throughout the time period The Plan will identify hazardous materials accepted at the Solid Waste Facility (SWF) and their management.

2. Lifespan of the SWF

ENR, in its comment letter dated October 7, 2009, states:

"It is the understanding of ENR that the lifespan and remaining capacity of the Solid Waste Facility is unknown. Hence ENR recommends that the Proponent undertake studies to determine the remaining capacity and the projected lifespan of the Solid Waste Facility."

The town has made a commitment in this regard. At the Technical Session the following commitments were made by the Town (Letter, MVLWB, Nov 18, 2009, Re: Technical Session Commitments):

"A commitment to provide a study of the current site, its operations, and recommendations, in a report by March 31, 2010. This study would include, but not be limited to: research into the projected lifespan of the solid waste facility."

Final Recommendation:

The Town has committed to developing and submitting a report which includes an assessment of the projected lifespan of the solid waste facility to the MVLWB by March 31, 2010.

ENR Recommends:

The Town of Hay River supply the above referenced report and that it also includes an assessment of the projected lifespan of the solid waste facility.

3. Closure and Reclamation

ENR has outstanding concerns regarding Closure and Reclaiming planning for the Solid Waste Facility (SWF). ENR states in its letter of comment dated Oct 7, 2009:

“The Water Licence Questionnaire refers to the Operations and Maintenance Manual for information on a Closure and Reclamation Plan¹ (the Plan). However the O&M Manual (O&M Manual) provided with the Water Licence Application contains no information on the Plan. Hence ENR recommends that the Proponent provide the Plan.”

In response to the above referenced ENR comment, the Towns response of, Oct 23, 2009, states:

“An oversight in editing. An A&R plan has not been provided. If it is determined that the site is to be closed within the life of the licence, the Town will submit an A&R plan as is typically required by a licence.”

However, the Town response, and discussion at the Technical Session, indicates no initiation of Closure and Reclamation Planning for the SWF. ENR is concerned the initial steps of developing a Closure and Reclamation Plan (C&R Plan) are not in place, and the town will be unprepared to meet a closure scenario; this concern is augmented when considering that the town has not considered the projected lifespan of the SWF.

The development of a C&R Plan is important. There are three distinct steps, performed in the proper order, through the development of a Final C&R Plan:

1. Preliminary Closure and Reclamation Plan
2. Interim Closure and Reclamation Plan
3. Final Closure and Reclamation Plan

Step 1, a Preliminary C&R Plan, is appropriately prepared in conjunction with the planning and permitting stage of the SWF. The general purpose is to propose closure objectives, alternatives analysis, and proposed closure criteria to understand the Proponent's intent. Determining appropriate closure options should also be integrated with a level of community engagement to build consensus upfront.

Step 2, the Interim C&R Plan, is to identify uncertainties surrounding certain closure options that guide corresponding areas for reclamation research during operations prior to closure. There are typically several versions that are prepared during the life of the facility to address changes in development alternatives, and to refine as the facility progresses towards closure and subsequent versions of Closure and reclamation Plan are produced. Interim Plans are prepared on a regular basis to coincide with operational changes, advances in technology, key milestones,

¹ Page 18, Section 6.5, Municipal Water Use Questionnaire, Hay River WL Application MV2009L3-0005.

information collected during reclamation research, and results of community engagement.

Step 3, the Final C&R Plan, should be more detailed because more information and studies are available to determine duration, frequency, and magnitude of the effects. The final version of the C&R Plan is to contain detailed reclamation activities, and should be prepared and approved prior to a scheduled permanent closure or immediately after an unplanned closure.

Final Recommendation:

ENR recommends the Town prepare and submit a Preliminary Closure and Reclamation Plan for the Solid Waste Disposal Facility and submit it to the MVLWB for review and approval by Dec, 2010.

4. Fencing

ENR written comments of Oct 7, 2009, made recommendations with respect to fencing at the Solid Waste Facility (SWF). There are serious wildlife issues related to the lack of adequate fencing which requires immediate attention:

- The risk of wildlife mortality is unacceptable and immediate; and
- The risk of human interaction with carnivores on site.

At the Technical Session November 13, 2009, the Town acknowledged that fencing around the Solid Waste Facility (SWF) is a concern it takes seriously, and made a commitment to install fencing around the entire facility as demonstrated in its statement referenced below:

“A commitment to take the fencing issue seriously and to eventually build a fence that will encompass the entire solid waste facility. This commitment does not imply any particular type of fence or specific timeframe for its construction.”

However, ENR has outstanding concerns due to the Town’s inability to commit to a timeframe for installation of a completed fence. Undue delays in implementation pose an increased risk to wildlife that have access to waste, and compromises operational health and safety resulting from an increased risk to persons exposed to carnivores, in particular bears, that are on site.

Final Recommendation:

ENR recommends the Town develop and submit a Plan to the MVLWB that proposes the timely installation of a fence that will prevent carnivores from having access to the Solid Waste Facility. The Plan must include a specific timeline for its completion. The Plan should be developed in consultation with ENR

5. Frequency of Cover, Solid Waste Cells

ENR has outstanding concerns regarding a lack of solid waste cell maintenance at the Solid Waste Facility (SWF). An ENR site visit to the SWF in September 2009 noted extensive volumes of waste that had not been maintained, covered and disposed of in a timely manner.

Undue delays in management and cover of solid waste cells results in prolonged open exposure. This results in an increase in windblown debris and increases odours that attract wildlife. Windblown debris is unsightly and proposes a risk to the public and workers. Prolonged open exposure of waste increases risk to both wildlife that have access to waste, and compromised operational health and safety resulting from an increased risk to persons from carnivores, in particular bears, that are on site.

Final Recommendation:

ENR recommends the Town develop schedules of frequency and the criteria for applying cover to the solid waste cells to ensure timely management of waste on site. This information must be included in an updated Operations and Maintenance Manual.

Attachments:

1. Dvlp_Comm_Haz_Mgmt_Plan_2009_08.docx

Developing a Community Based Hazardous Materials Management Plan

Table of Contents

Introduction	2
Regulatory Authority.....	2
Recordkeeping and Reporting	3
Hazardous Waste Categories	3
HHW	4
ICI Hazardous Waste	4
Outsourced Industrial Waste and Third Party Waste Disposal in Municipal Facilities	4
Hazardous Materials	5
Storage, Packaging, Labelling.....	9
Off-Site Disposal.....	9
Waste Segregation Training.....	10
Hazardous Waste Management Plan.....	10
Waste Screening	18
When does a hazardous material become a hazardous waste?	18
Waste Screening for Facility-specific unacceptable wastes.....	18
Management of Unacceptable Wastes.....	19
Appendix I Movement Documents	21
Appendix II Lead-Acid Battery Storage Plan.....	27
Appendix III Construction/Demolition Hazardous Materials Check List	29
Appendix IV Common Household Hazardous Wastes.....	30
Appendix V Hydrocarbon Contaminated Material Treatment Facilities	31
Appendix VI Drum Disposal Protocol For Municipal Landfill.....	32
Appendix VI I Hazardous Material Management Considerations	34
Appendix VIII HHW Disposal Request Form	35
Appendix IX Waste Screening Procedures	36
Appendix X Sample Waste Load Inspection Report	37
References	38

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 Waste¹. 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.

- [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.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 guidelineⁱⁱ.

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 guidelineⁱⁱⁱ.

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^{iv}.

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.^v

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^{vi}.

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^{viiiviii}. 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^{ix}. 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.^x

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^{xi},

- 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

A Generator / consigneur 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 ^{re} 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 / Accepted / Refusé		34		Decont. / Pack. / 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		18		19		36	
Export / Import		Import / Exportation		Customs code(s) / Code(s) de douanes		37		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.			
Signature		Tel. No. / N° de tél.		22		22		Name of authorized person (print) / Nom de l'agent autorisé (caractère d'imprimerie)			
Special handling / Manutention spéciale		21		21		21		Date shipped / Date d'expédition			
Attached / Ci-joint		As follows / Ci-contre		22		22		Time / Heure			
Year / Année		Month / Mois		Day / Jour		A.M. / P.M.		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.		Year / Année		Month / Mois			
Day / Jour		A.M. / P.M.		Year / Année		Month / Mois		Day / Jour			

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;”

“(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;”

Inventory	Location
<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.^{xii}

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)^{xiii}

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).^{xiv}

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
- 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
- vi <http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/ozonedepleting.pdf>
- vii <http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/paintguideline.pdf>
- viii http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/Guideline_Waste_Lead_and_Paint.pdf
- ix 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
- xiii <http://www.gp.alberta.ca/documents/codes/HYDROCARBONS.pdf>
- xiv <http://www.enr.gov.nt.ca/live/documents/documentManagerUpload/siteremediation.pdf>