Newfoundland Labrador

GOVERNMENT OF
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GUIDANCE DOCUMENT

Title: **Environmental Standards for Municipal Solid Waste Transfer Stations / Local Waste Management Facilities**

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Environmental Standards for Transfer Stations
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1.0 PURPOSE

To define the environmental standards for the siting, design, construction, operation, and decommissioning of a Municipal Solid Waste Transfer Station/Local Waste Management Facility to provide a high level of environmental protection. This document is also intended as guidance in applying for a Certificate of Approval to construct and operate a transfer station.

2.0 BACKGROUND

A waste transfer station functions as a connecting point between a community's solid waste collection program and the regional waste management system. Facility size, ownership and services offered may vary, but the basic purpose is to consolidate waste from multiple collection vehicles into larger, long-haul vehicles for more economical transport to a final waste management facility.

The transfer station has a designated receiving area where waste is unloaded, compacted and reloaded into larger high volume vehicles, usually in a matter of hours. Transfer stations may also function as centres to separate or sort waste into portions that may be reused or recycled, further reducing the final volume of waste that is transported to landfill.

Short term storage of non-hazardous construction and demolition debris, and recyclable metals at a transfer station requires approval from the Department and the facility shall be designed for this purpose. The material may be stored at a transfer station for a period of time to allow for reuse or recycling, and to minimize the final volume disposed to landfill.

Waste transfer stations should have minimal adverse environmental impact as municipal solid waste is not landfilled at the site, there is no long term storage of waste, only non-hazardous, recyclable material may be stored outside for a limited time, and all other waste received at the site is held in suitable containers and/ or an enclosed building.

3.0 APPLICATION OF ENVIRONMENTAL STANADARDS

These standards apply to the siting, design, construction, management and decommissioning of a waste transfer station designed to receive and transfer material originating from a municipal solid waste stream.

These standards do not apply to:

- the storage and handling of hazardous waste;
- facilities serving only as citizen waste drop-off stations (using containers) or community convenience centres (material recovery and processing).

The Department may provide guidance not covered by these Standards for acceptance and storage of various types of materials, or vary the requirements on a site-specific basis.

The General Environmental Standards for Municipal Solid Waste Management Facilities also apply to MSW Transfer Stations.

4.0 Legislation and Approvals

The legislative authority for the establishment, development and operation of a municipal waste management system is provided through the *Environmental Protection Act,* Parts IV, V and XI; and the *Municipalities Act,* Part XIII.1.

The information provided in the General - Environmental Standards for Municipal Solid Waste Management Facilities/Systems regarding Legislative Authority; the Certificate of Approval Process; Approval for Other On-Site Activities; Public Notification; and Financial Assurance/ Environmental Insurance applies to Transfer Stations / Local Waste Management Facilities.

A Certificate of Approval to construct and to operate a MSW Transfer Station shall be requested from the Department pursuant to the Environmental Protection Act, Parts IV, V and XI.

The standards outline the information required to support an application for a Certificate of Approval to construct and operate a waste management facility/ system, but additional information may be required by the Department. The facility design shall be completed by a Qualified Professional and outline all system components and assumptions. Engineering drawings and technical descriptions shall be provided in sufficient detail to allow evaluation of compliance with the environmental standards. A Quality Control/Quality Assurance program is also required for approval for all aspects of the facility/system, including design, construction, operation, and environmental monitoring.

Applications for a Certificate of Approval to construct and operate a municipal solid waste management system / facility must be accompanied by a letter from the local municipal unit confirming compliance with the applicable zoning, planning restrictions, and such other by-laws as may exist.

The Department may issue a Certificate of Approval for a specified operating period after which time a renewal may be requested by the owner/operator.

5.0 ENVIRONMENTAL STANDARDS

The following section outlines requirement for the siting, design, construction, operation, and decommissioning of a Transfer Station. Further information is available in the General Environmental Standards for MSW Waste Management Facilities/Systems.

Alternate facility designs and technologies that provide for an equivalent or higher level of environmental protection will be assessed on technical merit and evaluated on a case by case basis.

5.1 Site Selection

Table I provides some of the recommended separation distances for transfer station separation distances are necessary in order to minimize potential environmental conflicts between non-compatible land uses and the facility. It is advised to exceed these recommendations wherever possible to minimize the possibility of public complaints and environmental issues. The Department may vary the requirements of the criteria depending on the type of material to be recovered, operational procedures, environmental sensitivity and other site-specific conditions.

Land Use	A transfer station shall not be sited in environmentally sensitive areas (parks, nature reserves, areas where there may be endangered species of plants or animals, wildlife migration corridors, wetlands, etc). Sites shall be established in accordance with municipal zoning requirements.	
Access and Road Restrictions	Access roads shall be accessible year round by the weight and type of vehicles anticipated.	
Flood Plain	The site shall not be located within a 100 year flood plain or in any area which has greater than 1% chance of flooding in any year. Flood risk mapping shall be consulted if available.	
Watersheds	The site shall not be located in a protected water supply area or a protected well field.	
Hydrogeology	Areas where there is a reasonable depth of native soils and no useful groundwater resources are preferred.	
Recommended Separation Distances from Transfer Station Property Boundary	**Feature**	**Separation Distances (m)**
	The 10 m closest to the property boundary must be reserved for natural or landscaped screening (berms or vegetative screens))	30
	Residential and Institutional Properties (Examples: public schools, hospitals, churches, public parks and playgrounds)	100
	Industrial and Commercial Property	100
	Right-of Way of a Public Road	30
	The High Water Mark of any Water Course, River, Stream, Water Body, Lake, Pond, Marsh, Bog, Swamp, Tidal Flat, or Similar Area	100
	Drinking Water Supply (Well or Surface Water)	100
Unstable Area	Sites are not to be located within 100 metres of an unstable area	
Airports	A site shall be located a minimum of 8 km from airports that are used by commercial aircraft. This distance may be reduced if bird control measures, that are approved by both Transport Canada and the Department, are implemented or if the potential for birds causing hazard to aircraft is minimal.	
Fire Break	Distance to be approved in consultation with the Fire Commissioner's Office.	

5.2 Site Investigation: Hydrology, Surface Water and Groundwater

Site investigations are undertaken to provide environmental baseline on regional and local hydrogeology, surface water and groundwater quality/conditions for a proposed site. A summary of site characteristics as it relates to potential transport of contaminants in the environment is required prior to any approval for construction. The factors addressed include: soil and bedrock composition, the hydraulic conductivity, depth to groundwater, direction of groundwater flow, and use of the aquifer for drinking water supplies. Surface water resources are also discussed where relevant and include: the location of on-site and off-site surface water bodies and the use of surface water for drinking water and other purposes. The presence of wetlands, floodplains and sensitive environmental features is also addressed.

Further detail on the content of a site investigation is contained in Section 5.2 of the General Environmental Standards for Municipal Solid Waste Management Facilities.

5.3 MSW – Transfer Station Site/Facility Location and Facility Design:

Site location:

- ✓ an accurate description of the proposed location
- ✓ aerial photos;
- ✓ a legal survey;
- ✓ plans showing all property boundaries, buildings, roads, utility corridors, contours, drainage channels, water bodies, rights of way, easements, forested areas and adjacent land uses; and
- ✓ GPS coordinates/GIS system mapping of facility features in a compatible and manageable format and level of detail; and
- ✓ site compatibility with other land uses, and any environmental sensitivity of the area must be commented and addressed.

Facility location

- ✓ a surveyed plot plan, showing the location of all on-site facilities and infrastructure; and
- ✓ a description of the required infrastructure design specifications, access requirements and support services to handle the anticipated waste volume to be received / processed/ stored / disposed over the life of the facility.
- ✓ Consideration shall be given to the amount of material to be processed, the proximity of the facility to collection routes and markets and the availability of transportation. Preferred locations are close to, or at, existing waste disposal sites.

Facility Design

The layout shall include the location of the tipping surface and area for material handling sorting and storage. The site plan shall indicate roadways, direction for traffic flow, parking areas and buffer zones. There shall be sufficient area for weigh scales for incoming materials and for queuing of trucks at both the weigh scales and at the facility in general.

The design of a Transfer Station shall be shown on plans certified by a Professional Engineer and

described in written form as per the general environmental standards for MSW management facilities, to allow evaluation and determination of compliance.

6.0 Construction

The Transfer Station is required to meet the general environmental standards for construction of MSW management facilities including an approved design, quality control / assurance protocol and environmentally sound construction practices.

Prior to opening the Transfer Station, the owner and/or operator shall provide to the Department , documentation in the form of a Certificate of Completion, that the site has been constructed as designed in the application report, that all facilities and systems are in place and functional and the site is ready to receive materials.

7.0 Quality Control/Assurance

Quality control/assurance (QC/QA) is defined as a planned system of inspections and activities that provide assurances that the design, manufacture and installation of systems and materials used in the construction and operation of the facility meet the purposes for which the systems and materials are intended. Appendix B provides an example of a Typical Quality Control/Assurance program for a MSW landfill. However, a quality control/assurance program shall be specific to the type of facility/ system that is being constructed and operated.

Manufacturers' specifications for the installation and operation of equipment/components shall be adhered and compliance documented. Operating instructions and maintenance procedures shall also be adhered and documented daily to ensure that installations function safely and as specified by the manufacturer. Directives of regulating agencies shall also be adhered.

A description of the quality control/assurance program to be carried out on all aspects of the waste management facility/system that are integral to environmentally sound design and performance is required. This information is required by the Department to obtain a Certificate of Approval to construct and operate a waste management system. The implementation of an Environmental Management System based on a culture of continual improvement (Plan, Do, Check, Revise) is recommended e.g. ISO 140001.

8.0 Reception of materials

8.1 Receiving, Inspection and Monitoring

The operator shall ensure that only approved materials of municipal origin which may include solid waste, construction and demolition debris, scrap metal, white goods and other approved material defined and listed in the terms and conditions of the facility's Certificate of Approval, is accepted at the transfer station.

MSW transfer stations may be approved to accept larger, bulky goods such as appliances, furniture, car wrecks and other recyclable metals, construction and demolition debris, and household hazardous waste to provide a convenient and practical place for public drop-off. these types of wastes. Waste segregation and good housekeeping practices will be required to accommodate a certain volume of this material to make transport to recycling or landfill

economical. Further information regarding approval to accept and store recyclable metals, construction and demolition materials and household hazardous waste is provided in the respective attachments at the end of this document.

All vehicles delivering material to the site shall be screened to ensure that they are carrying acceptable materials and, where scales are in place, weighed to determine material quantities for accounting purposes. A transport vehicle shall be refused access to the site and facility if it is known to contain unacceptable, hazardous or suspected hazardous material waste.

8.2 **Hazardous or Suspected Hazardous Waste**

Suspected hazardous material shall be kept in a designated holding area to facilitate storage, handling, removal and disposal according to all regulations. This is required to avoid potential for hazardous materials incidents at the transfer station.

Details of non-compliant material brought to the facility shall be recorded including: date received; type, quantity, source and owner of the material; name of transport company, contact information and transport vehicle identification.

8.3 **Measurement of Material**

Waste Management Facilities/ Systems serving a population of 5,000 or more, or which receive more than 5,000 tonnes/year of material may use measurement methods approved by the Department. For transfer stations or municipal landfills serving populations greater than 10,000 or which receive greater than 10,000 tonnes/year, and for all private landfills, weigh scales are required.

The federal government requires that weigh scales used to assess charges related to the weight of a commodity be accurate and sensitive to the range of weights being measured. A weigh scale accurate for measuring typical commercial waste vehicles and/or containers (loaded weight as well as tare weight) may not be accurate for measuring waste loads brought to a transfer station or a landfill in smaller vehicles such as pickup trucks and private automobiles. If fees are being contemplated for small loads, the accuracy of the scales for measuring these smaller weights should be confirmed with the federal department of Consumer and Corporate Affairs -Weights and Measures. Alternatively, charges for these loads could be based on typical load sizes according to type of vehicle rather than on a direct measure of weight.

8.4 **Materials Storage Time** The allowable maximum storage time will depend on the type of material, the facility size, and season, management practices and if there are any nuisance issues or environmental problems with the specific facility / site at the time.

Allowable on-site storage times for inert waste streams such as construction and demolition debris and scrap metals will depend on available space and be set out in the Certificate of Approval. Storage times may be extended to allow for more economical removal and transport, where there are no problems associated with the waste material.

Storage of Municipal Solid Waste destined for a composting facility or the regional landfill will be limited to two days in the summer, and one week in winter, unless there are outstanding circumstances that affect waste removal or transport.

Transfer stations accepting more than 5,000 tonnes/year shall transport all garbage off the premises at the end of every working week.

Uncontained storage of municipal solid waste (garbage) is prohibited.

Any changes or modification shall be approved by the Department.

Any residual products associated with the operation shall be disposed of in a manner acceptable to the Department.

8.5 **Other waste streams**

Other waste streams that may be accepted for temporary storage or recycling purposes at a transfer station may include vehicle wrecks and recyclable metals, construction and demolition materials and household hazardous waste. If approved by the Department, the terms and conditions applying to the temporary storage of these waste streams would be incorporated into the Certificate of Approval to operate the transfer station, or an amendment to an existing approval. Further information respecting temporary storage of these materials is provided in attachments 1, 2 and 3 at the end of this document.

9.0 Facility Operations – Design Considerations

9.1 **Facility Sizing and Process Flow**

The facility size, throughput, and accommodations for temporary storage of the various recyclables or organic waste and residual garbage; or dry and wet waste streams shall be described. Buildings and access shall be appropriately sized and designed to accommodate throughput, and anticipated traffic.

A transfer station must provide sufficient tipping area to accommodate the numbers and types of vehicles arriving, their unloading times, and any material containment, sorting or storage to be done. The temporary storage / transfer capacity must accommodate peak waste disposal periods, e.g. after statutory holidays or long weekends. Coordination of material pickup, with transfer station capacity and staffing will be a function of operations management.

9.2 **Floors**

The floors of all receiving and storage areas shall be impermeable e.g. sealed concrete, asphalt or other as approved by the Department. The containment shall be designed to prevent leachate from entering the environment and to contain and to collect runoff. Floors of buildings at large transfer stations shall be designed of sufficient thickness and strength to withstand the stress imposed by material handling vehicles and the stored material itself.

9.3 **Access Requirements**

Transfer Stations shall be designed to accommodate the type and volume of vehicle traffic

anticipated such as heavy equipment, trucks and public vehicles that deliver waste and other on-site activities. Access roads shall be maintained (surfaced and drained) to prevent rutting and excessive erosion. The site shall have controlled site entry and exit points to control the types of waste received at the site and vehicle movement.

9.4 Receiving Areas

Details of material receiving and storage, including infrastructure such as weigh scales, roadway and parking areas and any facilities for temporary on-site storage is to be clearly described. Consideration shall be given to designing a facility which minimizes long wait times for vehicles delivering waste to the site.

Weigh scales are to be approved and functioning pursuant to Weights and Measures Canada Standards for the purpose of weighing the waste as it is delivered to the site.

9.5 Environmental Control Systems

Design features are required to maintain acceptable air quality, to minimize dust and odour generation, to reduce noise levels and control nuisance such as rodents, flies or litter.

Environmental design controls may include the following:

- prevention of water ponding at the site (ensure proper drainage);
- installation and maintenance of ventilation equipment and air emissions controls; including fans and negative air pressure inside the building
- provision for water mist for dust suppression

Complementary operational controls would include:

- regular maintenance of the site, systems and equipment;
- good housekeeping practices;
- provision of training and personal protective equipment for employees; and
- provision for air quality monitoring and analysis if necessary.

9.6 Environmental / Nuisance Controls

A litter control program shall be implemented which includes regular litter collection on and around the entire site. Open truckloads of materials transported to and from the site shall be covered by tarpaulin, or a similar material, to prevent loss of material at the site and during delivery. Proper housekeeping practices shall be in place to prevent litter and nuisance problems at the facility. Site location may require that a treed or bermed buffer zone be established between the property boundary and the facility to improve aesthetics.

An effective rodent, bird, animal and vector control program shall be in place for the lifespan of the facility. The control program shall be approved by the Department.

Dust produced by operations and waste transfer shall be controlled. All roads on site shall be surfaced and maintained to minimize the potential for the tracking of dust, mud or wastes from the facility onto access, public or private roads. Suitable dust and noise control measures and systems shall be included in the design and operation of the site.

10.0 Operations Plan

10.1 Operations and Maintenance Manual

The owner/operator of the Transfer Station shall develop an operations and maintenance manual that will be kept on site and be readily available for use by staff and regulators. The manual shall be prepared by the owner and/or operator and approved by the Department. It shall include the general operations, policies, procedures, monitoring requirements, maintenance and legal requirements of the facility. The facility shall operate in compliance with the provisions of the Certificate of Approval and this manual.

See Section 10.0 of the General Environmental Standards for MSW Management Facilities for further details on the expected content of an Operations and Maintenance Manual/Plan.

10.2 Environmental Health and Safety Contingency Plan

The owner/ operator shall have up-to-date contingency plans in place to effectively handle all reasonably foreseeable emergencies which could result in disruption of facility operations and/or environmental damage. The plan shall describe appropriate mitigation measures required to prevent damage to the waste management facility and the environment.

Bound copies of the contingency plan(s) shall be kept at the facility (ies) with the Operations Manual. Employees shall be familiar with the contingency plan(s) and participate in regular practice response exercises.

The attendant on site shall be equipped with an effective and quick means of communication for personal safety and to contact first responders (facility owner/operator, fire, police, and medical) in the event of an emergency.

An appropriate fire control program developed in consultation with the local Fire Department shall be in place on a continual basis. The Department of Natural Resources shall also be advised in areas where there is a forest fire risk.

The owner and/or operator shall review the contingency plan annually and revise it as required.

11.0 Records and Reporting Requirements

The General Environmental Standards for MSW Management Facilities describes the variety of records and reporting requirements associated with the construction and operation of a facility. Documentation for a regional waste management facility/site would be in a standard format to facilitate reporting. The use of electronic records and reporting in a compatible format shall be considered as a means to reduce excessive use of paper. However, retaining limited hardcopies of annual reports, financial transactions, correspondence, and contingency plan implementation that are considered significant are recommended.

Operations management reports on daily activity (ies) at a transfer station would include the following information:

- identification of generators and transporters of the materials;
- the origin and quantity of the materials (wet/dry wastestreams) received (mass and/or

volume) from each municipal unit;
- the quantity of material rejected, transferred and/or stored for future transfer
- a description of any complaints received; and
- any incident requiring contingency plan implementation.

An annual report shall be prepared by the owner/operator and submitted to the Department. The expected content of an annual report is outlined in the General Environmental Standards for MSW Management Facilities.

Environmental monitoring and reporting requirements are also outlined in the General Environmental Standards and would be set out in the terms and conditions of the Certificate of Approval.

Records shall be kept on site for a minimum of two years. All records shall be available for inspection by the Department during the lifespan of the facility.

12.0 Site Safety and Security

A list of factors important to safe and secure operation of a waste management facility/site is provided in the General Environmental Standards for MSW Management Facilities.

In brief, well-controlled access, clear signage, and having a sufficient number of well trained personnel in place when the site/facility is open to the public during operating hours are seen as the central components of safe operations. Adherence to the Operations and Maintenance Manual and Reporting Requirements will also ensure safety at the facility/ site.

Working conditions shall always meet or exceed Occupational Health and Safety Standards, and sufficient good quality personal protective equipment provided. Environmental Health and Safety Emergency Contingency Plans shall be well known and practiced by employees. Ongoing public education and awareness will also serve to improve facility efficiency, and decrease overall risk.

13.0 Environmental Monitoring

Waste transfer stations or local waste management facilities are locations used uniquely for the consolidation and direct transfer of waste material. Large facilities would conduct all material transfer within enclosed buildings designed for this purpose. At sites serving a smaller population other means of containment may be approved by the Department. Apart from the occasional spill, there should be minimal municipal solid waste temporarily stockpiled, or stored whereby leachate would become an issue. Wastewater resulting from cleaning transfer station containers, floors and equipment would be directed to an oily water separator, and collected, tested/treated prior to discharge. Uncontained municipal solid waste shall not be stored outside at transfer stations, which eliminates the potential for precipitation contacting waste material and resulting in leachate or wastewater runoff.

It is possible that some transfer stations will be approved to store recyclable metals and the

recyclable / reusable part of inert construction and demolition debris outdoors. These storage areas would be secure, but potentially subject to the elements, in which case some runoff might occur.

An appropriate environmental monitoring program shall be developed as part of the Certificate of Approval process for the facility/ site. The requirements shall be based on an assessment of site investigations, including the hydrogeologic, groundwater and surface water investigation, and proposed facility operations. Where groundwater and/ or surface water monitoring is required, the monitoring program, shall be designed and conducted by a suitably Qualified Professional and approved by the Department prior to implementation. A typical list of sampling parameters and evaluation criteria are listed in separate Appendix C. The Department may develop or adjust the list of parameters and/or monitoring schedule on a site-specific basis.

The General Environmental Standards for MSW Management Facilities provides further information on possible monitoring requirements which may or may not apply to the transfer station. The requirements specific to the transfer station will be set out in the terms and conditions of the Certificate of Approval.

All surface water (storm water runoff, or leachate) discharged from the site shall comply with the *Environmental Control Water and Sewage Regulations*, 2003. Additionally, liquid effluents shall not be acutely lethal as determined by the suite of biological Test Methods developed by Environment Canada for this purpose. The Department of Environment and Conservation Policy PD:PP2001-01: *Use of Accredited and Certified Laboratories* applies for sampling analysis.

13.1 Air Quality Dust and Noise

The Department may require that a dust and noise monitoring program be implemented at the site.

The Department may require the proponent to submit results of air dispersion modeling to determine the likelihood of problem odours at the property boundary and near the facility. The aim of air dispersion modeling is to provide baseline information for air quality in these areas and to identify parameters and limitations for future air quality testing.

13.1.1 Odour management

An odour management program shall be submitted to the Department prior to approval and shall include the following:

- identify sensitivity and location of facility users and occupants of adjacent and nearby properties;
- population density;
- planned development in the immediate area;
- climatic features such as prevailing winds direction and speeds, annual rainfall, average seasonal temperatures, humidity and pressure conditions;
- description of the local air shed (the geographic area of potential impact from odours); and,
- geographic features of the proposed site.

14.0 Decommissioning Plans

The owner/ operator shall submit a preliminary decommissioning plan to the Department when applying for a Certificate of Approval. A detailed decommissioning plan shall be submitted prior to the closure of the site.

The requirements for decommissioning (preliminary and final detailed) plans for a transfer station or local waste management facility may vary on a site specific basis and depending upon the proposed future use of the facility / site but shall be consistent with the General Environmental Standards for Municipal Solid Waste Management Facilities. At least six months notice (180 days) is required to the Department prior to closure of a transfer station, at which time a detailed decommissioning plan must be provided for approval.

The schedule of decommissioning activities, including notifications/signage, any remedial work, site clean-up, removal of infrastructure, restriction/removal of access; environmental monitoring requirements, projected costs and financial assurance, is information due to the Department. The decommissioning plan must be updated and submitted to the Department for approval whenever significant changes are made to the MSW Transfer Station.

14.1 Site Cleanup / Rehabilitation

Prior to decommissioning this would normally include removal of litter and wind-blown debris along the access road and around the perimeter of the site; removal of all metals stockpiled to approved recycling facilities; removal of all remaining waste from the site; completion of any remedial work required; and removal of any buildings, facilities or infrastructure no longer needed.

Upon termination of operations the site must be rehabilitated to the satisfaction of the Department. Termination is defined as out of use, by the owner or operator, for any consecutive 12 month period or when the owner and/or operator indicates there will be no further activity at the site.

14.2 Vector Control

The owner and/or operator shall undertake an assessment of rodent populations and if required, develop and implement an adequate ongoing control program for rodents and other animals prior to site decommissioning.

14.3 Post-Decommissioning Monitoring, Maintenance and Reporting

Post-decommissioning monitoring and maintenance may be required by the Department to ensure no long-term negative impacts to the environment.

Annual reports are to be submitted to the Department outlining any post decommissioning monitoring and maintenance activities and summarising the results of all inspections. Any problems noted shall be described along with the corrective actions taken.

14.4 Future Use of the Site

Approval from the Department may be required depending upon the post-decommissioning condition of the site. The Department shall be advised of any change in ownership or proposed undertakings.

REFERENCES

Atlas of Protected Public Water Supply Areas, Government of Newfoundland and Labrador, Department of Environment and Lands, Water Resources Management Division.

Establishing and Operating a Solid Waste Transfer Station, E. J. Fuller, P.E., Extension Solid Waste Specialist, Wayne Woldt, Extension Waste Management Specialist, Nebraska Cooperative Extension NF92-78, University of Nebraska.

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Some Sources of Information for Municipalities Dealing with New Industries & Businesses, GD-PPD-012, Government of Newfoundland and Labrador, Department of Environment, 2001.

Transfer Station Manual, Alberta Environment, 1982.

Waste Transfer Stations: A Manual for Decision-Making, US EPA, Solid Waste And Emergency Response (5306W), EPA530-R-02-002, June 2002.

ATTACHMENT 1

Recyclable metals storage and processing at Transfer Stations

The following are terms and conditions that would apply to transfer stations opting to collect and temporarily store recyclable metals on-site. The Certificate of Approval to operate the Transfer Station would normally be amended to reflect the scope of activities undertaken at the site. The General Environmental Standards for Municipal Solid Waste Management Facilities/Systems apply to areas dedicated to the storage/processing of derelict vehicles and scrap metal for recycling. Additional terms and conditions, such as the following will also apply.

1) A Certificate of Approval specifically addressing the requirements for the collection, processing and/or transport scrap metal and derelict vehicles at/from a Transfer Station, shall be requested from the Department. Approvals may be issued for a specified period of time, in accordance with the appropriate terms and conditions and pursuant to the Environmental Protection Act, SNL 2002, Sections 16, 78 and 83. A detailed description of the facility; proposed signage and site security; information on metals storage; removal and containment of hazardous substances; training of staff; operations protocol; emergency contingency plans; and financial assurance are required to obtain a Certificate of Approval to operate.

2) Contractual arrangements in place with licensed metal recyclers and/or licensed hazardous waste transporters in the Province shall be copied to the Department. Details of any on-site processing i.e. crushing and baling on-site, and transport to market will also be required. An amendment to the approval to operate will be required from the Department for any changes, expansion or modification of the on-site storage or processing operations.

3) Environmental Emergency Response and Contingency Plans are required to obtain a Certificate of Approval to operate and shall be updated annually. The Environmental Emergency contact number is (709) 772-2083 or 1-800-563-9089.

4) Contact information (name, numbers) in the event of an emergency situation shall be clearly posted. Signage relating to access restrictions and fire/health/safety precautions shall be prominently displayed.

5) All staff shall be appropriately trained and certified for the tasks assigned. Training shall address all chemical and workplace hazards, the use of personal protective equipment, and emergency response procedures. It is recommended that Service NL, Occupational Health and Safety Division be contacted regarding requirements for a Worker Health and Safety Plan for activities planned or undertaken at the site. The Department shall be copied on this plan.

6) The metals recycling storage area shall be secured by fencing, or at minimum by a lockable access gate at the entrance. Video security and alarm systems may be recommended.

7) The proponent shall comply with the *Air Pollution Control Regulations, 2004* at all times. Schedule E of the regulations specifically prohibits the open burning of waste types associated with recyclable metals and derelict vehicle including tires; plastics; asphalt and asphalt products;

rubber; paint and paint products; fuel and lubricant containers; used oil; and hazardous substances.

8) Open burning or smelting of materials is prohibited. Smoking on site is also prohibited.

9) Combustion of used oil in stoves and/or space heaters is not permitted unless prior written approval has been obtained from the Department and/or Service NL. Combustion of used oil or used grease shall comply with the Used Oil Control Regulations and the Air Pollution Control Regulations, 2004.

10) Spill Prevention and Containment - Areas in which environmentally hazardous substances including: chemicals and automotive fluids, solvents, and refrigerants are used or stored, shall have an impermeable surface with a surrounding dyke or curb providing effective secondary containment that will contain 110% of the capacity of the largest container, with no discharge route to the environment. Spill containment capacity shall be consistent with requirements of the Storage and Handling of Gasoline and Associated Products Regulations and all other applicable regulations and guidelines.

A spill response kit shall be maintained on site (both during operations at the permanent site and at each and every location of mobile operations) consisting at minimum of a supply of absorbent materials and an 18-gauge 205 litre drum to clean up and contain small spills of hydrocarbons and other fluids from derelict vehicles. Employees shall be trained in the use of, and know where to locate the spill response kit.

11) Decommissioning shall be consistent with the General Environmental Standards for Municipal Solid Waste Management Facilities and the Certificate of Approval to operate the specific metals recycling facility. Where metals processing is undertaken, the decommissioning requirements contained in the Certificate of Approval for the licensed metal recycler may be applied. The final condition of the site at upon closure and decommissioning shall be to the satisfaction of the Department.

12) Records and Reporting

The annual report for transfer station operations within the regional waste management system shall contain the following site (location) specific information for metal recycling operations:

- quantity of metals (tonnes or m3) processed and/or exported; and
- records of all transfers of vehicles, fluids, and other wastes (e.g. batteries, tires, halocarbons, oil, and gas) collected and disposed, including quantity and type of material, the origin/source, and the name of the recycler.

Records for recyclable metals collected, processed and exported from the transfer station location/local waste management site shall be maintained for a period of not less than three (3) years.

Removal, Storage, Handling and Transport of Environmentally Hazardous Materials/ Waste Dangerous Goods

*Automotive fluids

Vehicle wrecks shall be drained of all automotive fluids and shall have batteries and halocarbons removed prior to acceptance at the facility, or within 48 hours of arrival at the facility where this service is offered.

The removal of automotive fluids, especially gasoline, shall always be done on an impermeable surface and completed in a safe manner. Vapours and free-product may pose an explosion, health and environmental hazard. The safe and proper handling of all fluids is required.

All petroleum products, waste oils, cooling fluids, or other potentially hazardous fluids, shall first be removed/purged from vehicles and/or equipment and placed into approved labelled containers, drums or storage tank systems.

Mixing of recovered fluids shall be avoided to minimize safety hazards and costs for recovery/reuse/recycling of these products.

Storage of used automotive fluids, gasoline and associated products and any other environmentally hazardous substance shall be no less than 100 m from any body of water. Refuelling and maintenance activities of any heavy equipment used on-site shall also occur at least 100 m from any body of water and on level terrain.

* Oil Filters

Disposal of oil filters to landfill is prohibited.

Oil filters containing used oil resulting from commercial/industrial vehicles or equipment shall have all free-flowing oil drained and shall be placed in an appropriate container for recycling.

These filters shall be crushed, punctured, perforated or otherwise have their structural integrity compromised so that all free-flowing used oil is drained from the filters. The used oil that drains from the filters shall be collected into an approved container (i.e. jerry can), tank or drum for appropriate disposal.

* Drained Gasoline Storage

Containers designed for and compatible with gasoline storage are required. For the purposes of this Approval, temporary storage containers (e.g. jerry cans, 205 litre drums) are acceptable. A total of 410 litres is the maximum volume of drained gasoline that may be stored at a work site at a given time.

* Used Oil

Used oil, and oily water shall be stored in an approved secondarily contained tank system meeting the requirements of Subsection 21.(1) of the Used Oil Control Regulations.

The storage of used oil in a single 18-gauge 205 litre steel drum is permissible if done in accordance with Subsection 21.(2) of the Used Oil Control Regulations. Further explanation is found in the Guidance Document: GD-PPD-031 Requirements for Storage of Used Oil in Drums.

Contamination of used oil (e.g. by mixing classes of used oil or adding chemicals such as paint, paint thinner, solvents, gasoline or other substances) is prohibited as per Section 7 of the Used Oil Control Regulations.

* Mercury Switches

Mercury switches shall be safely removed prior to crushing of vehicles for return to a mercury recovery program. A copy of the Switch Removal Guide shall be provided. More information can also be found on the Switch Out Program website, www.switchout.ca.

*Lead acid batteries

Wet lead acid filled batteries shall be safely stored off the ground on an impermeable liner/surface and secured from the elements in a covered ventilated area. Combustible materials and other incompatible hazardous wastes shall not be stored near the battery storage area.

Lead acid batteries are prohibited from landfill disposal. A transporter approved by Department of Environment and Conservation must be contracted to transport lead-acid batteries to a licensed recycler. Removal of batteries from the site for recycling shall be conducted at regular intervals and not less frequently than once each calendar year.

* Discarded Refrigeration and Air Conditioning equipment

Refrigeration and air conditioning equipment shall be handled in a manner to prevent release of halocarbons. Only approved persons as defined in the Halocarbon Regulations shall recover and contain regulated substances. They must have operational equipment available at the job site that can recover and contain these regulated substances. The recovered regulated substance shall be put into approved containers and the drained equipment shall then be labelled "Halocarbon Free".

Discarded Fuel Oil Storage Tanks

Domestic or industrial fuel oil tanks shall only be accepted if clean and purged of fuel, sludge, and vapours.

* Polychlorinated biphenyls (PCBs)

Electrical equipment that may contain or have previously contained PCB liquid and/or solid, shall be verified as being PCB free by the generator and/or transporters of the equipment prior to being accepted for storage. Written notification in the form of a test certificate from an approved laboratory shall be required.

*Hazardous Waste associated with Storage of Recyclable Metals

Hazardous substances/ waste dangerous goods removed on-site, shall be properly contained, correctly labeled, and stored in a designated secured area with clear signage: "HAZARDOUS WASTE STORAGE". The impermeable receiving pad shall be of sufficient size to accommodate the volume of metals handled, equipped with a curb or berm for fluid containment and maintained in good condition. Asphalt is not deemed an appropriate material for use in the construction of a receiving pad.

Transportation of all hazardous waste, as defined under Canadian Environmental Protection Act, Interprovincial Movement of Hazardous Waste and Hazardous Recyclables Regulations shall be conducted by a licensed hazardous/special waste transporter to an approved recycling, treatment or final disposal facility. Containment and packaging for transport shall meet the Federal Transportation of Dangerous Goods Regulations (latest version). The consent of the owner/operator is required and transaction and shipping records/manifests shall be retained.

Tires

Acceptance of automotive tires as included in the Used Tire Recycling Program at a waste management facility, for temporary storage would require a written request for an approval and/or an amendment to the Certificate of Approval. The Departmental Guidelines for the Establishment and Operation of Facilities for the Outdoor Storage of Tires (B. Drover, 2002) shall apply. Copies of this document are available upon request from the Department.

Interim storage of used tires with a rim diameter equal to or less than 24.5 inches. at transfer stations is limited to approximately 100 tires. The MMSB provides a collection service program tires (tires from highway vehicles) and shall be contacted at 1-800-901-6672 regarding pick-up when a minimum quantity (30 to 100 based on location) has been collected. Tires must meet MMSB specifications: whole tires with rims removed that are clean. Tires filled with rock, dirt, or other debris are not acceptable for recycling and will be rejected. Program tires collected shall not be stockpiled for more than one (1) year. The maximum number of tires to be stored at a transfer station at any given time shall not exceed 150 and the storage location shall be accessible by truck.

There are no levies applied to all-terrain (ATV), or off the road (OTR) vehicle tires. Off the road tires can be defined as tires used on rolling stock equipment used in the agricultural, forestry, industrial/construction and mining industries. These tires are not collected under the Used Tire Recycling Program by MMSB. If not approved for specific recycling applications, they shall be disposed to the regional waste management facility in accordance with the current Operations Plan for the facility.

Storage and Processing of Vehicle wrecks

Stockpiling of vehicles shall be minimized and done in an organized and aesthetically pleasing manner that ensures worker safety and reduce visibility from surrounding areas.

Vehicles shall be stored in a neat and tidy fashion in rows and/or columns with a minimum separation distance of eight (8) metres to allow passage of emergency equipment.

A prior written contract shall be in place between the owner/operator of the transfer station and the

metal recycler that is contracted to process/remove metals from a site.

On-site crushing/baling operations are restricted to two (2) weeks per site at any given time during the calendar year. Application to the Department can be made in advance for an extension to this timeframe; a detailed explanation will be required.

Responsibility for Removal of Fluids, Gases and Tires

Appropriate storage and/or removal of automotive fluids, gases, tires, or hazardous substances from a site where metal processing, crushing or baling has taken place is required. Removal from the site shall be according to regulations and responsibility determined in advance between the site owner/operator and contracted party.

Vehicle Receiving and Shipment Time Frame

On-site processing and shipping of recyclable materials from the site shall normally be completed within one (1) calendar year from date of receipt or more frequently as determined by volumes.

All recyclable materials shall be shipped for export from the collection site to an approved recycling facility.

ATTACHMENT 2

Temporary storage of Construction and Demolition (C & D) Materials for Recycling and Recovery at Transfer Stations

The following are terms and conditions that would apply to transfer stations opting to collect and temporarily store construction and demolition debris on-site. The Certificate of Approval to operate the Transfer Station would normally be amended to reflect the scope of activities undertaken at the site. The General Environmental Standards for Municipal Solid Waste Management Facilities/Systems apply in all cases. Additional terms and conditions may include:

1) A Certificate of Approval for the operation of a MSW Transfer Station would be required to specifically address the temporary storage of construction and demolition (C&D) material for recovery/recycling. Approval from the Department would also be required for any changes, expansion or modification of the on-site storage or for any processing operations. Information required for a Certificate of Approval would include the types, anticipated volumes, proposed storage arrangements and proposed recycling/recovery options.

2) The storage area shall be in a secure location with access restricted to working hours.

3) Reception and appropriate segregation of materials destined for recovery/recycling shall be overseen at the approved location. Removal of materials from this location shall be pre-authorized by staff on duty.

4) An up to date Environmental Emergency Response and Contingency Plans shall be required to obtain the Certificate of Approval to Operate and shall specifically address the C&D storage situation. The Environmental Emergency contact number is (709) 772-2083 or 1-800-563-9089.

5) Contact information (name, numbers) in the event of an emergency situation shall be clearly posted. Signage relating to access restrictions and fire/health/safety precautions shall be prominently displayed.

6) Only clean fill and uncontaminated materials in reusable condition shall be accepted for temporary storage.

7) Hazardous materials are not to be accepted or stored at the C & D storage location.

8) Any kind of burning or incineration, including smoking is strictly prohibited at this location.

9) Decommissioning shall be consistent with the General Environmental Standards for Municipal Solid Waste Management Facilities, and the Certificate of Approval. The final condition of the site at upon closure and decommissioning shall be to the satisfaction of the Department.

10) Records and Reporting
The annual report for transfer station operations shall contain records (by weight and source) of C&D materials received for temporary storage; and disposed to landfill at the Regional Waste Disposal Site.

ATTACHMENT 3

Collection and Storage of Household Hazardous Waste (HHW) at Transfer Stations

The following are terms and conditions that would apply to transfer stations opting to collect and temporarily store household hazardous waste on-site. The Certificate of Approval to operate the transfer station would normally be amended to reflect the scope of activities undertaken at the site. The General Environmental Standards for Municipal Solid Waste Management Facilities/Systems apply household hazardous waste depots operating on a year-round permanent or a seasonal basis. Additional terms and conditions, such as the following will also apply.

1) A Certificate of Approval for the collection and storage of household hazardous waste shall be requested from the Department. Approvals may be issued for a specified period of time, in accordance with the appropriate terms and conditions and pursuant to the Environmental Protection Act, SNL 2002, Sections 16, 78 and 83. A detailed description of the facility including scale drawings and photos showing the layout and design of the facility; proposed signage and site security; information on the handling, containment and storage of HHW; training of staff, operations protocol, emergency contingency plans and financial assurance are required to obtain a Certificate of Approval to operate.

2) Contractual arrangements in place with licensed hazardous waste handlers/transporters in the Province shall be copied to the Department. Details of materials that will be accepted at the facility and any on-site packaging of waste materials will also be required. An amendment to the approval to operate will be required from the Department for any changes, expansion or modification of the on-site storage or processing operations.

3) Financial assurance/insurance shall be consistent with the anticipated level of risk for the operations at a given facility.

4) Environmental Emergency Response and Contingency Plans are required to obtain a Certificate of Approval to operate and shall be updated annually. The Environmental Emergency contact number is (709) 772-2083 or 1-800-563-9089.

5) Contact information (name, numbers) in the event of an emergency situation shall be clearly posted. Signage relating to access restrictions and fire/health/safety precautions shall be prominently displayed.

6) All staff shall be appropriately trained and certified for the tasks assigned. Training shall address all chemical and workplace hazards, the use of personal protective equipment, and emergency response procedures. It is recommended that Service NL, Occupational Health and Safety Division be contacted regarding requirements for a Worker Health and Safety Plan for activities planned or undertaken at the site. The Department shall be copied on this plan.

7) The HHW storage area shall be secured by fencing, or at minimum by a lockable access gate at the entrance. Video security and alarm systems may be recommended.

8) Any kind of burning or incineration, including smoking is prohibited at this location.

9) Spill Prevention and Containment - Hazardous waste shall be stored only with compatible materials, in suitable containers that are clearly labeled. Appropriate precautionary measures shall be taken as per labeling information, MSDS sheets and/or the best available information regarding chemical composition. Storage areas shall have an impermeable surface with a surrounding dyke or curb providing effective secondary containment that will contain at least 110% of the capacity of the largest container, with no discharge route to the environment. Spill containment capacity shall be consistent with requirements of the Storage and Handling of Gasoline and Associated Products Regulations and all other applicable Regulations and Guidelines.

Emergency response equipment to deal with hazardous materials incidents, including leaks, spills, chemical gases/fumes or fire shall be maintained at all times on site. Employees shall be trained in the use of, and know where to locate the spill response kit.

10) Decommissioning shall be consistent with the General Environmental Standards for Municipal Solid Waste Management Facilities and the Certificate of Approval to operate the HHW facility. The final condition of the site at upon closure and decommissioning shall be to the satisfaction of the Department.

11) Records and Reporting
The annual report for transfer station operations within the Regional Waste Management system shall contain the following site (location) specific information for the HHW depot operations:

- Copies of HHW inventory including origin, source, and volume and the date received;
- Copies of transport manifests for HHW shipments are to be retained for a period of not less than three (3) years.
- Inspection log forms for the facility and maintenanceof emergency response and personal protective equipment; and
- Training records for facility staff.

12) Hazardous Waste Transport Transportation of all hazardous waste, as defined under Canadian Environmental Protection Act, Interprovincial Movement of Hazardous Waste and Hazardous Recyclables Regulations shall be conducted by a licensed hazardous/special waste transporter to an approved recycling, treatment or final disposal facility. Containment and packaging for transport shall meet the Federal Transportation of Dangerous Goods Regulations (latest version). The consent of the owner/operator is required and transaction and shipping records/manifests shall be retained.