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GUIDELINES FOR THE STORAGE OF SCRAP TIRES IN MANITOBA

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GUIDELINES FOR THE STORAGE OF SCRAP TIRES IN MANITOBA

1.0 INTRODUCTION

1.1 BACKGROUND

Scrap tires pose a significant solid waste management challenge for many municipalities in Canada, and similar jurisdictions elsewhere, due to the large number of tires scrapped annually, and to the properties built into tires to insure their safety and durability in use.

Estimates of scrap tire generation vary, but generally hold to the relationship that about one scrap tire is generated annually per person in Canada. Using this relationship, approximately one million scrap tires will be generated annually in Manitoba. Most of these tires are generated in Southern Manitoba. The Winnipeg area generates the bulk of this amount.

Current scrap tire management methods in Manitoba include recycling, retreading, stockpiling, and landfilling. At the present time, most of Manitoba scrap tires are being recycled or stockpiled for retreading or recycling because of the Tire Stewardship Program (TSP).

Because of a fifty-cent (\$0.50) tire incentive payment to municipal governments that divert their scrap tires from landfilling to TSP registered processors, most of the scrap tires are being recycled. A very high percentage of scrap tires is being collected by registered processors for conversion to tire derived products for which the TSP pays up to \$2.50 for each scrap tire equivalent (9.6 kg) (20 lb) of product sold. The processors need to stockpile scrap tires in order to have them available during winter months when their availability is low.

1.2 PURPOSE OF GUIDELINES

The purpose of these guidelines is to provide proponents with the requirements for the selection, construction, and management of sites for the storage of scrap tires to minimize or prevent potential threats to public health, safety and the environment, pending the conversion of the scrap tires into marketable products.

These guidelines are offered for the consideration of the user. It is entirely in the judgment of the professional and lay user to decide and be responsible for the use of the guidelines and methods described, and for the results of actions taken. Manitoba Environment and its directors, employees or staff, take no responsibility for the results, the use of the results for any purpose or for any errors or omissions that may occur as a result of the use of the guidelines and methods described herein.

1.3 APPLICATION OF GUIDELINES

These guidelines should apply to any person, municipality, crown corporation, or private corporation that is proposing to establish, alter or operate a scrap tire storage facility, where that facility contains at least 3,000 scrap tires, (200 m³ of scrap tires). The guidelines also contain requirements for the indoor storage of scrap tires.

1.4 DEFINITION OF TERMS

As used in these guidelines:

"access road" means a road that leads from a Provincial Trunk Highway, Provincial Road, or a municipal road;

"approved" means approved by the Director or an Environment Officer in writing;

"buffer zone" means land used to separate the scrap tire storage site from adjacent land;

"bulk volume" means the total volume of all scrap tires kept at a scrap tire storage facility;

"closure" means actions taken to prevent or minimize the threat to public health, safety and the environment posed by a closed facility, including removing equipment, all scrap tires, tire residues, and tire derived products to sites specified in an approved closure plan;

"closure plan" means a plan for the closure of a scrap tire storage facility;

"critical habitat area" means an area in which one or more endangered species live;

"director" means a Director, designated under the Environment Act;

"environment officer" means a person or a member of a class of persons so appointed by the Minister under subsection 3(2) of the Environment Act;

"flood plain" means an area in which there is a one percent or greater chance of flooding in a given year;

"groundwater" means that part of the subsurface water that is in the saturated zone;

"heritage site" means a location or a structure of heritage significance that has been protected under the Heritage Resources Act;

"individual storage area means an area within the total storage area and excludes separations around the individual storage area;

"indoor" means an enclosed structure which offers complete protection from wind and precipitation;

"operation" means the procedures, personnel, and the equipment used to receive, store, process or dispose of scrap tires;

"operator" means any person, corporation, or municipality that stores, operates and manages a scrap tire storage facility;

"proponent" means any person, who is establishing, or proposes to establish a scrap tire storage facility, or who has been designated by a person or group of persons to establish a scrap tire storage facility in Manitoba on behalf of that person or group of persons;

"scrap tire" means any tire that is no longer suitable for its original intended purpose because of wear, damage, or defect, and cannot be repaired for reuse, or retreaded;

"scrap tire storage facility" means any industrial, trade or business location with more than 3,000 scrap tires (200 m³ of scrap tires) which may or may not be processed;

"stockpile" means any aggregation of scrap tires located within individual storage areas at a scrap tire storage facility;

"storage site" means the site for the storage facility;

"surface water" means lakes, reservoirs, ponds, perennial or ephemeral streams and springs, rivers, creeks, estuaries, wetlands, and all other perennial bodies of water, natural or artificial;

"total storage area" means an accumulation of individual storage areas including separations around the individual storage areas;

"wetlands" means an area where water is at or above the land surface long enough each year to be capable of supporting aquatic or hydrophytic vegetation, and which has soils indicative of wet conditions; and

"vector" means a carrier that is capable of transmitting a pathogen from one organism to another.

2.0 PROCEDURES FOR SUBMITTING PROPOSALS

2.1 GENERAL REQUIREMENTS

A proponent shall provide the information prescribed in the Scrap Tire Storage Facility Proposal Form described in Appendix "A" to establish, alter or operate a scrap tire storage facility.

The following information should also accompany the Proposal Form for the siting, construction, operation, and management of a scrap tire storage facility:

- (a) A topographic or cadastral map drawn to a scale of no less than 1:50,000 showing the location of the scrap tire storage facility;
- (b) A Certificate of Title showing the owner(s) and legal description of the land upon which the scrap tire storage facility will be constructed;

- (c) A written consent for the use of the land for the intended purpose from the owner of the land if not the same as the proponent;
- (d) The name of the owner of mineral rights beneath the land, if not the same as that of the surface owner;
- (e) A description of the existing land use on the site, and on land adjoining it, as well as changes that will be made thereto for the purpose of scrap tire storage;
- (f) A map drawn to a scale of no less than 1:2000 indicating:
 - the measurements and size of the area to be used for scrap tire storage;
 - the topography of the storage area with contour lines at intervals of not more than one metre;
 - the location and dimension of access roads leading to the storage area, and of the road encircling the storage area;
 - the location, numbering, and dimensions of stockpiles; and
 - the location and the dimensions of the fence around the scrap tire storage facility;
- (g) The land use designation for the site and adjoining land as identified in a development plan adopted pursuant to the Planning Act or the City of Winnipeg Act, and the zoning designation as identified in a Zoning By-Law, if applicable;
- (h) A description of all previous studies and activities relating to feasibility, or project siting, and prior authorization received from other government agencies, including the hours of operation;
- (i) An identification of any storage of gasoline or associated products;
- (j) The duration of the active life of the storage facility; and
- (k) The closure plan as indicated in Section 8.0.

3.0 SITING REQUIREMENTS

3.1 OUTDOOR STORAGE OF SCRAP TIRES

The following are the requirements for the siting of an outdoor scrap tire storage site:

1. The storage site should not be located in a flood plain, or in any area where it may be subjected to submersion in water.

2. The boundaries of the storage site should be located at least:
- (a) 100 metres (328 feet) from the right of way of a railroad, except where the rail line is a spur to the property for transporting the scrap tires;
 - (b) 100 metres (328 feet) from the right of way of a public road, except for the access road to the scrap tire storage site;
 - (c) 400 metres (1,312 feet) from any building existing outside the boundaries of the storage facility at the time the storage facility is established;
 - (d) 400 metres (1,312 feet) from a potable water well existing at the time the storage facility is established;
 - (e) 400 metres (1,312 feet) from the boundaries of a cemetery or First Nation burial ground;
 - (f) 2 km from the boundary of a Provincial designated endangered or wildlife habitat and management area;
 - (g) 2 km from any Provincial designated wetland;
 - (h) 1 km from a Federal or Provincial designated waterway, or surface water; and
 - (i) 1 km from the boundaries of a Federal, Provincial or Municipal designated park or historic site.

3. Hydro Transmission and Distribution Lines

There is no recommended fixed set-back distance from the boundaries of a scrap tire storage site to hydro transmission and distribution lines at this time. The location of the site should be reviewed by Manitoba Hydro on a case by case basis. Proponents are advised to contact the Regional office of Manitoba Hydro for the required set-back distance for the region in which the scrap tire storage site will be located, or the Property Management Branch.

The outdoor storage of scrap tires with respect to hydro transmission and distribution lines, is under consideration by the local authority having jurisdiction for the Manitoba Fire Code.

4. Transport Canada Air Navigation System

The boundaries of a scrap tire storage site should not be located within 8 km of an aerodrome reference point. This will require the boundaries of the scrap tire storage site to be located not less than 8 km from the center point between the ends of a single runway aerodrome, or 8 km

from a reference point established by Transport Canada for aerodromes consisting of more than one runway. Proponents are advised to contact Transport Canada for the zoning regulation pertaining to a specific storage site, especially where the guidelines cannot be met. Transport Canada may be contacted at the following address:

Transport Canada
P.O. Box 8550
15-333 Main Street
Winnipeg Manitoba R3C 0P6
Telephone 1-204-983-1360

Rationale

Transport Canada aircraft zoning regulations prohibit the use of land outside airport property boundaries for locating the boundaries of a waste disposal ground due to the hazard created by birds to aircraft activity.

These zoning regulations do not refer specifically to scrap tire storage. However, outdoor storage of scrap tires has the potential to serve as a breeding ground for rodents which are a basic attractant for some birds. Transport Canada considers the zoning regulation for waste disposal grounds to be applicable to outdoor scrap tire storage facilities.

4.0 OUTDOOR STORAGE SITE CONSTRUCTION REQUIREMENTS

4.1 GENERAL REQUIREMENTS

The following are the requirements for the construction of an outdoor scrap tire storage site:

1. The operator of a scrap tire storage facility, should divide the site for the storage facility into a storage area, a traffic area, and a buffer zone. A handling area may also be set aside for loading, unloading, and sorting of scrap tires;
2. The total storage area excluding the area for a buffer zone should not exceed 6000 m² (1.482 acres);
3. Where the total storage area exceeds 5000 m² (1.2355 acres), the operator should build two access roads to the storage area separated by a distance of at least 35 m (114.8 feet), and a road encircling the storage area. The two access roads should be connected with a public road;
4. The site for the scrap tire storage facility should be designed and constructed to provide protection to surface water and groundwater from runoff of pyrolytic oil resulting from a potential tire fire;
5. The site runoff drainage system should be adapted to the general topography of the terrain;

6. The operator should provide a buffer zone at least 35 metres (114.8 feet) wide between the boundaries of the storage site and the adjacent land occupied by a person other than the storage site operator;
7. Where a handling area is set up at the storage site, the buffer zone should be at least 50 metres (164.04 feet) wide between the boundaries of the handling area and the adjacent land occupied by a person other than the storage site operator;
8. The handling area should be encircled by a traffic area at least 15 m (50 feet) wide;
9. A clear space of not less than 15 m (50 feet) should be provided around each individual storage area;
10. The individual storage areas should have a gradient less than 5%;
11. The individual storage areas should be arranged such that there is a clear space of not less than
 - (a) 30 m (100 feet) between stored tires and brush or forested areas; and
 - (b) 6 m (20 feet) between stored tires and uncontrolled grass or weeds.
12. The storage area should be solid ground or paved with asphalt, concrete, or other hard surface material; and
13. The operator of a storage site shall install a heated shelter for use by authorized persons.

4.2 VECTOR CONTROL REQUIREMENTS

All scrap tires should be stored in a manner which prevents the breeding and harbourage of mosquitoes, rodents, and other vectors by one of the following means:

1. Cover with impermeable barriers other than soil to prevent entry or accumulation of precipitation; or
2. Use of treatment or methods to prevent or mitigate vector breeding as necessary, provided the control program is approved as appropriate and effective by a Director and/or Medical Officer of Health.

4.3 STOCKPILES

The following are the requirements for the construction of storage stockpiles:

1. The base area of a stockpile should be not more than 1000 m² (0.25 acres), and be limited to a height not more than 3 m (10 feet).
2. Storage piles should be separated by a clear space of at least 15 m (50 feet) from piles of other stored product;

3. The base of a storage pile should be located at least 15 m (50 feet) from the exposed wall of buildings on the same storage site.
4. No person should operate any cutting (power saw), welding or heating devices within 15 m (50 feet) of any outdoor stockpile.

4.4 ACCESS ROUTES

4.4.1 General Requirements

The operator should provide fire access routes at and to the scrap tire storage facility.

The following are the general requirements for access routes:

- (a) have a clear and unobstructed width of not less than 6 m (20 feet);
- (b) be located not less than 6 m (20 feet) from any outdoor stockpile;
- (c) be surfaced with material which allows access by firefighting equipment in all weather conditions;
- (d) be connected with a public thoroughfare in at least two places that are located as remote from each other as possible if the storage area is over 5000 m² (1.2355 acres);
- (e) be accessible by firefighting equipment to all outdoor stockpiles on the storage site;
- (f) be maintained accessible and unobstructed at all times;
- (g) be constructed with turnaround points adequate for firefighting equipment;
- (h) be designed to support the loads imposed by firefighting equipment in all seasons;
- (i) permit the approach of fire department vehicles to within 60 m (200 feet) traveling distance of any part of an individual storage area;
- (j) The access routes required in item i, should be located so that a clear space of not less than 6 m (20 feet) is provided between stored tires, and the nearest side of any of the access routes; and
- (k) The nearest side of the road encircling the storage area shall be located at least 5 m (16.4 feet) from each individual tire storage area, and from any fence enclosing the tire storage facility.

5.0 FIRE PREVENTION AND CONTROL MEASURES

5.1 COMMUNICATION SYSTEM

The operator of a scrap tire storage site should install a telephone system to alert the fire department of the municipality in whose territory the site is located in the event of a fire.

5.2 FIRE SAFETY PLAN

The operator of a scrap tire storage facility should obtain an approved fire safety plan for the operation of the storage facility from the local authority having jurisdiction for the Manitoba Fire Code. A copy of the approved plan should accompany the proposal. A copy of the plan should also be prominently posted at the storage site, when approval is received for the operation of the site.

The fire safety plan should identify the following:

- the location of the tires;
- the method of storage, including the requirements for clear spaces, and the maximum allowable size of individual storage areas;
- the location of fire alarm systems and fire fighting equipment;
and
- the control of fire hazards in and around the storage area.

6.0 SECURITY

6.1 GENERAL REQUIREMENTS

The following requirements are recommended for the security and protection of property used for tire storage:

1. An outdoor storage area should be surrounded by a firmly anchored fence to discourage climbing and unauthorized entry and that is:
 - (a) approved by the Director;
 - (b) not less than 1.8 m (6 feet) high; and
 - (c) provided with gates that shall be locked when the storage area is not staffed.
2. When in a fire department access route, the gates required in Subsection 6.1.1(c), should be of adequate width, design and location as approved by the local authority having jurisdiction for the Manitoba Fire Code, so as to readily permit the entry of fire department vehicles. A copy of the approved design and location plan should accompany the proposal.

3. The operator should allow only duly authorized persons who are identified in a register, access to the storage site.
4. The register should be kept up to date and should contain the following:
 - (a) the quantity of scrap tires stored;
 - (b) the quantity of scrap tires transported to the site, and the quantity removed from and transported away from the site;
 - (c) the origin of the scrap tires; and
 - (d) the full names and addresses of persons authorized to have access to the storage site.

At least two copies of all records should be kept, and should be retained by the operator for five years after the date of the last entry.

5. The operator should post a notice at the entrance to the storage site showing the following information in lettering at least 10 centimetres high:
 - (a) the days and hours of operation; and
 - (b) the telephone number of the municipal fire department and contact persons.

7.0 INDOOR TIRE STORAGE REQUIREMENTS

7.1 GENERAL REQUIREMENTS

The requirements shall apply to buildings or parts of buildings used for the storage of scrap tires. Such buildings shall conform to the most recent version of the Manitoba Building Code and Manitoba Fire Code administered by Manitoba Labour.

8.0 CLOSURE

8.1 CLOSURE PLAN

The operator of a scrap tire storage facility should submit as part of the application documents, a completed closure plan to the Director. The closure plan shall be approved by the Director before implementation.

The closure plan should address matters pertaining to the following actions:

1. Closing all access routes to the waste tire storage site, with a description how this action will be carried out;
2. Notifying the Director in writing 120 days prior to beginning the closure of the site;

3. Removing all scrap tires, tire residues, and tire derived products to sites specified by the Director in the approved closure plan, with a description how this action will be carried out;
4. Notifying the Director when closure activities are complete, and the site is ready for inspection;
5. Providing the Director with a detailed closure schedule; and
6. Providing a written cost estimate of the cost of closing the storage facility at the end of its active life.

An operator should resubmit the adjusted written closure cost estimates to the Director accordingly.

9.0 FINANCIAL ASSURANCE

9.1 GENERAL REQUIREMENTS

The operator should provide financial assurance to the Director when submitting a proposal for a scrap tire storage site, to demonstrate adequate financial ability to conduct closure activities, and provide for cleanup costs should an emergency occur.

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APPENDIX A

PROPOSAL FORM FOR ESTABLISHING A SCRAP TIRE STORAGE FACILITY

General Information: (Please Print or Type)

1. Storage Facility Name and Mailing Address:

Name:

Facility Mailing Address:

Postal Code: () - Telephone: () - Fax:

2. Facility Location Information;

Address:

Postal Code: () - Telephone: () - Fax:

Section: _____ Township: _____ Range: _____

3 Site Operator's Information:

Site Operator's Name:

Mailing Address:

Postal Code: () - Telephone: () - Fax:

4. Property's Owner Information:

Mailing Address:

Postal Code: () - Telephone: () - Fax:

Contact Person Information:

Signature of Contact Person for the Proposal

Printed Name:

Mailing Address:

Postal Code: () - () - Fax: