

Guideline for the Management of Waste Asbestos

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Guideline for the Management of Waste Asbestos

1 Introduction

This guideline provides general information on the proper management of waste asbestos. Waste asbestos is a contaminant under the *Environmental Protection Act* (EPA) of the NWT and must be managed as a hazardous waste.

Asbestos is a cancer causing substance. The public, workers, and the environment must be protected from any air-borne exposure to this material.

This guideline is specific to the management of waste asbestos and should be read in conjunction with the Guideline for the General Management of Hazardous Waste In the NWT (referred to as the General Guideline). Section 2.2 of the EPA gives the Minister of Resources, Wildlife and Economic Development the authority to develop, coordinate and administer these guidelines.

1.1 Definitions

<i>Asbestos</i>	Magnesium silicate minerals that occur naturally in fibrous forms. The regulated (TDGR) asbestos types include: chrysotile, actinolite, anthophyllite, tremolite (white), crocidolite (blue), amosite, myosorite (brown).
<i>Friable waste material</i>	A material which when dry can be crumbled, pulverized or reduced to powder by hand pressure.
<i>Generator</i>	The owner or person in charge, management or control of a hazardous waste at the time it is generated, or a facility that generates hazardous waste.
<i>Transport authority</i>	The regulations controlling the management of hazardous waste under that mode of transport. These include: Road and rail - <i>Transportation of Dangerous Goods Act</i> (TDGA) and <i>Regulations</i> (TDGR) Air - <i>International Civil Aviation Organization Technical Instruction</i> (ICAO) Marine - <i>International Maritime Dangerous Goods Code</i> (IMDG).
<i>Waste Asbestos</i>	Asbestos that is no longer useable for its intended purpose and is intended for storage, recycling or disposal. It includes any type of material with greater than 1% asbestos by weight.

1.2 Characteristics

Asbestos is a silicate mineral which is strong, flexible and resistant to heat and chemicals. Asbestos was used in a variety of materials including: fireproof fabrics, gaskets, electrical and heat insulation, chemical filters, brake lining, siding and concrete reinforcement.

1.3 Potential Effects

Respiratory exposure to asbestos particles and fibers causes cancer.

The fibrous nature of asbestos is a health concern. Friable asbestos readily floats in air and is easily inhaled. Due to the mineral nature it is not readily dissolved and may not be excreted from the body. If enough asbestos particles are taken into the respiratory tract cancer may develop.

Environmental and occupational exposure to asbestos is primarily from air-borne sources. This includes weathered or poorly maintained asbestos materials and particles from asbestos abatement (removal) projects. Natural exposures of asbestos (rock outcrops) and dust from vehicle brake pad wear are beyond the scope of this guideline.

2 Roles and Responsibilities

2.1 Environmental Protection Service

The Environmental Protection Service (EPS) of the Department of Resources, Wildlife and Economic Development is the Government of the Northwest Territories' (GNWT) agency responsible for initiatives which control the discharge of contaminants and their impact on the environment. EPS is responsible for ensuring that environmentally acceptable management procedures, emission levels and disposal methods are maintained. EPS programs are applied primarily to Commissioner's Land, lands administered by municipal governments or GNWT undertakings. Legislative authority is provided by the EPA and *Pesticide Act*. Contact EPS for a listing of relevant regulations and guidelines.

2.2 Occupational Health and Safety

Worker protection from air-borne asbestos particles is regulated by the Prevention Services Division, Workers' Compensation Board. The *Asbestos Safety Regulations*, under the *NWT Safety Act*, require that employee exposure to hazardous air-borne asbestos be maintained below specified levels. The exposure levels correspond to the type of asbestos and the friability of the material. Contact the Prevention Services Division of the Workers' Compensation Board for the regulations and procedures required for the containment of asbestos dusts and worker protection.

2.3 Generators of Waste Asbestos

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

Waste asbestos is a hazardous waste. The owner (generator) of the asbestos is responsible for ensuring the waste asbestos is properly managed from the time it is generated to final disposal. Waste asbestos must be safely removed, handled, packaged, stored, transported, treated and/or disposed in accordance with this guideline and all applicable Acts and regulations.

2.4 Contractors

Contractors can manage waste asbestos on behalf of a generator. However, the generator is responsible for insuring that the waste management method complies with this guideline, the General Guideline and the requirements of other legislative authorities. (Including the *Asbestos Safety Regulations* under the *Safety Act* and the *Transportation of Dangerous Goods Act and Regulations* (TDGR) or other transport authority).

3 Waste Management

Minimizing or avoiding the creation of pollutants and wastes can be more effective in protecting the environment than treating them, or cleaning them up after they have been created.

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3.1 Pollution Prevention

Pollution prevention methods reduce or eliminate the creation of waste. Pollution control practices treat waste after it has been created. Pollution prevention opportunities for asbestos include the following:

Reduce

- Consider using less hazardous materials i.e.: fiberglass, metals, wherever possible. In some applications there is no replacement for asbestos.

Reuse

- Encapsulation of the existing asbestos by sealing with paint or an epoxy product, covering with paneling or other non-asbestos materials may be considered. The Prevention Services Division, Workers' Compensation Board must be consulted prior to sealing areas that contain asbestos.
- Non-friable asbestos materials can be re-used (i.e.: fire-break asbestos cementous boards), to reduce replacement costs and extend the life of the product.

3.2 Storage

Waste storage is not a long term solution.

Store waste asbestos according to the following:

- Store in sealed, airtight containers and labeled “Asbestos” as directed by the *Asbestos Safety Regulations*.
- Use containers that are sound, sealable and not damaged or leaking.
- Label containers according to the requirements of the Work Site Hazardous Materials Information System (WHMIS) of the *Safety Act* or the relevant Transport Authority if transport to a disposal location is planned. (see Section 3.3 Transportation).
- Protect containers from the weather and physical damage.
- Storage should be in a secure area with controlled access.
- Train personnel in the safe use, storage and shipping procedures for waste asbestos. Only trained persons should have access to the storage area.

The short term storage of waste asbestos is only acceptable as an interim measure to permit time for the collection of sufficient volumes for cost effective transport to a disposal facility.

Storage of waste asbestos in quantities greater than 1000 kilograms for a period greater than 180 days requires the site to be a registered hazardous waste storage facility. Consult the General Guideline or contact EPS for application procedures.

3.3 Transportation

The transport of waste asbestos requires proper classification, packaging, labeling and documentation as required by the transport authority (air, marine, rail, road). Requirements for waste generators and carriers are detailed in the General Guideline.

Special Provisions 37 and 44 of TDGR are two exemptions for road transport of waste asbestos. These provisions allow for the substitution of a shipping document for the hazardous waste manifest, and, provided the shipping name and product identification number appear on the outer package or small container, labels are not required.

The shipping document must include the following information and should be mailed or sent by facsimile to EPS:

- Date of consignment
- Consignor identification, mark or signature
- Shipping name
- Product Identification Number
- Quantity

For road transportation purposes, waste asbestos can be classified in the following ways, depending on the type of asbestos.

Shipping Name: **Waste White Asbestos**
 P. I. N.: UN 2590
 Classification: 9.1
 Packing Group: III
 Special provisions: 37,44

Shipping Name: **Waste Blue Asbestos**
 P.I.N.: UN 2212
 Classification: 9.1
 Packing Group: III
 Special provisions: 37,44

Shipping Name: **Waste Brown Asbestos**
 P.I.N.: UN 2212
 Classification: 9.1
 Packing Group: III
 Special provisions: 37,44

Further consultation with the transport authority is recommended.

Generator numbers, waste manifests and registered hazardous waste carrier lists are available from the Environmental Protection Service.

3.4 Asbestos Abatement

Prevention of asbestos fibre release into the air is the primary objective of all asbestos abatement projects.

The removal of asbestos materials requires a thorough understanding of the potential hazards and knowledge of measures available to prevent worker, public and environmental exposure to asbestos fibers.

The *Asbestos Safety Regulations* require that employers conducting an asbestos removal project provide the following training to workers who are likely to come in contact with asbestos:

- (a) demonstration and instruction in the use of all protective equipment;
- (b) the safe handling and disposal of waste asbestos;
- (c) health education including information relating to pneumoconiosis, lung cancer and the effects of smoking; and,
- (d) any other information a safety officer considers necessary.

Other requirements, such as soaking the asbestos with water through its entire thickness prior to disturbing are designed for safety purposes.

Materials containing non-friable asbestos, such as asbestos cementous board (used as building siding), ceiling tiles, linoleum, tar papers, are generally non-hazardous if they remain intact. However, if these are broken or shredded, asbestos fibers may be released into the air. Minimal safety apparel is required when proper handling procedures are exercised. Contact the Prevention Services Division, Workers` Compensation Board, for more information on worker protection or to obtain a copy of the regulations.

The names and location of asbestos training centers are available by contacting the waste management associations listed in Appendix II of the General Guideline.

3.5 Disposal

Two options are available for the disposal of waste asbestos.

Burial at the local landfill. Approval for local landfill disposal must be obtained from the municipal authority. Acceptance of the asbestos materials by the local authority must be confirmed to EPS by telephone or in writing. This ensures that the municipality is registered as a receiver of waste asbestos.

At the landfill, the waste asbestos shall be immediately buried and covered with one half meter of cover material (two feet). Cover materials can be locally available soils, refuse or other materials provided the asbestos containment is not ruptured. If a landfill practices open burning, waste asbestos should be placed in a dedicated trench isolated from the burning. The excavated soils from the trench should then be used to cover the asbestos to the required depth.

In addition:

- the excavation must be isolated from future burning activities.
- the asbestos waste should be buried where it will not be disturbed.
- the location of the asbestos should be maintained on a map or diagram of the property by the municipal authority for future reference.

The second disposal option for asbestos is to contract a registered waste management company. These companies can be contacted through their associations listed in Appendix II of the General Guideline.

Consideration will be given to proposals for alternate disposal methods that provide a level of environmental protection equivalent to complying with this guideline. The Environmental Protection Service may approve the method, subject to conditions.

4 Conclusion

This guideline presents a brief introduction into the management of waste asbestos. It is intended as a source of basic information and should be read in conjunction with the [Guideline for the General Management of Hazardous Waste in the Northwest Territories](#).

For more information contact:

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- 3) Prevention Services Division
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