

Guidelines for the Disposal of Asbestos Waste

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TABLE OF CONTENTS

Item	Page
1. Introduction	1
2. Definitions	2
3. Legislation	3
4. Transportation	4
4.1 Manifesting	4
4.2 Transportation of Dangerous Goods Regulations (TDGR) Requirements	4
4.3 Haulage Recommendations	5
4.3.1 Asbestos Waste	
4.3.2 Friable Asbestos Waste	
5. Disposal	6
5.1 Containers	6
5.1.1 Asbestos Waste	
5.1.2 Friable Asbestos Waste	
5.2 Disposal Practices	6
6. References/Acknowledgements	8

1. **INTRODUCTION**

BACKGROUND:

An amendment has recently been made to the Federal Transportation of Dangerous Goods Regulation (TDGR) regarding the management of asbestos waste. This amendment involves placing the numeral "37" in column IV of list II of Schedule II of the TDGR. It is documented in the Canada Gazette, Part II, Vol. 123, No. 13 dated June 21, 1989.

WHAT DOES THIS MEAN?

This amendment has implications under both the TDGR and Alberta's Hazardous Waste Regulation (505/87).

For the purposes of the federal TDGR, the amendment means that the requirement for a waste manifest has been removed, as has the requirement for notification of an international or transborder consignment of any form of asbestos waste. Note that shipments of asbestos waste must still comply with the remaining classification, documentation, safety marks and training requirements of the TDGR.

The amendment also means that all forms of asbestos waste are exempt from Alberta's Hazardous Waste Regulation (see Section 2 (a) and Section I (a) of Table I). The manifesting requirements of this Act and all other requirements of this Act no longer apply to any form of asbestos waste.

Since the Alberta Hazardous Waste Regulation no longer applies, this document is provided to outline the proper disposal practices and to clarify the regulatory requirements for asbestos waste management.

2. **DEFINITIONS**

- a) “asbestos” means actinolite, amosite, anthophyllite, chrysotile, crocidolite, tremolite or any other form of asbestos mineral.
- b) “asbestos waste” means a waste containing asbestos in a concentration greater than 1% by weight.
- c) “dust” means finely divided particles of asbestos.
- d) “friable asbestos waste” means asbestos waste which is easily crumbled or asbestos waste in the form of dust.
- e) “sanitary landfill” means a waste management facility where waste material is:
 - i) placed in trenches or on land;
 - ii) compacted by force applied by mechanical equipment; and
 - iii) covered with earth.

3. **LEGISLATION**

The Hazardous Chemicals Act and the Hazardous Waste Regulation no longer apply to asbestos waste in Alberta. However, a number of other Acts continue to regulate the handling of asbestos in Alberta.

Workers in this province are protected in the handling of asbestos by provisions under the Occupational Health and Safety Act. Specific provisions exist under the Chemical Hazards Regulations, which stipulate the occupational exposure limits for the workplace, and the General Safety Regulations, which provide for respiratory protective equipment and competency of workers. The Asbestos Regulation provides for specific controls at the work-site and for medical surveillance.

The Uniform Building Standards Act and Alberta Building Regulation both provide specific requirements concerning the situations under which asbestos may not be used in a building and provisions for situations to be rectified.

The Public Health Act Waste Management Regulation stipulates the requirements for managing sanitary landfills in Alberta.

Clean Air and Clean Water Act approvals may specify monitoring, reporting and disposal requirements for industrial plants in Alberta. The management of asbestos waste is sometimes addressed in these approvals.

The requirements of these or any other federal or provincial Acts or regulations or municipal by-laws take precedence over this document. These guidelines do not attempt to address areas such as asbestos removal or worker health and safety.

Under the terms of subsection 33(5) of the Alberta Public Health Act Waste Management Regulation, the Director of Standards and Approvals has approved all sanitary landfills to receive non-hazardous industrial wastes, such as asbestos waste. However, the owner of a waste management facility is not required to accept waste which “may create a danger to property or to the health or safety of persons employed at the facility, or to the public”. Hence, it is recommended that approval for disposal be obtained from the landfill operator before asbestos waste is shipped from the site where it is produced.

4. TRANSPORTATION

4.1 Manifesting

Asbestos waste is no longer required to be manifested within Alberta. If asbestos waste is hauled out of the province or the country, the appropriate authority should be contacted at the receiving destination with respect to manifesting requirements. Asbestos waste is no longer included in Alberta Environment's waste manifest system.

Generator, carrier and receiver numbers are no longer required by Alberta Environment for asbestos waste shipments.

4.2 Transportation of Dangerous Goods Regulations (TDGR) Requirements

Transportation of Dangerous Goods Regulations requirements for shipments of asbestos waste are as follows:

i) a shipping document (weigh bill, or bill of lading) which must include:

- name and address of generator;
- name and address or location of receiver;
- name of carrier;
- total mass or volume of asbestos waste;
- number of bags (if bagged);
- shipping name ie: (waste asbestos, white);
- dangerous goods class ie: (Class 9.1);
- PIN number ie: (UN 2590);
- packing group ie: (III);

The classification information, shipping name, Class, PIN number and packing group must be in this exact order on the document. Other possible classifications for asbestos wastes are:

waste asbestos, blue, Class 9.1, UN 2212, packing group II;
waste asbestos, brown, Class 9.1, UN 2212, packing group II;

- ii) if the product is bagged, bags must be marked with the shipping name and PIN number;
- iii) placarding of the vehicle is required for shipments of more than 500 kg;
- iv) the vehicle operator must have a valid Certificate of Training issued by the vehicle operator's employer.

Alberta Public Safety Services, Dangerous Goods Control Compliance Information Centre may be contacted for more information at 422-9600, Edmonton, or toll free at 1-800-272-9600 from anywhere else in the province. Both lines are open 24 hours.

4.3 Haulage Recommendations

4.3.1 Asbestos Waste

In general, asbestos waste being transported from the location at which it is generated:

- i) should be transported as directly as possible to the intended waste disposal site;
- ii) should not be transported with any other cargo in the same vehicle;
- iii) should not be mixed with other types of waste; and
- iv) should not be transported in a compaction type waste haulage vehicle.

The external surfaces of every container and of every vehicle or vessel used for the transport of asbestos waste must be free from asbestos waste. Asbestos waste must be properly secured and transported within an enclosed vehicle or covered by a tarpaulin or net if transported in a vehicle which is not enclosed. Additional recommendations for hauling friable asbestos waste are described below:

4.3.2 Friable Asbestos Waste

If possible, friable asbestos waste should be securely packaged prior to transport as described in Section 5.1.2 of these guidelines.

Friable asbestos waste should be transported only in vehicles equipped with emergency spill clean-up equipment including a shovel, a broom, wetting agent, protective clothing, a supply of six-mil polyethylene bags, bag closures and personal respiratory equipment approved for protection against asbestos.

Any friable asbestos waste which leaks from a container during transportation should be collected and double bagged in two six mil polyethylene bags immediately upon discovery. If possible, punctured and broken containers should also be double bagged in two six-mil polyethylene bags.

Bags or boxes of friable asbestos waste must be properly secured and transported within an enclosed vehicle or covered by a tarpaulin or net if transported in a vehicle which is not enclosed.

5. DISPOSAL

The disposal of asbestos waste should be carried out in accordance with the following recommendations:

5.1 Containers

5.1.1 Asbestos Wastes

Asbestos waste which is non-friable need not be packaged for disposal. Additional requirements for friable asbestos waste are as follows.

5.1.2 Friable Asbestos Waste

No person should allow friable asbestos waste to leave the location at which it is generated unless;

- i) the friable asbestos waste is in a rigid, impermeable, sealed container of sufficient strength to accommodate the weight of the friable asbestos waste; or
- ii) the friable asbestos waste is double bagged within two six-mil polyethylene bags; or
- iii) the friable asbestos waste is packaged in accordance with a method approved in writing by the Director of Standards and Approvals of Alberta Environment.

Every container referred to above must be free from punctures, tears or leaks, and should be clearly labelled to indicate the nature of the contents and the presence of a carcinogenic hazard, with a warning that the dust not be breathed.

Friable asbestos waste which is readily bagged or boxed should not be transported or disposed of in bulk. However, if it cannot be readily packaged then the portion of the vehicle containing it should be lined with six mil polyethylene and covered in such a way as to prevent asbestos fibers and particulates from escaping. Bulk friable asbestos waste may be moistened to prevent the escape of asbestos fibres. Polyethylene liners used in the transportation of bulk friable asbestos waste should be disposed of along with the associated asbestos waste.

5.2. Disposal Practices

The final disposal of asbestos waste must be a sanitary landfill approved by the Local Board of Health or an industrial landfill approved and designated as class I or II by Alberta Environment.

Where containers of friable asbestos waste are being unloaded, the unloading shall be carried out so that no loose friable asbestos waste or punctured, broken or leaking containers of friable asbestos waste are landfilled. Any friable asbestos waste that is in a container that is punctured, broken or leaking shall be double bagged, immediately on discovery, in two six-mil polyethylene bags.

Asbestos waste may be deposited only at locations in a landfilling site that have been adapted for the purpose of receiving asbestos waste or are otherwise suitable for that purpose.

Asbestos waste may be deposited at a landfill site only while the depositing is being supervised by the operator of the site or a person designated by him for the purpose, and the person supervising is not also operating machinery or the truck involved.

where asbestos waste is deposited, at least 25 centimetres of cover material other than garbage must be placed immediately over the waste in such a manner that direct contact with compaction equipment or other equipment operating on the site is avoided. The final cover should be at least 125 centimeters thick and may include garbage.

The surfaces of vehicles and reusable containers which have been in direct contact with friable asbestos waste must be thoroughly cleaned prior to leaving the disposal site. Only the minimum amount of water necessary to wet the asbestos fibres should be used during cleaning. Any waste produced during vehicle or container cleaning should also be covered immediately.

Every person directly or indirectly involved in the transportation, handling or management of asbestos waste should take all precautions necessary to prevent asbestos fibres from becoming airborne.

6. REFERENCES

1. Alberta Occupational Health and Safety, *Issues and Legislative Gap Analysis Pertaining to the Worker and Public Exposure to Asbestos*. February, 1989'
2. Environment Reporter *Hazardous Emissions Subpart M-National Emission Standard for Asbestos* 120:1035 April 5, 1984, Bureau of National Affairs Inc. Washington D.C.
3. Monenco Science and Technology *Asbestos Legislation Review* December 23, 1988.
4. Nova Scotia Department of Environment *The Dangerous Goods and Hazardous Waste Management Act-Respecting Asbestos Wastes* December 6, 1988.
5. Ontario Ministry of the Environment *Regulation 309-General Waste Management*. Reg. 460/88
6. Province of Alberta- Occupational Health and Safety Act *Asbestos Regulation* 7/82
7. Province of Alberta Occupational Health and Safety Act - *Chemical Hazardous Regulation* 242/83
8. Province of Alberta Occupational Health and Safety Act - *General Safety Regulation* 348/84
9. Province of Alberta Public Health Act - *Waste Management Regulation* 250/85.

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