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What is solid non-hazardous waste?

Defining Waste in Ontario

Non-hazardous waste is defined by the Environmental Protection Act (EPA) through Regulation 347 - General Waste Management. The EPA and its regulations are enforced by the Ministry of the Environment (MOE).

Regulation 347 uses both definitions and testing procedures to classify waste. By definition, curbside household garbage and similar waste generated by businesses and institutions are classified as solid non-hazardous waste. This definition also includes construction and demolition wastes such as drywall and roofing materials.

Some wastes, such as soils and industrial process residues must be tested before they are classified. It is the waste generator's responsibility to classify and manage their waste in accordance with the EPA and its regulations.

How do we know waste is solid non-hazardous?

Waste not specifically designated as non-hazardous in Regulation 347 has to be classified before it is disposed. In order to be classified as solid non-hazardous waste, the following questions must be answered:

Is it a "Listed" Waste?

Regulation 347 contains a list of industrial process wastes that by definition are hazardous waste. These lists are included as Schedules 1, 2 and 3 in Regulation 347. Any of these waste or mixtures of these wastes are designated as hazardous waste.

Does it have a hazardous characteristic?

If a waste is not listed in the Regulation 347 schedules, it must be tested to determine whether it has a hazardous characteristic.

These characteristics include:

- Corrosiveness (pH < 2 or > 12.5)
- Reactivity (to water & air)
- Ignitability
- Leachate Toxicity

The most common test used on waste is the Toxicity Characteristic Leaching Procedure (TCLP).

Toxicity Characteristic Leaching Procedure

TCLP simulates what happens when waste is placed in a landfill.

A weak acid solution is run through a sample of the waste to produce leachate. The leachate is analyzed to determine if a waste is hazardous. Regulation 347 defines leachate quality criteria in Schedule 4. The parameters, include:

- Metals (e.g., lead, cadmium and chromium)
- Inorganic chemicals (e.g., cyanide, nitrate and nitrite)
- Organic chemicals (e.g., benzene, vinyl chloride and cresols)

Is it a solid?

A waste must be solid in order to be received at a landfill site.

The 'slump test' determines whether a waste is a solid. The test can be done at a landfill site.

1. A sample of the waste is packed into a cone.
2. The cone is inverted on a board and then removed.
3. If the waste sample slumps more than 50% it is classified as a liquid waste and is unacceptable for receipt.



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How is waste verified as solid non-hazardous?

Environmental Compliance Approvals

Every waste disposal site in Ontario must have an Environmental Compliance Approval (ECA) from the Ministry of the Environment (MOE).

The ECA includes conditions under which a waste site must operate. The conditions are specific rules the operator must follow to operate, protect the environment, monitor and control effects, maintain records and report environmental performance.

One of the most important conditions of a solid non-hazardous waste landfill is the process of confirming that received wastes are classified as non-hazardous.

Acceptable Waste

- Curbside waste (no testing required)
- Industrial, commercial and institutional waste similar to curbside waste
- Railway ties and telephone poles
- Construction and demolition waste (including drywall) from non-industrial sources and uncontaminated sites
- Yard waste from residential property only
- Grocery and other food waste
- Roofing waste - non-industrial sources
- Textiles
- White goods - fridges/air-conditioners when tagged that chlorofluorocarbon (CFC's) have been removed
- Empty containers (with lids off, drums cut in two or crushed)

Approvable Waste (with supporting information)

- Industrial waste streams - sand, slag, sludge by-products
- Asbestos waste
- Contaminated soil (industrial, or commercial properties)
- Excavated waste from a waste disposal site
- Roofing waste from industrial sites
- Light ballasts (only in small quantity)
- Waste from health care facilities (e.g., hospitals, laboratories)
- Waste from waste treatment facilities
- Waste from waste transfer stations
- Florescent tubes

Unacceptable Wastes

- Biomedical waste
- Treated biomedical waste
- Pesticide and Herbicides
- Liquid waste
- Equipment that contains refrigerants
- Hazardous waste
- Batteries
- Propane tanks
- Pressurized and gas cylinders
- Whole drums
- Tires
- Animal Carcasses
- Automobile shredder fluff (e.g. foam, rubber, upholstery)

Waste Approval Procedures

The Customer

1. Completes a Waste Stream Information Sheet (WSIS), to describe the waste
2. Submits samples of their waste for analysis to an accredited laboratory
3. Provides supporting information (e.g. analytical reports, ECA, waste handling procedures)

Environmental Performance Department

1. Reviews the WSIS and supporting information
2. Compares results against Regulation 347
3. Determines any conditions for acceptance
4. Notifies the customer in writing
5. Notifies the landfill staff of the decision

Landfill Operators

1. Confirm waste stream is approved
2. Inspect loads for unacceptable waste
3. Have the authority and responsibility to reject waste that is not approved



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