

WASTE MANAGEMENT

Waste Management Guidelines

Syncrude is committed to the proper handling and disposal of waste materials from our operations. The objectives of our waste management program are to continually reduce the quantity of waste generated and to examine each waste stream with the view to reduce, reuse or recycle materials where possible. Syncrude also aims to ensure compliance with all applicable legislation regarding the disposal and recycling of waste materials. We recognize that many waste materials contain substances that could contaminate the environment and pose risk to human health if they are not properly managed.

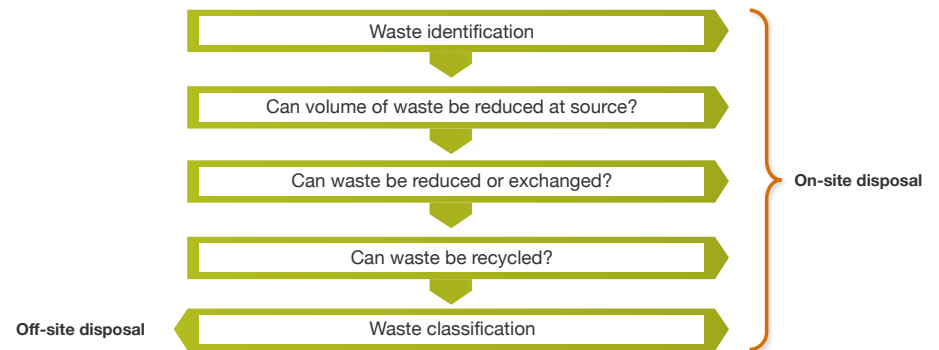
We **Reduce** waste through the use of an inventory management system that records and accounts for raw materials and process chemicals on-site. Waste reduction is also achieved through process changes, operational changes and equipment modifications. Through these means we endeavour to use less hazardous substitutes for toxic materials, change procedures that generate waste, and look for new methods or technologies to better capture hazardous waste.

We **Reuse** waste by finding new uses for it (for example, oily rags collected from Syncrude laboratories and shops are cleaned and reused). As well, our asset recovery program redistributes materials such as protective clothing and janitorial equipment.

We **Recycle** waste by gathering used materials so they can be reclaimed and reprocessed by recyclers. Examples include paper, vehicle batteries, scrap metals, catalysts and beverage containers. Used lubricating oil is recycled on site.

By Practicing the 3Rs, Syncrude:

- Saves on raw material and production costs;
- Reduces waste disposal cost;
- Assumes less risk of liability for future cleanup;
- Reduces movement of waste on public roads;
- Encourages resource conservation and recovery; and
- Demonstrates environmental leadership.



Waste Management

	2007	2008	2009	2010	2011
Major waste recycled or reused – solid (tonnes) ¹	12,079	9,150	20,563	32,663	32,923
Minor waste recycled or reused – solid (tonnes) ²	219	255	210	270	503
Major waste recycled or reused – liquid (m ³) ³	2,653	3,680	3,439	3,992	3,172
Waste – solid hazardous or potentially hazardous materials sent for off-site treatment or destruction (m ³)	19	11	68	11	110
Waste – liquid hazardous or potentially hazardous material sent for off-site treatment or destruction (m ³)	4.0	4.6	2.1	1.4	1.1
Waste disposal – on-site industrial, non-hazardous (tonnes)	16,862	20,431	21,775	41,278	17,807
Waste disposal – on-site sanitary non-hazardous (tonnes)	1,712	2,137	2,354	1,027	720
Waste disposal – off-site sanitary non-hazardous (tonnes) ⁴	–	–	–	874	1,098

1 Includes catalyst, scrap metal, tires, conveyor belting and batteries.

2 Includes solid recycled materials such as aerosols, oil/fuel filters, oily rags, refrigerant, plastic and metal drums, electronic waste, fluorescent tubes, kitchen grease, paper/cardboard/newsprint, beverage containers and printer cartridges.

3 Includes used oil and used solvents.

4 In August of 2010, Syncrude began sending most of the sanitary waste generated at Syncrude to the Regional Municipality of Wood Buffalo's landfill.

Recycling Programs

Hazardous Waste Roundup – Syncrude annually holds a roundup to collect hazardous wastes on our site. The wastes are transported off-site and sent to approved recycle and disposal facilities. In 2011, over 17 tonnes of waste was collected. Items included paint, solvents and flammable liquids.

Oil Filters – these are shipped off-site and the used oil in the filters is recovered.

Used Motor Oil – used motor oil is recycled on-site and processed into Syncrude crude oil.

Other Waste Hydrocarbons and Solvents – These are recycled on-site and reprocessed into Syncrude crude oil.

Cardboard and Paper – Recycling bins are located throughout Syncrude to promote recycling.

Cell Phones – All cell phones, cell phone batteries and chargers are collected on-site and sent for recycling.

Beverage Containers – Beverage containers are returned to a recycling depot and all cash from container deposits is donated to the United Way.

Printer Cartridges – Used printer cartridges are sent back to the vendors for recycle.

Fluorescent Tubes – Fluorescent tubes are crushed and the crushed glass is sent to a retort for mercury recovery; the aluminum end caps are separated and recycled.

Aerosols – Any gases remaining in aerosols are disposed of or recycled appropriately and the metal containers are recycled.

Electronics – all discarded computers and related equipment, and other electronics, are sent for off-site recycling.

Plastic and Steel Drums – Reusable drums are returned to the original suppliers for recovery of residual deposits and recycling of the drums.