GFL GREEN FOR LIFE environmental

NON-REGULATED WASTE
BC HAZARDOUS WASTE

NON-REGULATED WASTE

SUMMARY:

- What is a Non-Regulated Waste
- Regulatory Regime
- Hazards and Environmental Impacts of Non-Regulated Waste, by example.
- BC Hazardous Waste

NON REGULATED WASTE

What is a non-regulated waste?

Might be easier to say what it is not;

- It is not a Hazardous Waste as defined by the BC Hazardous Waste Regulation.

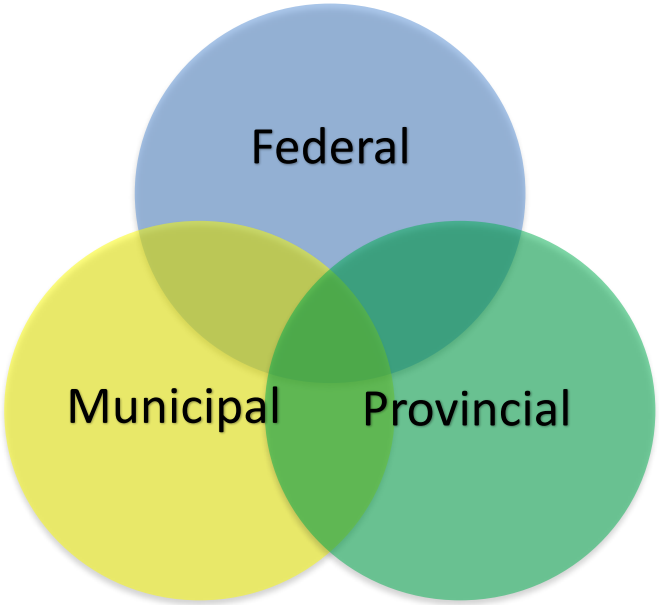
- It does not meet the criteria for Transportation of dangerous goods. (i.e. Flammable, Corrosive, Toxic)

NON REGULATED WASTE

Examples of Hazardous Waste based on TDG

REGULATORY REGIME

Waste is regulated in part by various levels government.



REGULATORY REGIME

FEDERAL	PROVINCIAL	MUNICIPAL
Canadian Environmental Protection Act (CEPA) Transportation of Dangerous Goods (TDG) 	Environmental Protection Act (EPA) BC Hazardous Waste Regulation BRITISH COLUMBIA	Waste Water Management and discharge criteria (Can be more stringent then Fed/Prov. guidelines) Controlled Waste Disposal (ex. Asbestos)

HAZARDS AND ENVIRONMENTAL CONCERNS OF NON-REGULATED WASTE

HAZARDS OF NON-REGULATED WASTE

There can be hidden hazards associated with Non-Regulated waste that must be carefully considered.

- Corrosive
- Reactive with other materials
- Inhalation Hazards
- Environmental Impacts

HAZARDS OF NON-REGULATED WASTE

Determining the Hazards of any waste requires careful review of the Safety Data Sheet and any process that created the waste. Often requires Analysis.

QUESTIONS

- What materials might this product react with?
- Does this material decompose to something unstable over time?
- What PPE is required to handle the material?
- Is there an odour?
- Has this material been through a process?
- Is it contaminated with something else?

HAZARDS OF NON-REGULATED WASTE

Horticultural Grade Fertilizers

Issues	Hazards	Solutions
Not Regulated by TDG but contains oxidizing ingredients such as Ammonium Nitrate or Potassium Nitrate.	Not compatible with combustible material such as organics or oily waste.	Can be managed as an oxidizer for disposal purposes (i.e. Stabilized or incinerated).

HAZARDS OF NON-REGULATED WASTE

Powdered Product (ex. Perlite, Volcanic Glass)

Issues	Hazards	Solutions
Extremely dusty, not water soluble. Some dust can be combustible, possible dust explosion.	Difficult to manage dust, processing creates an inhalation hazard.	Direct Disposal, do not disturb material.

HAZARDS OF NON-REGULATED WASTE

High or Low pH Waste

Issues	Hazards	Solutions
TDG measures corrosivity based on damage to tissues and metals. Have seen NON-TDG Waste with pH as high as 13 or less then 2 (but this would also be BCHWR)	If released directly to the environment can damage aquatic environments. Can react with other waste streams.	Treat as Corrosive waste for disposal. Neutralize the pH This could mean containerizing the waste and sending it for stabilization.

HAZARDS OF NON-REGULATED WASTE

Aqueous Film Forming Foam (AFFF)

Issues	Hazards	Solutions
Contains fluorinated surfactants belonging to the chemical group of per- and polyfluoralkyl substances (PFASs)	PFAS compounds are persistent in the environment and in the human body. PFAS exposure is being linked to Cancer, liver damage and decreased fertility.	High Temperature Incineration (not always effective) Water Treatment (Treatment media then incinerated)

HAZARDS OF NON-REGULATED WASTE

Soil and Water

Issue	Hazard	Solutions
Can contain trace contaminates such as metals and hydrocarbons, greater than Soil and Water quality standards. Can be greater than municipal discharge criteria for facilities.	Harmful to the environment if not properly disposed of.	- Water treatment - Remediation - Secure Landfill

BRITISH COLUMBIA HAZARDOUS WASTE

BCHWR WASTE

WASTE OIL

Includes, automotive lubricating oil, cutting oil, fuel oil, gear oil, hydraulic oil or any other refined petroleum based oil or synthetic oil where the oils are in the waste in a total concentration greater than 3% by weight.

Examples;

- Oily Rags
- Oily Water
- Soil contaminated with spilled oil

BCHWR WASTE

Polycyclic Aromatic Hydrocarbons

Released from burning coal, oil, gasoline, trash, wood, or other organic substances.

Other activities that release PAHs include roofing tar or working with coal tar products, coating pipes, steelmaking, and paving with asphalt.

Examples;
Coal Tar Wrapped Pipe
Contaminated Soil

BCHWR WASTE

Leachable Waste

Means waste when subject to the modified leachate extraction procedure (TCLP) produces an extract with a contaminant concentration greater than those prescribed in the regulations.
(TCLP for Solids, Liquids already in solution)

Examples;

Lead Paint Chips, used sand blast grit, soil contaminated with hydrocarbons, Soil from an industrial site (metals)

Parameters vary by province.

BCHWR WASTE

Leachable Waste

Common Contaminates of Concern in BC;

- Lead
- Chromium
- Arsenic
- Mercury
- Xylene
- Ethylbenzene
- Tetrachloroethylene

*Leachate Criteria defined in Table 1 Leachate Quality Standards of the BC Hazardous Waste Regulation

BCHWR WASTE

Pesticides

- Waste Pest Control Products Containers and Pest Control Products
- Not all pesticides are a TDG Class 6 but they are considered hazardous waste under the BCHWR.
- Includes wastes produced in the production of treated wood products using pest control products (Does not include wood products).

BCHWR WASTE

pH <2 or >12.5

- Waste that have a pH <2 or >12.5 are hazardous waste.
- Not all waste with these pH parameters are class 8 (Corrosive by TDG).
- TDG measures Class 8 material based on the damage a material causes when in contact with living tissue or Metal.

- Examples can include Industrial Dyes or cleaners.
- Waste water contaminated with Portland Cement.

QUESTIONS?

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THANK YOU

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