

# SOLID WASTE ACCEPTANCE PROTOCOL: ALBERTA

This form will assist you in identifying if the waste(s) can be accepted and assist in the analytical testing requirements.

**SECURE Class II Landfills will only accept solid, non-dangerous oilfield and non-hazardous Industrial wastes.**

## EXAMPLES OF COMMON ACCEPTABLE SOLID WASTES (NO FREE LIQUIDS)

1. Activated Carbon
2. Asbestos
3. Catalyst(s) Sulphur and Non-Sulphur
4. Cement (Crushed, Dry Returns)
5. Contaminated Debris and Soil(s) with:
  - Chemical/Solvent(s)
  - Crude Oil/Condensate
  - Dry Cleaning/Industrial Related
  - Mercury/Metals
  - Methanol
  - Produced/Salt Water
  - Refined Fuel(s) (i.e. Gasoline)
  - Sulphur
6. Construction and Demolition (C&D) Debris
7. Desiccant(s)/Molecular Sieve(s)
8. Drilling Mud(s)/Cuttings:
  - Advanced Gel Chem
  - Gel Chem
  - Invert
  - Potassium Chloride (KCl)
  - Potassium Sulphate (K<sub>2</sub>SO<sub>4</sub>)
9. Frac Sand (non-radioactive)
10. Incinerator Ash
11. Sand – Produced
12. Sludge - No Free Liquids (Solids ONLY) from:
  - Flare Pit
  - Hydrocarbon
  - Lime
  - Process
  - Sulphur
13. Treated Wood/Wood Waste (e.g. railway ties)

## PROHIBITED WASTES

1. Free Liquids
2. Hazardous Solid Waste as defined in:
  - The *Waste Control Regulation* (Government of Alberta, 2021)
  - The *Alberta User Guide for Waste Managers* (AEP, August 1996)
3. Radioactive Material
4. Reactive Material
5. Explosives
6. Biological and/or Bio-Medical Waste
7. Ozone Depleting Substances

## LANDFILL DISPOSAL CRITERIA

The following is a list of landfill disposal criteria that may be required based on the description, origin and history of the solid waste:

- Analytical data provided must support the non-hazardous solid waste classification
- Analytical data provided must be current (not older than one (1) calendar year)
- It is the responsibility of the waste generator to determine the characteristics of the waste
- Un-used non-hazardous solid products require a SDS/Data Sheet

## MULTI-WELL PADS

- SECURE Application Form (SAF) and analytical is required for each surface location;
- All downholes are to be listed on the SAF;
- An analytical is required for each drilling product for every SAF; and
- If the product or formation changes, an updated analytical is required

### SECURE ALBERTA CLASS II INDUSTRIAL LANDFILL DISPOSAL CRITERIA

The following lists of common compounds are found in Table 2 of the *Alberta Users Guide for Waste Managers* (AEP, August 1996). The associated regulatory levels are the maximum allowable concentrations. Any material that exceeds these levels will not be approved for disposal at the SECURE Class II Landfill.

**Note:** Refer to the “Class II Industrial Landfill Analytical Requirements” following this page for the specific analytical required based on the waste stream description.

CONSTITUENTS	REGULATORY	CONSTITUENTS	REGULATORY
<b>Leachable BTEX:</b>		<b>Leachable:</b>	
Benzene	0.5 mg/L	Total cresols	200.0 mg/L
Toluene	0.5 mg/L	Nitrite	100.0 mg/L
Ethylbenzene	0.5 mg/L	Nitrate/Nitrite	1000.0 mg/L
Xylenes	0.5 mg/L		
Extractable halogenated organic compounds (EOX):		1,000.0 mg/kg	
Volatile organic compounds (VOCs):		Discrete compound limits	
<b>Leachable Metals:</b>		<b>PAHs:</b>	
Antimony	500.0 mg/L	Napthalene	0.50 mg/L
Arsenic	5.0 mg/L		
Barium	100.0 mg/L	<b>PCBs:</b>	
Beryllium	5.0 mg/L	PCB	50.0 mg/kg
Boron	500.0 mg/L		
Cadmium	1.0 mg/L	<b>Sulphur:</b>	500.0 mg/kg
Chromium	5.0 mg/L	Elemental Sulphur Sulphides	
Cobalt	100.0 mg/L		
Copper	100.0 mg/L		
Iron	1,000.0 mg/L	<b>Other:</b>	
Lead	5.0 mg/L	Additionally, the waste must meet all the following requirements:	
Mercury	0.2 mg/L		
Nickel	5.0 mg/L		
Selenium	1.0 mg/L		
Silver	5.0 mg/L		
Thallium	5.0 mg/L		
Uranium	2.0 mg/L		
Vanadium	100.0 mg/L		
Zinc	500.0 mg/L		
Zirconium	500.0 mg/L		

- **pH:** Greater than ( $\geq$ ) 2.0 and Less than ( $\leq$ ) 12.5
- **Flash Point:** > 60.5°C (Degrees Celsius)
- **No Free Liquids** can be present (US EPA Method 9095 Paint Filter Test)

**Note(s):**

- Not all regulated compounds are listed above. Refer to the *Alberta Users Guide for Waste Managers* (AEP, August 1996) for the complete list
- Dry cleaner and/or other industrial related impacted solids may require specific analytical parameters; please contact SECURE for full details
- Waste containing elemental Sulphur and Sulphides  $\geq$  500.0 mg/kg is deemed Sulphur Waste (SWaste). Refer to the *Guidelines for Landfill Disposal of Sulphur Waste and Remediation of Sulphur Containing Soils* (AEP, September 12, 2011)

Refer to Table 2.0 of the *Alberta Users Guide for Waste Managers* (AEP, August 1996) for Halogenated Organic Compounds – discrete compound regulatory limits in addition to the 1,000.0 mg/kg total.

### BASIC PARAMETERS

The following **basic** analytical testing is required for all wastes regardless of the composition:

**FP** – Flash point for solid samples

**pH** – pH of solid waste material

**LBTEX** – Leachable BTEX (TCLP)

**LMETALS** – Leachable metals (TCLP)

**PFT** – Paint Filter Test

### SUPPLEMENTAL – WASTE SPECIFIC PARAMETERS

The following additional analysis **MAY** be required depending on the waste description and/or type (refer to guidance below). Additional analysis may be requested depending on the type of waste and source of generation.

**Sol Scan** – Landfill Solvent Screen in solid waste EPA 8240

**PCB** – Polychlorinated Biphenyls

**PAH** – Polycyclic Aromatic Hydrocarbons

**EOX** – Extractable Halogenated Organic Compounds (TCLP)

**VOC** – Volatile Organic Compounds (TCLP)

**Spontaneous Combustion** (Self-Heating)

**Sulphur** – Elemental Sulphur (S) and Sulphides (S<sup>2-</sup>)

**Water Reactivity** (ΔT)

**% ANC** – % Acid Neutralizing Capacity – Additional testing **recommended** for Sulphur impacted wastes

**% CCE** – % Calcium Carbonate Equivalent – Additional testing **recommended** for Sulphur impacted wastes

### WASTE SPECIFIC ANALYTIC PARAMETERS

WASTE DESCRIPTION	ANALYTICAL REQUIREMENTS
1. Activated Carbon	Basic and Spontaneous Combustion (Self-Heating) *
2. Catalyst (sulphur)	Basic, Elemental sulphur and sulphides, Spontaneous Combustion*
3. Catalyst (non-sulphur)	Basic, Spontaneous Combustion*
4. Desiccant(s)/Molecular Sieve(s)	Basic, Water Reactivity (ΔT)*

\*Please contact the Facility Manager to discuss the requirements of these parameters.

**Note:** The analytical requirements for waste approval include but are not limited to those listed above. SECURE may request additional testing prior to issuing approval. If a waste differs from the descriptions above please contact the SECURE facility.

### HELPFUL INFORMATION (Laboratory Requirements)

- Spontaneous combustion testing requires a four (4) liter pail of sample.
- BTEX sampling requires a 500 mL glass jar with no head space.
- Analytical reports must be the signed copy.