

# building a sustainable future for

## Alberta in Swan Hills

### SCOPE OF SERVICES

SUEZ provides operation and maintenance of the Swan Hills Treatment Centre (SHTC).

This fully integrated facility is the only one of its kind in Canada and one of the few in the world.

The centre treats all types of hazardous waste generated in North America, excluding explosive and radioactive items.

### KEY FIGURES

120 employees

Incineration nominal capacity of 40,000 tonnes per year

Over 2,000 types of waste referenced, including solids, liquids and sludge

8,000 storage units capacity on site, including bulk, drums, big bags and totes

ready for the resource revolution





# the past and future of a unique facility

The site was chosen for its geology and local support after an exhaustive review led by the Alberta government. Since its inception in 1987, the SHTC has treated over 300,000 tonnes of hazardous waste including POPs, PCBs, dioxin/furan wastes and ODS.

SUEZ has operated the plant since 2011 setting environment, health and safety as the top priority. The SHTC benefits from the expertise shared between more than 40 hazardous waste facilities operated worldwide by SUEZ.

## A complete specialized process line to treat and dispose of hazardous waste

### Reception

Waste arrives by means of trailer trucks. Verifications, labeling and regulatory paperwork ensure tracking of the disposal process.

### Incineration

Organic wastes are destroyed in the incinerator at temperatures above 1050°C. This achieves Destructive Removal Efficiency of at least 99.9999% of hazardous organic compounds.

### Stabilization

Fly ash is mixed with cement, which constitutes one of the many barriers against leachate of trace amounts of heavy metals.

### Landfill

Stabilized material is disposed in the on-site Class 1 landfill. Cells are secured with clay, geomembrane and are re-vegetated.

### Inspection & Pre-Treatment

The waste is inspected, analyzed in laboratory and/or pretreated (shredded, mixed, resized) before going through the main processes.

### Neutralization

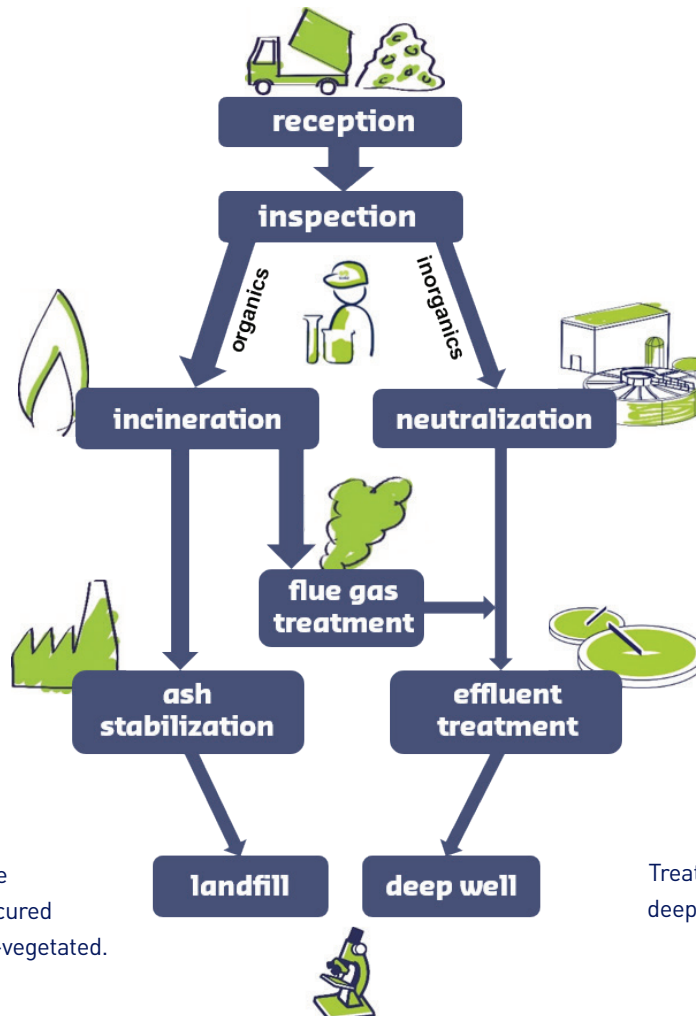
Inorganic liquids are chemically and physically rendered non-hazardous in the "Phys-Chem" process, utilizing a combination of acid/base and redox properties.

### Post-Treatment

Flue gas scrubbing removes acids and particulates while effluents are cleaned using wastewater treatment techniques.

### Deep Well

Treated liquid effluents are injected into a deep well 1,800 metres below the surface into a stable geological formation.



### Environmental Monitoring

Any potential impact of the activities on the environment is closely monitored. Surrounding wildlife, air emissions, surface and ground waters, landfill and deep well integrities are constantly studied in order to verify that the prime goal of the facility is achieved: protect the environment.

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