

# Silverberry Landfill and Treatment



## ENGINEERED LANDFILL DISPOSAL



### Plant Profile:

Hours of operation	8AM to 6PM, 7 days a week
Location	Block A-18-88-20 W6 Silverberry
Directions to facility	From Fort St John, travel north on the Alaska Hwy to mile 73 (47.5km). Turn right on Beaton Airport Road travel 11 km. Turn right and the CCS signs will lead you to the facility.
Address	Box 383, Charlie Lake, BC V0C-1H0
Phone	250-827-6834
Fax	250-827-6835
Class and Approval	Secure Landfill (BC)
Permit Number	Landfill Permit # PR 17150 / Landfarm Permit # PS 10758 - WLAP
LF Design	The Silverberry Secure Landfill incorporates a 3 liner system, a primary (top) composite liner consisting of a 60 mil high density polyethylene (HDPE) geomembrane liner underlain by a 0.6m thick compacted clay liner (CCL). This lies above a leak detection system between the primary composite liner and secondary 0.6m CCL and consists of high flow geonet synthetic drainage media connected to a drain system and collection sump. Cell construction is subject to a strict QA/QC Program managed by third party professional engineering consultants.
Groundwater Monitoring	For interpretation purposes, the site has been divided into the Land Treatment Facility and the Landfill Facility. The rationale for the placement of the monitoring wells is as follows. A ground water monitoring program is in place with 2 wells located up gradient of the landfill treatment cell, 5 wells located down gradient of the landfill treatment cell, 1 well located cross gradient of the landfill cell, 1 well located upgradient of the landfill cell and 2 wells located down gradient of the landfill cell. Sampling occurs 2 times a year with analysis compared to background analysis.
Surface Water Controls	All surface water is diverted and collected into a storm water retention pond north west of the Bioremediation cells. All waters are tested by third party accredited labs according to Surface Water Discharge Criteria. Waters not meeting Surface Water Discharge Criteria are Deep Well Injected at the Silverberry TRD facility and must meet Deep Well Injection Criteria. Any water inside the landfill is contained and collected as leachate.
Waste Acceptance Protocol	A three step process that begins with: 1) the application for disposal (WCD) submitted with third party accredited lab analytical attached. 2) random sampling of waste streams entering the facility. Testing for gross parameters including; flashpoint, pH, paint filter and NORM detection. 3) equipment operator observes loads as they are being received for discrepancies.
Waste Placement	Facility utilizes a three dimensional alpha numeric grid locating system with surveyed elevations. Documentation is maintained showing the location of each load.
Waste Tracking Documentation	All approved loads must be accompanied by either a completed CCS Manifest (Non-Special Waste) or a Federal Manifest (Special Waste)
Expansions	The construction of landfill cell #2 was initiated on August 21, 2003, and was completed on November 13, 2003. With the rest of the contractual obligations being completed by December 10, 2003.
Facility Biography	The Silverberry Secure Landfill was opened on October 18, 2002 and was CCS's first venture into the Province of British Columbia. Since the opening we have expanded our landfill operations and are looking forward to future expansions as our relationships continue to grow in the oilfield community. CCS is the only company that can accept Special Waste for direct disposal. Silverberry is the product of several years of hard work and cooperation by The Province of British Columbia, The Ministry of Water, Land and Air Protection, The City of Fort St. John, First Nations and CCS Energy Services. CCS is looking forward to being the first choice provider of safe, environmentally responsible energy services and contributing to the rapidly growing economy of the Peace Region.

### Contact:

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