Coastal Plains RDF

Coastal Plains Recycling and Disposal Facility (RDF) is a regional facility that provides safe and convenient disposal services for communities, businesses and industries serving Alvin and surrounding areas. Waste Management’s approximately 300 disposal facilities employ the latest advances in landfill technology. This facility is engineered with environmental protection systems that meet or exceed rigorous government regulations and are subject to highly regulated monitoring and reporting requirements. Systems include engineered liners and covers, leachate collection and removal, and landfill gas collection and control.

Containment Design

Landfill cells are constructed using a composite liner system, which provides a positive barrier for groundwater protection. The liner system consists of a 60-mil High Density Polyethylene (HDPE) liner in direct contact with a three-foot thick layer of compacted soil. A bentonite slurry wall around the disposal cell perimeter is keyed into an underlying impermeable clay layer as an additional protective barrier for groundwater.

Leachate Collection & Treatment

Leachate is collected through a network of perforated collection pipes and leachate collection sumps equipped with extraction and clean-out pipes used in conjunction with the composite liner system. Leachate is conveyed from the collection sumps via pumps and hoses directly into storage tanks.

Groundwater Monitoring

Groundwater is monitored at 21 wells, both upgradient and downgradient of the waste disposal footprint. The groundwater monitoring network is sampled and analyzed semi-annually in accordance with the procedures of the facility’s groundwater sampling and analysis plan.

Landfill Gas Management

Coastal Plain’s methane monitoring, collection and management system consists of over 150 gas wells which feeds the methane gas into the flare and co-generation facility that produces electricity. Nineteen perimeter probes that are monitored quarterly help detect any methane gas leaving the facility.

Security

Site security is ensured by controlled, limited access to the facility as well as perimeter fencing and electronic surveillance. The facility can only be accessed via a single gate, which directs all traffic to a gatehouse occupied during business hours by trained personnel. During non-business hours the gate is locked and monitored by electronic surveillance.

YEAR OPENED
1985

PROJECTED LIFE REMAINING
25 years

FACILITY ACREAGE
660 acres

PERMITTED FOOTPRINT
128 acres

REMAINING PERMITTED CAPACITY
10.9 million tons total (Class 1 and Class 2)

TONS PROCESSED ANNUALLY
419,000 tons

OWNERSHIP
Waste Management of Texas, Inc.

PERMIT TYPE & PERMIT #
MSW 1721A

REGULATORY AGENCIES
Texas Commission on Environmental Quality (TCEQ), Galveston County Health District

EMPLOYEES
17
Acceptable Material
Asbestos – Friable/Non-Friable
Auto Shredder Residue
Biosolids
CERCLA Waste
Construction & Demolition (C&D) Debris
Drum Management – Solids & Liquids

Unacceptable Material
CFC (Freon) Containing Items
Explosives
Lead Acid Batteries
PCB Liquids
Pressurized Gases

Radioactive or Nuclear Waste
Regulated Hazardous Waste
Used Oil
Whole Tires

Additional Services Provided
Composting
Solidification

Risk Mitigation
Waste Management’s in-house professionals employ best management practices at Coastal Plains, which includes using state-of-the-art site design and management systems, to minimize potential risks.

Community Partnerships and Involvement
Coastal Plains RDF is proud to be an active supporter of community events and programs that make Brazoria County a strong and healthy place to live, work and play.

This facility also supports the following events, charities, schools and service groups:

Alvin Community College
Alvin-Manvel Area Chamber of Commerce
Santa Fe Chamber of Commerce
University of Houston, Clear Lake