

LONE WOLF RESOURCES

Services—Waste Recycling & Stabilization

LWR specializes in recycling contaminated soil, sediment, sludge and concrete debris into reusable materials. Recycling is a sustainable remedial solution that conserves natural resources and minimizes on-site and off-site truck traffic along with its associated fuel consumption and emissions; it also saves our clients money.

Material processing is performed with a fleet of modified cold-mix pugmills, conveyors, screens and shredders that we own. Initial bioaugmentation processing steps are followed by stabilization in the pugmill where materials are uniformly mixed with customized reagent blends to produce a material that meets environmental and geotechnical standards specific to each project and site.

LWR has recycled over 1 million tons of impacted materials to date.

PROJECTS - WASTE RECYCLING:



FORMER REFINERY SUPERFUND

Location: Colorado City, TX

Project Value: \$20MM

This Superfund Site was defined by the TCEQ as the "#1 State Superfund Site in Texas". The site was formerly occupied by a refinery that operated from 1928 to 1969 on about 183 acres near Colorado City, TX. LWR has been providing turnkey remediation services as prime contractor at this superfund site in West Texas over the past 14 years.

Highlights

- 183-acre site with 32 impoundments
- Recycling of over 450,000 tons of impacted soils, sediments and concrete debris
- Produced over 260,000 gallons of asphalt emulsion from waste pond contents

Benefits

- Recycling process produced the following:
 - Asphalt-stabilized road base for on-site and off-site use
 - Storm water pond lining material
 - Capping material for on-site containment cell
- Recycling solution minimized long term liability for our client by eliminating waste from site
- Recycling solution was the most cost effective solution

ACTIVE REFINERY SWMU RECYCLING

Location: Port Arthur, TX

Project Value: \$6.7MM

LWR was contracted to stabilize the contents of a closed SWMU at an active refinery. The stabilized product was designed to meet environmental and engineering standards. The product was then recycled as structural fill beneath construction of a new process unit.

Highlights

- Stabilization operations included LWR's cold mix pugmill units adding a reagent admixture
- 347,000 tons of recycled product produced

Benefits

- Recycling process produced the following:
 - Select fill for new construction projects at the facility
 - Construction material for perimeter berms
 - Cap material to close former stormwater basin
- Cost savings of over \$6MM by reducing amount of purchased engineered fill from off-site sources
- Achieved the following Sustainable Goals:
 - Reclaimed 12 acres of property;
 - Conserved over 684k gallons of diesel fuel;
 - Eliminated over 3MM trucking miles and 7.6k tons of CO2 emissions

ACTIVE REFINERY POND RECYCLING / STABILIZATION

Location: New Brunswick, Canada

Project Value: \$4.5MM

LWR was contracted by the refinery owner to excavate and stabilize three waste ponds containing 40 years of hydrocarbon-containing material. The ponds were adjacent to a Ducks Unlimited preserve sponsored by the client.

Highlights

- Excavated and stabilized approximately 33,300 tons of impacted soils and sediments from a refinery pond
- Stabilized an additional 4,480 tons of impacted materials from other projects and refinery waste
- Approximately 113,000 tons recycled product was produced from refinery waste streams

Benefits

- Recycling process produced the following:
 - Select fill for refinery construction projects
 - Fill material to backfill the pond footprint
- Recycling solution minimized long term liability for our client by eliminating waste from site
- Cost savings for recycling solution were six times lower than next best alternative remedial solution