

LANDFILL REMEDIATION AND MONITORING FORMER WATERFORD HILLS LANDFILL SITE

Waterford, Oakland County, Michigan



The Michigan Department of Environmental Quality (MDEQ) requested that ERG oversee the Trade Contractor (Technical Service Professionals, LLC.(TSP)), close out construction tasks, conduct groundwater sampling, oversee operations and maintenance and provide professional technical assistance regarding system operations of the Waterford Hills Sanitary Landfill (MDEQ Site ID #63000165). The work is being completed under the Level of Effort (LOE) contract between the MDEQ and ERG.

The Closed Waterford Hills Sanitary landfill is located on 55-acres within the Pontiac Lake State Recreation Area, owned and maintained by the MDNR. ERG assists the MDEQ effort to achieve compliance with the City Detroit Wastewater and Sewer discharge permit limits, monitor groundwater quality near the landfill and maintaining landfill gas control at the site.

The Waterford Hills Sanitary Landfill was used for sand and gravel mining operations prior to 1981. The landfill was issued a Type II municipal solid waste landfill permit by the MDNR. The facility was operated by a private company and continued to receive waste until October 1990, at which time a Cease and Desist Order was issued by the MDNR. The order was issued as a result of the detection of volatile organic compounds, heavy metals, and other contaminants in groundwater samples obtained from monitoring wells at the site between 1988 and 1990. The area of waste placement comprises 27 acres in the northern portion of the site. After landfill operations ceased, the MDNR Parks and Recreation Division assumed responsibility for closing the landfill. The closure project involved relocating some of the waste, installing a new 40-mil synthetic polyethylene cap across the entire filled area, installing a landfill gas extraction system and utility flare, and re-contouring the landfill site for storm water management. The closure project was completed in 1996, at which time the landfill gas extraction and flare system was placed into operation. The MDEQ has continued to maintain the integrity of the closed landfill facilities, operate the landfill gas extraction system, and monitor the quality of leachate, which is discharged to the sanitary sewer system under City of Detroit Wastewater Discharge Permit.

ERG currently administers the contract of TSP and evaluates their monitoring and maintenance of the leachate pretreatment system. ERG conducts leachate discharge monitoring in accordance with a DWSD wastewater permit. The DWSD permit requires semi-annual self monitoring reports, semi-annual sampling the system following the accepted time weighted application, and annual site meeting with DWSD personnel.

ERG also administers the contract for the operation and maintenance of the landfill gas recovery system. ERG reviews and administers data collected by TSP in the landfill database summarizing gas monitoring results and prepare on a quarterly basis figures that summarize vacuum influence at monitoring locations. ERG works with the TSP to assess flare operation, trouble shoot the flare system as needed in order to maximize gas capture and flare operation. ERG directs TSP to monitor and re-balance the landfill gas collection system, as needed and to the extent practicable, to distribute vacuum to the areas where the system is not currently delivering vacuum. ERG also maintains the dedicated landfill gas monitoring equipment.

ERG Role
Professional

Project Reference
MDEQ
Greg Barrows
586-753-3807

Project Value
\$200,000

Completion
active

Services Provided
Contractor Oversight
Groundwater
Sampling
Gas Monitoring
System O&M
Regulatory
Compliance