

United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Tuesday, December 18, 2007

From: Steven Faryan

Subject: On-going Site Activities

Mallard Lake Landfill

26W580 Schick Road, Hanover Park, IL

Latitude: 41.9525000

Longitude: -88.1442000

POLREP No.:	4	Site #:	B5MH
Reporting Period:	December 13-17, 2007	D.O. #:	
Start Date:	11/6/2007	Response Authority:	
Mob Date:	11/6/2007	Response Type:	Time-Critical
Demob Date:		NPL Status:	
Completion Date:		Incident Category:	Removal Action
CERCLIS ID #:		Contract #	
RCRIS ID #:			

Site Description

EPA's Emergency Response Branch was requested to assist the IEPA in March of 2007 at the Wayne Township Ground Water site in Northern DuPage County, Illinois. U.S. EPA upon reviewing available data and well logs from the Mallard Lake landfill discovered a boring conducted by BFI contractor Hearst and Assoc in April of 2006 with methane levels of 17.9% concentration within 50 feet of a residential neighborhood on the West perimeter of the landfill. U.S. EPA requested the operator of the landfill, BFI, and owner of the landfill, DuPage Forest District, to conduct an investigation outside the West boundary, South Boundary and on the Right-of Way to determine the extent of the gas migration off site. This landfill gas has historically contained high levels of Volatile Organic Compounds including vinyl chloride which was reported by the landfill operator to lead to ground water contamination exceeding the Maximum Concentration Limit (MCL) for vinyl chloride at the Western perimeter of the landfill.

During the first phase of the investigation conducted November 6-10, high levels of methane exceeding 75% in concentration were detected in temporary monitoring wells at locations within 30-50 feet from residential homes. The permeable zone containing this methane is 40-45 beneath the ground surface. BFI consultants STS, began installation of shallow monitoring wells on November 31, 2007.

Current Activities

BFI and STS continue to investigate the methane gas migration extent through CPT soundings and probe installations west of the Mallard Lake Landfill. During this reporting period, WESTON START conducted oversight of 10 CPT soundings and gas probe installations to a maximum depth of 66 feet (Figure 4) in Hawk Hollow (RW-7 and RW-19 and the Right of Way Whitney Drive (CP 19 and CP18), Goddard Lane (CP15 and CP 14), McCormick Lane (CP16 and CP17) and Eastman Lane (CP20 and CP23).

Six of the ten probes (CP18, CP15, CP14, CP16, CP23 and RW-7) all detected methane gas. CP18 and CP14 both had methane gas detections of 78.7% while CP23 and RW-7 both had detections at 80.1%. CP15 and CP16 both had methane detections of at 56.5%, and 78.7% respectively (See Figure 3). Two proposed CPT locations along Whitney (CP21 and CP22) will need to be re-located due to the presence of utilities revealed on December 13th, by the Hanover Park Public Works vacuum truck.

The remaining four locations all had no methane detections during initial probe installation. RW-19 was an additional gas probe location added to the Hawk Hollow Forest Preserve to continue the westward gas migration investigation. Based on methane gas detections from recent CPT push locations, STS will extend the migration investigation study area to include areas west of County Farm Road including Victor Lane, Zeppelin Drive, Morton Road, McCormick Lane and DeForest Lane. As of December 17th, STS has investigated and installed 26 CPT probes at depths between 36 and 66 feet deep to investigate the potential methane gas migration extent. A comprehensive round of methane gas monitoring will be conducted by STS in the following days which will include all shallow and cone penetrometer probes.

STS will also begin installation of three methane gas probes (with the CPT rig) along Schick Road (southside) starting December 18th. Utilities for the push locations were cleared on December 17th. Also, utility clearance is expected to be completed for DeForest Lane on December 17th. Cone penetrometer investigations and installations will continue through December 19th at which time the CPT rig crew will break for the Holidays.

U.S. EPA along with STS and WESTON START continue to screen residential homes for the potential presence of explosive gases on a voluntary basis (See Figure 1- Residential Screening Status). BFI's public relations consultants, Reputation Partners, continue to call local residents (who live west of the landfill) to schedule appointment for air monitoring and installation of explosive gas meters. As of December 17, 2007, 170 homes have been visited and 89 homeowners have allowed their residence to be screened. Thus far no explosive gases have been detected in any homes (Table 1).

In addition, upon obtaining approval of residents, U.S. EPA and landfill contractors have installed explosive gas detectors in 68 homes along Whitney Drive, County Farm Road, DeForest Lane, Goddard Lane, Lawrence Avenue and Mallard Lake Estates (south of Schick Road).

These detectors are similar in size and operation to a smoke detector, and can detect the presence of methane, propane and other explosive gases. The detectors sound an audible alarm when the gases reach a concentration that is 25 % of the minimum necessary to cause an explosion. All residents are given written and verbal instructions on what to do if the alarm sounds. BFI has prepared a contingency plan with emergency contact information if an alarm or high level of methane is detected which involves a response the Hanover Park Fire Department. Residential screening will continue through December 21st at which time screening and meter installations will resume after the Holidays. However, Reputation Partners will be addressing any calls received from residents during the holidays inquiring about screening and gas meter installations. Screening and gas meter installations will be supported by STS and WESTON.

STS conducted three residential slam bar sampling on December 13th, at 1816, 1851 and 4663 Whitney Drive. Up to three locations (front, back and side yard) were sampled to a shallow depth of three feet at each resident; however no methane gas was detected at all three residences (See Figures 3a-c);

In addition, work plans submitted by BFI and STS are currently being reviewed by U.S. EPA and their consultants Weston Solutions, Inc. to investigate the gas migration and sample the landfill gas and ground water.

U.S. EPA is meeting weekly on Monday's at 2:00 PM to inform and update all agencies involved. The next meeting will be held January 7, 2007. Cone penetrometer investigation and installations will continue through December 19th after which CP investigations will resume after the Holidays.

Corrective Action

BFI has been conducting Emergency Corrective Action at the Mallard Lake Facility installing six replacement and one new gas extraction wells in the landfill; however, these wells have not been connected to the extraction system. Also BFI and STS installed one water and vapor extraction well (GX-1) on the southside of the landfill along Schick Road. BFI's November 2007 Mallard Lake Landfill gas monitoring probe readings are available for review(See Landfill Gas Monitoring Data)

Planned Removal Actions

BFI public relations consultants Reputation Partners along with STS continue to distribute literature (door hangers) regarding residential screening and gas meter installation to local residents residing in the investigation area.

In addition, a U.S. EPA fact sheet was mailed to all local residents in the investigation area briefing them on the purpose of the methane gas investigation, description of the investigation areas, residential screening and gas meter installation and other efforts conducted by BFI and U.S. EPA to mitigate the migration risk.

U.S. EPA entered into an Administrative Order of Consent (AOC) with BFI and the DuPage Forest District regarding methane gas investigation. The AOC requires BFI and the DuPage Forest District to complete the emergency assessment and investigation work to determine the extent of the methane gas leakage from the landfill, and to complete long-term measures to control the off-site migration of landfill gases.

U.S. EPA along with state and local representatives will hold a public meeting on Thursday, January 17,

2008 at Horizon Elementary School at 1701 Greenbrook Boulevard, Hanover Park, Illinois to discuss the Administrative Settlelement with the Mallard Lake Landfill site(See Mallard Lake AOC Ad). The meeting will address the landfill gas investigation with local residents.

Next Steps

- STS, WESTON and U.S. EPA will continue screening homes and installing explosive gas meters based on appointments scheduled by Reputation Partners public relations.
- BFI and STS will continue methane gas migration investigation using the CPT rig and conducting weekly methane gas monitoring of existing and newly installed probes.
- Conduct soil gas sampling at designated shallow gas probe locations.
- Install and sample shallow soil gas near residential homes (based on access).
- Install and sample sub-slab sampling ports (based on access).
- BFI and their consultants, STS, will prepare a plan to improve and expand the methane recovery system and to address methane that has migrated off the property.

Key Issues

- Obtaining access to private homes to install shallow soil gas probes and sub-slab ports has been problematic.

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