

United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Wednesday, December 12, 2007

From: Steven Faryan

Subject: On-going Activities
Mallard Lake Landfill
26W580 Schick Road, Hanover Park, IL
Latitude: 41.9525000
Longitude: -88.1442000

POLREP No.:	3	Site #:	B5MH
Reporting Period:	December 10-12, 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, START conducted oversight of 11 CPT soundings and gas probe installations to a maximum depth of 62 feet (Figure 2) in Hawk Hollow (RW-6, 9, 11, 12, 13, 14, 16, 18 and 20) and the utility Right of Way (RW-1 and 3D) east of County Farm Road (Figure 2). RW-9 in Hawk Hollow detected a methane reading of 27.4% at a push depth of 50 feet. RW-8 had a methane detection of 48% on December 10th at a depth of 53 feet. RW-3D in the utility right of way detected methane gas of 80.1% at a push depth of 64 feet.

STS added two additional gas probe locations at RW-18 and RW-20 to further investigate a potential westward methane gas migration. Both RW-18 and RW-20 detected no methane gas concentrations to depths of 51 feet and 54 feet below ground surface. STS expects to push and install additional probe locations west of RW-18 to investigate the potential westward gas migration extent based on methane monitoring from RW-8 and RW-9. CPT soundings are expected to continue through the weekend and into next week in Hawk Hollow and the right of way of Whitney Drive, Goddard and McCormick Lane as soon as issues with utility clearance and access from the Village of Hanover Park are resolved. As of December 7th, STS has monitored and installed 19 CPT probes at depths between 36 and 62 feet deep to investigate the potential methane gas migration extent.

STS plans to conduct routine methane gas monitoring of the 13 shallow nested probes installed November 27-December 6th in Discovery Park(CP1S, CP2S, CP2I, CP3S, CP3I CP4S CP5S, CP10S, CP10I, CP11S) , Hawk Hollow Forest Preserve (RW-5S) and the utility Right of Way (RW-3S and RW-

4S. These wells were installed from 12-40 feet to investigate if any methane gas was detected above the 40 foot clay, till area.

STS also conducted methane monitoring of newly installed probes CP6, CP7, CP8, CP10, CP13, RW-8, 10, 15 and 18 and existing probe CP5 on December 10th and 11th CP8, RW-8, CP7, and CP5 had methane detections of 74.4%, 48.4%, 13.4%, and 0.4% respectively. The remaining probes listed above all detected zero methane gas readings (Figure 2).

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 11, 2007, 171 homes have been visited and 77 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 57 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.

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.

In addition, work plans have been submitted by BFI (and 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. Screening of homes and installation of explosive gas meters will be continued. Installation of shallow soil gas probes and sub-slab port will be conducted in homes where access is granted.

Planned Removal Actions

BFI public relations consultants Reputation Partners began distributing literature regarding residential screening and gas meter installation to those residents whose contact information is not available on December 12, 2007.

In addition, a U.S. EPA's fact sheet will be mailed to all local residents 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 is meeting weekly on Monday's at 2:00 PM to inform and update all agencies involved.

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 commercial property on south of Schick Road has delayed investigation in this area.
- Obtaining access to private homes to install shallow soil gas probes and sub-slab ports has been problematic.
- Obtain clearance from Hanover Park Village Engineer to conduct CPT investigations and probe

installations of the right of way of Whitney Drive, Goddard and McCormick Lane.

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