United States Environmental Protection Agency
Region V
POLLUTION REPORT

Date: Tuesday, December 11, 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.:	2	**Site #:**	B5MH
Reporting Period:	December 6-9, 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.

Current Activities

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.

To date, BFI and STS have installed 13 shallow well gas probes near the existing gas probes 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). STS conducted a round of methane gas meters at the shallow probes on December 6th which detected 0.3% methane at CP5S. All other shallow gas probes listed above had zero methane gas detection (See Figure 2 and Table 2- Gas Probe Methane Readings). CP5S indicated levels of methane of 2.2% at 24 feet and 16.7% methane at 30 feet on December 3rd (See Figure 2).

STS also conducted methane gas monitoring of existing CP gas probes CP1, CP2, CP3, CP4, CP5 and CP12 on December 6th as well. CP1 and CP2 had methane gas detections at 80.4% and 79.8% respectively. All other existing gas probes detected zero methane gas readings (Figure 2).

On December 6th, STS mobilized a Cone Penetrometer (CPT) rig to complete the methane migration extent investigation and install approximately 28 well locations. Each well installed will be monitored for methane gas using a LandTech methane gas detector. WESTON START conducted oversight of eight CPT gas monitoring probes in Discovery Park (CP8, CP6, CP7, CP10, and CP13) and three in Hawk Hollow Forest Preserve (RW-8, RW-10, RW15 west of County Farm Road. Gas probe CP8 (in Discovery Park) detected 72.8% methane and RW-8 (Hawk Hollow) detected 32.6% methane (See Table- 3 Cone Penetrometer Gas Probe Installations). BFI and STS will continue CPT investigation with proposed gas probes along Whitney Drive, Goddard and McCormick Lane and Lawrence Avenue. In addition, STS may install a few additional gas probes to further delineate the potential westward gas

migration in the Hawk Hollow Forest Preserve. This investigation is expected to be completed in approximately two weeks depending on weather, utility clearance and access from the Village of Hanover Park.

The first round of analytical results from the temporary wells showed only some low level detections (low part per billion) of vinyl chloride in one temporary well CPT-2 which is 50 feet from some residences and screened at a 40 foot depth.

U.S. EPA along with STS and WESTON continue to screen residential homes for the potential presence of explosive gases on a voluntary basis (See Figure 1- Residential Screening Status). BFI retained the services of Reputation Partners public relations firm to schedule screenings and installation of explosive gas meters with local residents. As of December 8, 2007, 169 homes have been visited and 61 homeowners have allowed their homes to be screened, and 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 41 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.

Planned Removal Actions

On December 4, 2007, U.S. EPA entered into an Administrative Order of Consent (AOC) with BFI and the Forest District regarding this problem. The AOC requires BFI and the 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 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.

U.S. EPA's fact sheet will go out to the public on December 11th briefing residents on the home screening and meter installation. In addition, BFI public relations consultants Reputation Partners will also prepare a fact sheet to issue to those residents whose contact information is not available.

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.
BFI and STS will continue methane gas migration investigation using the CPT rig and conducting weekly methane gas monitoring of existing probes.
Install and sample shallow soil gas at designated 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

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