



FACT SHEET

Brookhaven Landfill, Town of Brookhaven, New York

NOVEMBER 2018

INTRODUCTION

The New York State Department of Environmental Conservation (DEC) is publishing a regular series of fact sheets to share information with the community regarding actions taken by DEC and the Town of Brookhaven (Town) to improve air quality in the areas surrounding the Brookhaven Landfill. This fact sheet will provide an update of the activities that have occurred since the release of the previous fact sheets which are available at <http://www.dec.ny.gov/public/111038.html>.

Facility Brief

The Town of Brookhaven Landfill (the landfill) is a DEC permitted facility located in the hamlet of Yaphank, Town of Brookhaven, Suffolk County. The landfill began operating in 1974 and initially accepted household waste, or municipal solid waste (MSW). This MSW was placed in cells (designated areas) 1-4. The disposal of MSW ceased in 1990 in compliance with the Long Island Landfill Law. Construction of cells 5 and 6 took place after 1990. Cell 5, which accepted construction and demolition (C&D) debris and ash from local resource recovery facilities, is currently being capped and prepared for closure. Cell 6, which lies adjacent to Woodside Ave between Station Road and Horseblock Road, is currently active and accepting C&D debris, ash, and other authorized material.

SUMMARY OF COMPLETED AND ONGOING ACTIVITIES

- Cover and closure activities are ongoing in a 31-acre portion of the landfill, which is expected to be completed by early November, 2018. Topsoil application and hydro-seeding will follow in spring of 2019.
- The Town finalized the dosing strength and frequency for the permanent hydrogen peroxide (H₂O₂) leachate treatment system with good results.

ODOR MANAGEMENT AND CORRECTIVE ACTION PLAN (CAP)

Based on the CAP, the Town will continue to focus on the main areas of concern to improve conditions around the landfill:

- Proceed with final capping and closure of the sections of landfill which are filled to capacity;
- Control sources of odor at the leachate collection system; and
- Upgrade the landfill gas collection and flare system.

The following is an update on completed activities and the status of the focus areas.

Operating Landfill and Inactive Area Closure/Capping

Summary of Landfill Capping completed to date

Cells	Cap Phase	Area (acres)	Status	Year Completed/ Projected Completion Year
1 - 4	Phases 1-5b	95.6	Completed	1996
5 - 6	Phases A-F	77.8	Completed	2002 – 2017
5 - 6	Phase G	30.8	Under construction	2018
6	Remaining area to be capped	77.8	Active/partly filled with final three phases yet to be constructed	Upon achieving final elevation

Summary of Landfill Capping during this reporting period

Phase G capping activities continue: the final grading of the landfill top and side slopes was completed during the 3rd Quarter. Placement of the sand gas venting layer followed. The geosynthetic landfill cover is currently being installed, overlain by a geo-composite drainage layer. Final cap components and sand layer above the cap will be completed by the end of 2018, with topsoil and hydro-seeding to be completed during the first two months of 2019. (Please refer to pictures, on page 4, of landfill closure activities related to placement of soil gas venting layer and geomembrane barrier layer, as seen from Woodside Ave.)

Leachate Collection System Improvement

The Town completed the upgrades identified and detailed in the CAP by replacing key equipment to improve operational reliability. The following is the list of activities completed during the fall of 2018:

Landfill Leachate Collection Lines

- Routine maintenance: All side riser chambers and wet wells have been cleaned in accordance to the maintenance schedule. Work completed include annual cleaning of landfill leachate collection side riser pipes in Cells 5 & 6, scheduled cleaning of the Cell 5 force mains.
- Capital improvements: Commenced replacement of side riser drainage pumps and recirculation as required. Overhaul and repair of the bypass has been completed.

Treatment of Landfill Leachate for Hydrogen Sulfide

Dvirka & Bartilucci Engineers & Architects (D&B), one of the Town's consultants, has completed the installment of the permanent hydrogen sulfide (H₂O₂) system and, after some initial trial runs, found the optimal dosage concentration and frequency of dosing into the leachate to reduce offsite odors. The offsite H₂S monitoring equipment installed by DEC has not picked up any significant odor impact during the last five months.

- Routine maintenance: The leachate pretreatment has used over 20,000 gallons of H₂O₂ during the trial runs, and the optimal dosing rate of 9.5-10 gallons per hour has been established.
- Capital improvement: A contract for the construction of a spill containment wall for the

permanent H₂O₂ tanks has been awarded, and work is expected to be complete by the end of 2018.

Landfill Gas Collection and Flaring

The Town hired SCS Engineers to continue the evaluation of the existing landfill gas collection and flare system. They have started to make operational changes to reduce odors from the existing gas collection network to minimize vacuum loss and blockage due to condensate formation. The following activities were completed during the fall of 2018:

- Routine maintenance: All wellheads, hoses, vacuum lines, flanges, and meter taps have been repaired or replaced according to best management practices.
- Capital improvement: A new well head design was completed, and well heads are being fabricated. This new design will promote better condensate drainage thereby allowing a less obstructed and steadier flow of landfill gas to the flare.

CONTINUOUS MONITORING OF OFFSITE H₂S BY DEC

DEC is in the second year of continuous H₂S monitoring program at two offsite locations to monitor and verify the effectiveness of the CAP implemented at the landfill. DEC installed two H₂S monitors on May 9, 2018. One monitor is located along East Woodside Avenue near the leachate tanks, and the other is located south of the landfill at the Frank P. Long Intermediate School (FPL). The equipment used is an Acrulog monitor which measures H₂S in the range of 0 to 2,000 parts per billion (ppb). The measurements are collected at ten-minute intervals. Because the instrument operates on a continuous basis, it is considered an effective screening tool for detecting H₂S odor episodes.

H₂S has been detected twice this year at the FPL monitor. Both ten-minute measurements occurred on August 16, and the results were 6 ppb and 8 ppb.

The monitors will be removed in November 2018 as the accuracy is affected by cold ambient temperatures.

FOR MORE INFORMATION

Please contact Aphrodite Montalvo, Public Participation Specialist

Phone: (631) 444-0249

Email: R1info@dec.ny.gov

TO REPORT AN ODOR COMPLAINT

DEC Odor Hotline: (631) 444-0380

Please leave your name, phone number, date of call, location and description of odor.

For more information from NYSDEC, visit our website:

dec.ny.gov

Phase G Capping and Closure Activities



Side Slopes – View after placement of sand gas venting layer over graded waste



Side Slopes – View after placement of geo-composite layer



Top Area – View after placement of geo-composite layer



Drilling in the landfill mass to install landfill gas extraction wells, a critical component of the landfill cap design I component of the landfill cap design