U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Bennett Landfill Fire - Removal Polrep

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: **POLREP #23**
Rain Delay
Bennett Landfill Fire
B44Y
Chester, SC
Latitude: 34.7874300 Longitude: -81.4502500

To:
From: Matthew Huyser, OSC
Date: 11/2/2015
Reporting Period: 10/24/2015 - 10/30/2015

1. Introduction

1.1 Background

Site Number:	B44Y	**Contract Number:**	EP-S4-07-02
D.O. Number:	0134	**Action Memo Date:**	4/30/2015
Response Authority:	CERCLA	**Response Type:**	Time-Critical
Response Lead:	EPA	**Incident Category:**	Removal Action
NPL Status:	Non NPL	**Operable Unit:**	
Mobilization Date:	5/26/2015	**Start Date:**	5/26/2015
Demob Date:		**Completion Date:**	
CERCLIS ID:	SCN000402727	**RCRIS ID:**	
ERNS No.:	1100014	**State Notification:**	11/2/2014
FPN#:		**Reimbursable Account #:**	

1.1.1 Incident Category
Time-critical removal action.

1.1.2 Site Description
The Bennett Landfill Fire Site is a former construction debris and nonhazardous industrial waste landfill (defined by state regulations as a Class II landfill) that was additionally permitted to accept certain types of asbestos waste.

The landfill ceased accepting waste in 2014. On November 2, 2014, the landfill was found to be on fire and was believed to have been extinguished by November 7th. Due to increasing smoke concentrations in January 2015, SCDHEC requested that the EPA conduct a Removal Site Evaluation (RSE). EPA signed an Action Memorandum on April 30, 2015 to conduct a Time-Critical Removal Evaluation and mobilized to the Site to begin removal activities on May 26.

Additional information for this section is available in POLREP #4 from 6/5/2015.

1.1.2.1 Location
The Site is located at 4399 Pinkney Road, Chester, Chester County, South Carolina. The geographic coordinates of the Site are 34.7874300 degrees north and 81.4502500 degrees west.

Additional information for this section is available in POLREP #4 from 6/5/2015.

1.1.2.2 Description of Threat
The fire at the Bennett Industrial Landfill is actively releasing chemical compounds into the air, including benzene and formaldehyde, which are measured near the fire at concentrations exceeding industrial RMLs for air and concentrations within the surrounding community that are greater than three times the residential RSL. Conditions at the Site, if not addressed, will continue to deteriorate over time and resulting in increasing quantities of exposed asbestos which are susceptible to transport by wind and other weather conditions to the nearby population.

Additional information for this section is available in POLREP #4 from 6/5/2015.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results
Additional information for this section is available in POLREP #4 from 6/5/2015.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Vegetative cover installation was completed around the banks of the detention pond by October 23. Repairs to rill erosion on the asbestos cell was completed by October 26. Several coir logs were installed on the south edge of the landfill face to impede water flow along the steepest slope.

Topsoil was installed at the top of the landfill near the edge of the bern at the top of the face; the topsoil covers an area of approximately 1/2-acre. It was seeded, fertilized, and covered with straw on October 26.

Installation of clay on the top of the landfill continued through October 26 leaving an area of approximately 1/4-acre prior to initiation of the rain delay. After work on October 31, the top of the landfill is nearly complete.

Rainfall beginning on the afternoon of October 26 an through October 27 delayed and ceased on-site work activities, which did not resume until October 30.

2.1.2 Response Actions to Date

- May 25-29: ERRS mobilization, site preparation (access roads, entrance**,** trailer, work zones)
- June 1-2: Grading and wetting burned area
- June 3: First record of no morning smoke observed
- June 3-5: Continue grading and wetting burned area. Moved cover soils from borrow area to burned area
- June 5-26: Continue grading and covering operations.
- June 16: Exhausted stockpile of cover soil at top center of Site
- June 26 Initial cover soil installation completed.
- June 29 Initial six inches of clay cap begun. Completed on July 3rd.
- July 2nd Three additional gas monitoring wells installed to monitor landfill carbon monoxide and temperatures near former burn area.
- July 13-17: Began removal of trees and topsoil from West Ridge Borrow Zone
- July 14: Exhausted Old Yard Stockpile at the south side of the Site
- July 14-17: Begin installation of second 6" clay layer on burn area
- July 20-22: Complete second 6" clay lift on burn area
- July 22: Conducted compaction testing by PSI Inc - 30 of 34 grids passed
- July 23: Begin installation of third clay layer on landfill face area
- July 28: Complete excavation of 3 vertical feet of sediment from detention pond
- July 29: Consultation with Clemson University Extension Office for Soil quality and vegetation
- July 27-31: Continue installation of third clay layer on landfilled face area reaching 90% completion
- Aug 6: Conducted round 2 of compaction testing, 27 of 28 grids passed.
- Aug 14: Completed fourth and final clay layer on the face area
- Aug 12: Begin removal of Knoll Borrow Zone
- Aug 12: Begin initial cover installation on Asbestos Cell
- Aug 17 Initial cover of Asbestos Cell completed
- Aug 29 Final cover of Asbestos Cell completed
- Aug 25 Begin installation of topsoil on former burn area
- Aug 29 Begin installation of vegetative cover on former burn area
- Aug 29 Complete stormwater protection measures on detention pond.
- Aug 31 Begin grading northeast debris cell
- Sep 17 Complete initial 12-inch soil layer on northeast debris cell
- Sep 18 Complete construction of dams above retention pond and in west stormwater channel
- Sep 25 Clay capping of North Debris Cell 50% complete
- Sep 28 Temporary demobilization due to weather and ground conditions
- Oct 07 ERRS contractors remobed after significant rain event and flooding in South Carolina
- Oct 17 60 percent of landfill face covered with topsoil, seeded and fertilized.
- Oct 19 Landfill face covered with topsoil
- Oct 22 Landfill face covered with seed, fertilizer, straw matting, and erosion control devices
- Oct 21 Berm at top of landfill face completed to redirect storm water from top

2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

Information for this section is available in POLREP #4 from 6/5/2015.

2.1.4 Progress Metrics

Waste Stream	***Medium***	***Quantity***	***Start Date***	***Treatment***	***Est. % Complete***
Burning Area	Debris	Approx 3.0 acres	6/1/2015	Cover	18" of cover soils completed on 6/26. Initial clay cap completed 7/3. Final clay cap completed 8/14. Topsoil completed 10/19. Erosion Control completed 10/22.
Asbestos Cell	Debris	Approx 19,500 CY	n/a	Regrade & Cover	Initial cover completed 8/17/15. Final clay cap completed 8/29/2015. Vegetation installed 9/23

2.2 Planning Section

2.2.1 Anticipated Activities

The first priority of the removal action has been to address the burning debris pile by installing a soil cover. Isolation of the burning material and reduction of oxygen supply will significantly reduce emissions from the smoldering fire. The second priority of the removal action has been to address the eroding asbestos disposal cell by re-grading and covering the area.

Air sampling and monitoring activities have been completed.

The disturbed areas of the Site will be secured with vegetation to provide a stable erosion-resistant surface. Total project time has been updated to approximately 5 months.

2.2.1.1 Planned Response Activities

- Isolation of burning material by removal and relocation of available fuel path and installation of earthen cover; ***(ONGOING)***
- Isolation of designated asbestos disposal cell through the installation of earthen cover; ***(COMPLETE)***
- Re-grading waste materials and native soils for purpose of cover installation; ***(COMPLETE)***
- Installation of temporary measures to prevent off-site migration of dust or contaminants as removal operations are conducted; and, ***(ONGOING)***
- Continue sampling and monitoring, as needed, for site safety purposes and to further delineate or identify contaminants. ***(COMPLETE)***

2.2.1.2 Next Steps

1. Complete initial and final clay cover on landfill top, then vegetate
2. Repair channel dams with riprap
3. Vegetate all remaining exposed areas
4. Water until vegetation established

2.3 Logistics Section

Any equipment or personnel will be demobilized when no longer needed.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

OSC Matthew Huyser
OSC Perry Gaughan

3. Participating Entities

SCDHEC continues to provide technical assistance and information regularly

South Carolina Forestry Commission has inspected the Site and confirmed that no unacceptable forest fire hazard is present.

Chester County EMA and Union County EMA will provide technical assistance and information, as needed

Clemson Chester County Extension Office will provide technical assistance for soil amendment and seeding needs regarding final cover and vegetation

4. Personnel On Site

EPA (1)
SCDHEC (varies)
County EMA (varies)
ERRS (11)
START (1)

5. Definition of Terms

µg/m3	Micrograms per cubic meter (= 0.001 mg/m3)
AEGL	Acute Exposure Guideline Levels
AQI	Air Quality Index
C	Celsius
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
Conc	Concentration
ConcHR	Hourly (HR) average value recorded by an EBAM instrument
ConcRT	Real time (RT) concentration recorded by an EBAM instrument based on a rolling four-minute average
DHEC	South Carolina Department of Health and Environmental Control
EMA	Emergency Management Agency

EPA	U.S. Environmental Protection Agency
ERRS	Emergency and Rapid Response Services
mg/kg	Milligram per kilogram (= 1 ppm)
mg/L	Milligram per liter
mg/m3	Milligram per cubic meter (= 1000 µg/m3)
NAAQS	National Ambient Air Quality Standard (primary and secondary NAAQS for PM2.5 24-hour average is 35 µg/m3)
NPL	National Priorities List
OAQPS	EPA Office of Air Quality Planning and Standards
OSC	On-Scene Coordinator
PM2.5	Airborne particulate matter with particle diameters below 2.5 microns
ppb	Part per billion (cannot be used to describe a mass per volume unit such as µg/m3)
ppm	Part per million (cannot be used to describe a mass per volume unit such as mg/m3)
RML	Removal Management Level
RSL	Regional Screening Level
SCDHEC	South Carolina Department of Health and Environmental Control
START	Superfund Technical Assessment and Response Team
TWA	Time-weighted average

5.1 Regional Screening Levels (RSL) and Removal Management Levels (RML)
Regional Screening Levels (RSL) are conservative risk-based screening values developed by the U.S. EPA to help identify contaminants of potential concern. Contaminants that exceeded a RSL in at least one sample are then screened against industrial air Removal Management Levels (RML) that were calculated for this evaluation. RMLs are risk-based screening values developed by the U.S. EPA to determine whether sample concentrations are sufficiently elevated that they may warrant a removal action. Exceedance of a RML by itself does not require a removal action, nor does it imply that adverse health effects will occur.

6. Additional sources of information

6.1 Internet location of additional information/report
Site updates will be provided to the "Bulletins" section of epaosc.org/bennettlandfill

Documents, reports, and videos for public release will be posted to the "Documents" section of epaosc.org/bennettlandfill

6.2 Reporting Schedule

New POLREPS will be issued weekly on Fridays for the duration of on-site activities.

Daily photos of site conditions and progress are being posted to the "Images" section of epaosc.org/bennettlandfill. These photos are collected from the same general locations each day.

7. Situational Reference Materials

No pertinent information to report at this time.