

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
11184 Bristol Air - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: POLREP #5
Additional Monitoring and Sampling
11184 Bristol Air

Bristol, VA
Latitude: 36.6029424 Longitude: -82.1539850

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Date: 12/17/2021

Reporting Period: October 9th through November 30th, 2021

1. Introduction

1.1 Background

Site Number:	B3AR	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	
Response Lead:	EPA	Incident Category:	Removal Assessment
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	6/7/2021	Start Date:	5/25/2021
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

This incident is a removal site evaluation at the location continued and numerous odor complaints are occurring. The complaints include a description of various chemical smells and related health effects.

1.1.2 Site Description

The Site currently includes a large geographic area at/near the Virginia and Tennessee border. Both Virginia and Tennessee have a City of Bristol which are immediately adjacent to each other across the border. Both cities are experiencing significant odor complaints from both residential, commercial, and government property owners.

1.1.2.1 Location

The Site is located in the Cities of Bristol, Virginia and Bristol, Tennessee

1.1.2.2 Description of Threat

The potential threats posed by this Site are currently unknown. Several compounds (odor causing compounds and volatile organic compounds) have been identified to be in the air at low levels during various periods of the day. Typically the levels have risen at night. Initial review of the monitoring data and sampling data does not show duration or concentrations that would trigger a removal action. Six weeks of monitoring and sampling have previously been completed during June and July of 2021.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

See previous POLREPs

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

See above and below.

2.1.2 Response Actions to Date

The OSC continues to coordinate and maintain communication with stakeholders that include, but are not limited to the following: Cities of Bristol Virginia and Tennessee, Virginia DEQ, Tennessee DEC, ATSDR, elected officials, consultants, and the public. Internally, the OSC has coordinated with various EPA programs that may be salient to the Site.

The OSC continued communications with a consultant for the City of Bristol, Tennessee regarding data collected during the events. The consultant plans on doing an independent evaluation (including sampling within the landfill proper) on risk.

Throughout the reporting period, EPA was copied on several letters penned by the local community leadership regarding the landfill. The letters were largely addressed to Virginia DEQ and numerous other stakeholders (Agencies and individuals) were copied. The community group has consistently provided the OSC a courtesy copy of the correspondence.

On October 12th, the community meeting mentioned in POLREP #4, took place. It focused on sharing the experiences of the community among the residents. The local community leaders provided the OSC with a recording of the meeting. A result of the meeting was the proposal (by the community group) to have "listening sessions" where local, state, and federal entities could hear from the public. ATSDR actively participated in two such sessions in November. EPA listened in, but did not present or speak.

The OSC maintained communication with the community and its leadership. During these communications, the residents have indicated that the odors have increased significantly both in frequency and intensity.

The community group has also been conducting air surveys. This included driving around and noting where odors were present. In addition, they purchased ambient air monitors. Two in particular have been in use for monitoring. The first is a Forensics Detector model FD-4A, basic 4 gas detector. The second is a Klein Tools Combustible Gas Leak Detector, model ET120.

Based on these reports, coupled with the cooler temperatures which can increase the air inversion factor, the OSC decided to collect additional monitoring data. VADEQ has agreed to continued air sampling using the same strategy as previously developed. The basic strategy is to monitor the realtime results of the monitors and look for trends. When a trend is observed (e.g.; the concentration(s) of a chemical rise at the same time of day) VADEQ will deploy a sampling device/canister to collect an air sample for laboratory analysis. The sample collection period will be at least 8 or 24 hrs depending on which equipment is available at the time of collection.

The OSC requested the community identify areas of interest, specifically where they feel the odors are most intense and frequent. On October 16th, the community members provided 5 locations of priority (via emailed maps). Each area was highlighted by a circle that encompassed a group of homes (typically 1-4 "city blocks" in size. NOTE: city block is a generic term and several of the areas are rural and don't have a typical "block"). At the OSC's request, each of these areas was rated in order of priority, 1 through 5. The OSC reviewed the areas and provided them to VADEQ for on the ground research. It is important to identify specific properties within the areas that would meet the requirements for monitoring, including things like: site security to minimize the opportunity for theft or tampering and a power source. Shelter isn't as important as the daytime temperatures are cooler and equipment is less likely to overheat. VADEQ successfully identified several suitable addresses within priority areas.

On Monday, October 18th, EPA provided a briefing to Congresswoman Harshbarger's office regarding the current removal site evaluation efforts. In addition to the OSCs efforts to evaluate the odors in the community, brief explanations of other programmatic and agency roles were discussed at a high level. The explanations included efforts specifically related to landfill operation and regulatory compliance authorities.

On Monday, October 18th, EPA mobilized to site to begin a second round of air monitoring and sampling. Verbal access was secured from 3 individual property owners in or around the top three priority areas. General descriptions of the areas/locations are as follows:

- Priority #1. This is an area northwest of First Presbyterian Church in Bristol, Tennessee. The specific property also falls within priority area #5. This is identified as EPA location #8
- Priority #2. This is a property in the Forest Hills area of Bristol, Tennessee. This is identified as EPA location #7.
- Priority #3. This specific location is just north of the priority #3 area. EPA moved this location north for two reasons. First, an original EPA monitoring locations (Location #2) was on the southern side of this area and it would be duplicative. Second, there was a low lying area located just north that is in Bristol, Virginia along the Booher Rd that was extremely suitable for monitoring. This location is in Virginia and would allow at least one of the locations this round to be in Virginia.

Upon arrival on Tuesday, October 19th, EPA secured written access to do the monitoring. EPA, EPA ERT, START, and VADEQ were all onsite and began setting up the monitors at each location.

EPA and START returned to the Site on the morning of October 20th to inspect the stations. Location #8 had continued elevated VOC readings. Upon arriving at the location, the pelican case was opened and the readings immediately dropped. The case was subsequently opened and closed several times and each cycle showed the VOCs rise and fall with the closing and opening. Further inspection revealed a slightly loose connection with the hose that ran from inside the box to the outside ambient air. This loose connection allowed for fugitive VOCs (from off-gassing of plastics and/or foam inside the case) from within the pelican case to be detected with the monitor. The connection was tightened and the VOCs returned to the expected low levels. All other monitors had sufficiently tight connections to ensure only ambient outdoor air was being monitored.

All parties demobilized from Site and continued 24/7 remote monitoring of the stations. VADEQ prepared to collect air samples during the period as realtime data dictated.

During the October monitoring and sampling period, mobile air monitoring was also conducted. This mobile monitoring was conducted at the stationary locations but primarily at other locations around the neighborhoods and in areas of high complaints. The monitoring (with instruments) was conducted at various times of the day (as late as midnight and early as 5 am). The OSC traveled the areas (without instruments) searching for odors as late as 12:30 am and as early as 04:30 am.

Portable, hand-held air monitoring equipment was used to conduct mobile air monitoring. Hand-held monitoring equipment included: a MultiRAE Pro with a photoionization detector (PID) for VOC, methyl mercaptan, carbon monoxide, hydrogen sulfide, and oxygen sensors; an UltraRAE 3000 PID with a benzene tube; and TVA 2020 with a flame ionization detector (FID) for VOC. The TVA 2020 with an FID sensor cannot detect VOC at the low levels that a MultiRAE Pro can achieve, but it has the ability to detect methane, which cannot be detected using a PID sensor.

The general areas where mobile monitoring occurred are described below:

Bristol, Virginia: Intersection of Whitten Way/Kings Mill Pike; Woodland Circle; near intersection of Kings Mill Pike/Valley Drive; near intersection of Harlow Street/New Hampshire Avenue; Booher Lane; Kings Mill Pike near Northstar Baptist Church; multiple locations along Shakesville Road north of intersection with Kings Mill Pike (including monitoring at storm drain inlets); and multiple locations along Booher Road/Booher Springs Road.

Bristol, Tennessee: Florida Avenue between the intersections with Pine Street and Spruce Street (including at storm water inlets and sewer manhole cover at intersection of Florida Avenue/Spruce Street); Sparkling Brook Drive/Spanish Oak Drive; Fire Station #2 on Kings Mill Pike; intersection of Taylor Street/Georgia Avenue (including storm water inlet); and multiple locations along Booher Road/Booher Springs Road.

Mobile air monitoring was conducted at one or more of the above locations on the following dates in October 2021: 20, 24, 25, 27, and 28.

The following is a summary of air monitoring results. All meters were calibrated as appropriate. Additional details will be provided in the data summary report that is expected to be finalized later in 2021.

- Oxygen: 20.9%
- Hydrogen Sulfide: 0.0 ppm (Note: multiRAE sensors read down to ppm levels. The Honeywell SPMs read to ppb levels)
- Carbon Monoxide: 0.0 ppm
- Benzene: 0.0 ppm
- Volatile Organic Compounds via Photo Ionization Detector (PID): 10-30 ppb maximum.
- Volatile Organic Compounds via Flame Ionization Detector (FID): These readings varied by location. The highest ambient air concentration was 20 ppm on Shakesville Rd. Typical ambient air concentrations ranged from 3 to 6.5 ppm. The highest concentration was observed at a storm inlet near the public works facility. This reading was 800 ppm and represented "headspace". EPA surveyed inlets downstream and the concentrations significantly dropped the farther downstream we went.

The following air samples were collected by VADEQ during the October monitoring period:

Location 7 (community priority #2 area):

- None. There were no trends observed in the real time monitoring at this location that triggered air sampling.

Location 8 (community priority #1 area):

- 10/20/21, 8 hour sampler (Canister #332, K-2 passive sampler) – Sample start time 2302 hours on 10/20/21. Sample stop time 0810 hours on 10/21/21. Total run time 9 hours 8 minutes.
- 10/27/21, 8 hours sampler (Canister #542, K-4 sampler) – Sample start time 2236 hours on 10/27/21. Sample stop time 0653 hours on 10/28/21. Total run time 8 hours 17 minutes.
- 10/27/21, 8 hours sampler (Canister #S-186, K-1 sampler) – Sample start time 2256 hours on 10/27/21. Sample stop time 0803 hours on 10/28/21. Total run time 9 hours 7 minutes.

Location 9 (slightly north of community priority #3 area):

- 10/23/21, 24 hour sampler (Canister #346, K-8 passive sampler) – Sample start time 2300 hours on 10/23/2021. Sample stop time 0242 hours on 10/25/21. Total run time 27 hours 42 minutes.
- 10/27/2021, 24 hours sampler (Canister #523, K-7 Passive Sampler) – Sample start time 0920 hours on 10/27/21. Sample stop time 1235 hours on 10/28/21. Total run time 27 hours 15 minutes.

Additionally, VADEQ collected two air samples outside of the October monitoring period. These samples will still be used as part of EPA's overall evaluation of Site conditions.

Location 6 (previous monitoring location):

- 09/30/2021, 24 hour sampler (Canister #543, K-7 passive sampler) – Sample start time 2005 hours. Sample stop time 0145 hours on 10/02/2021. Total run time 29 hours 40 minutes. NOTE: This sample was not taken in conjunction with EPA.

Location 7 (previous monitoring location):

- 10/01/2021, 24 hour sampler (Canister #522, K-8 passive sampler) – Sample start time 2008 hours. Sample stop time 0152 hours on 10/02/2021. Total run time 29 hours 44 minutes. NOTE: This sample was not taken in conjunction with EPA.

This effort continues to be part of a removal site evaluation (RSE) as described in 40 CFR 300.410. The RSE included a preliminary removal assessment which is primarily administrative in nature. The OSC reviewed documented complaints of odors and physical affects the community was reporting. Additionally, historical sampling data supplied by the VADEQ was reviewed and evaluated. This was followed by a site inspection with onsite presence throughout the communities of both Bristol, Virginia and Bristol, Tennessee. The "Site", defined as the communities in both Bristol, Virginia and Bristol, Tennessee who have reported significant odors, is where the removal site inspection occurred. A previous 6 week monitoring period occurred in June and July of 2021.

On November 16th, EPA provided an additional briefing on the status of the evaluation to Congresswoman Harshbarger's office.

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

None identified.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

EPA will continue coordination with the community.

The EPA will continue to engage the various agencies and programs that are salient to the site. Specifically, EPA OSC will continue to coordinate with the EPA Enforcement and Compliance Assurance Division (ECAD) and VADEQ.

EPA will evaluate laboratory data received from VADEQ and provide all data to ATSDR for further evaluation.

2.2.1.1 Planned Response Activities

2.2.1.2 Next Steps

Evaluation data and determine

2.2.2 Issues

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

United States Environmental Protection Agency (EPA)
 Agency for Toxic Substance and Disease Registry (ATSDR)
 Virginia Department of Environmental Quality (VADEQ)

3.2 Cooperating Agencies

City of Bristol Virginia
 City of Bristol Tennessee
 Tennessee Department of Environment and Conservation (TDEC)

4. Personnel On Site

EPA
 Virginia Department of Environmental Quality
 Tetra Tech (EPA contractor)

5. Definition of Terms

VOC: Volatile Organic Compound
 PID: Photo Ionization Detector
 FID: Flame Ionization Detector
 SPM: Single Point Monitor.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

<https://www.forensicsdetectors.com/products/basic-multigas-detector>