

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
North Bridge Street Benzene - Removal Polrep
Final Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: POLREP #2
Final
North Bridge Street Benzene
C53F
Linden, MI
Latitude: 42.8150430 Longitude: -83.7826410

To:
From: Elizabeth Nightingale, OSC
Date: 9/2/2014
Reporting Period: 7/10/14-9/2/14

1. Introduction

1.1 Background

Site Number:	C53F	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	CERCLA	Response Type:	Emergency
Response Lead:	EPA	Incident Category:	Removal Assessment
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	7/8/2014	Start Date:	7/8/2014
Demob Date:	7/16/2014	Completion Date:	9/2/2014
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

Emergency Response

1.1.2 Site Description

The site encompasses several blocks of downtown Linden, and includes residential and commercial buildings, including a nursing care facility.

1.1.2.1 Location

Vicinity of Bridge Street and Broad Street Intersection, Linden, MI

1.1.2.2 Description of Threat

Please see initial POLREP.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Please see initial POLREP.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Please see the initial POLREP for a description of initial response actions conducted on July 8 and 9. On July 10, EPA conducted additional outdoor air monitoring. On July 10, July 15 and July 16 EPA also collected additional indoor and outdoor air samples.

Property Owner/Occupant Contacts

EPA attempted to reach all property occupants within 1 block in each direction of the area where odors have been reported. EPA gathered information on whether the property has a basement, whether it has a sump pump, whether the occupants have experienced odors in the past, and whether they would like us to conduct air monitoring inside their home/business.

Air Monitoring

Air monitoring was conducted with a MultiRAE - with the goal of measuring ambient volatile organic compounds (VOCs). If VOC levels exceeded 1 part per million (ppm), an UltraRAE was used to measure ambient benzene. Benzene was also measured if there was any other reason to measure it such as upon request, or in investigation of a suspected source area, etc. Storm and sanitary system monitoring as

conducted by with 2 foot long tubes attached to the MultiRAE and UltraRAE. The tubes were inserted into the inlet or catch basin or access area and all readings were taken at a similar depth.

An excel table that includes all collected monitoring data is included in the documents section of the epaossc.net website for this action.

Indoor Air Monitoring

During July 8-10, EPA conducted air monitoring at 13 properties and collected a total of 59 air monitoring readings at various locations within those properties. In the breathing zone (bz), measured VOCs ranged from 0-3.73 ppm. Measured benzene ranged up to 0.05 ppm.

Levels of VOCs and benzene were higher in a few non breathing zone areas indoors within a few properties - levels were highest in the sump pump pits where MDEQ had recently detected high levels of benzene in the water. VOCs in non-breathing zone areas ranged from 0 to 13.02 ppm. Benzene in non-breathing zone areas ranged from 0 to 4.85 ppm.

Outdoor Air Monitoring

During July 8-9, a total of 50 points along the storm and sanitary sewer system within a similar area were monitored within approximately 1 block in each direction of the area where odors have been reported.

Within the storm sewer system, lower explosive limit (LEL) was zero at all points. VOCs ranged between zero and 5.87 ppm. Benzene ranged between zero and 6.15 ppm.

Within the sanitary sewer system, LEL was zero at all points, VOCs ranged between zero and 2.5 ppm and benzene was zero at all points where it was tested.

Indoor Air Sampling

A total of 9 confirmatory 24 hour air samples were collected. Two of the 9 were collected outdoors to serve as an outdoor comparison. These samples were submitted to the laboratory and analyzed for VOCs.

The Agency for Toxic Substances and Disease Registry (ATSDR) Minimal Risk Level (MRL) for benzene is 6 ppbv (which is equivalent 20 microgram per cubic meter (ug/m3)) for up to a year of exposure. The ATSDR benzene MRL of 6 ppbv is protective against non-cancer health effects (reduced lymphocytes [white blood cells]).

Indoor air sampling results were below the MRL for all samples collected in the breathing zones of occupied sections of buildings. Samples from the floor areas near two sump pump crocks in the basement of one commercial building exceeded the MRL (results were 56 and 16 ppbv respectively).

2.1.2 Response Actions to Date

Based on analysis of the data collected during this response as described above, EPA, MDEQ and the Michigan Department of Community Health (MDCH) determined that a Vapor Mitigation System should be installed within the commercial building with the MRL exceedances. MDEQ funded design and installation of this system. Data collected to date indicate that the system is effectively reducing indoor benzene levels.

Additionally, the agencies determined that follow up investigation to identify the source was necessary. MDEQ took the lead in this investigation, and developed a plan to conduct additional air monitoring, air sampling and subsurface source investigation. The source investigation is currently underway. MDEQ has not needed Federal assistance with the follow up investigation.

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

MDEQ is leading the source investigation and will follow up with PRPs that are identified.

2.1.4 Progress Metrics

Regional Metrics		
This is an Integrated River Assessment. The numbers should overlap.	Miles of river systems cleaned and/or restored	0
	Cubic yards of contaminated sediments removed and/or capped	0
	Gallons of oil/water recovered	0
	Acres of soil/sediment cleaned up in floodplains and riverbanks	0
Stand Alone Assessment	Number of contaminated residential yards cleaned up	N/A
	Number of workers on site	N/A

Contaminant(s) of Concern	Benzene	
Oil response Tracking		
Estimated volume	Initial amount released	N/A
	Final amount collected	N/A
CANAPS Info	FPN Ceiling Amount	N/A
	FPN Number	N/A
	Body of Water affected	N/A
Administrative and Logistical Factors (Check X where applicable)		
Precedent-Setting HQ Consultations (e.g., fracking, asbestos)	Community challenges or high involvement	Radiological
More than one PRP	Endangered Species Act / Essential Fish Habitat issues	Explosives
AOC	Historic preservation issues	x Residential impacts
UAO	NPL site	Relocation
DOJ involved	Remote location	Drinking water impacted
Criminal Investigation Division involved	Extreme weather or abnormal field season	Environmental justice
Tribal consultation or coordination or other issues	Congressional involvement	High media interest
Statutory Exemption for \$2 Million	Statutory Exemption for 1 Year	Active fire present
Hazmat Entry Conducted – Level A, B or C	Incident or Unified Command established	Actual air release (not threatened)

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal
n/a					

2.2 Planning Section

2.2.1 Anticipated Activities

MDEQ is continuing to oversee an investigation into potential sources, and is conducting air monitoring and air sampling in the affected area. Upon completion of the investigation to determine the source (s) of the contamination, MDEQ plans to seek implementation of corrective action. State and local agencies will contact EPA if Federal assistance with further clean up is needed.

2.2.1.1 Planned Response Activities

No further Federal action is currently planned.

2.2.1.2 Next Steps

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

3.2 Cooperating Agencies

MDEQ
City of Linden
MDCH
ATSDR

4. Personnel On Site

7/10/14
START - 1

7/15/14
START- 1

7/16/14
START -1

5. Definition of Terms

ATSDR Agency for Toxic Substances and Disease Registry
BZ Breathing Zone
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
CERCLIS Comprehensive Environmental Response, Compensation, and Liability Information System
DNR Department of Natural Resources
EPA Environmental Protection Agency
ERNS Emergency Response Notification System
ERRS Emergency and Rapid Response Service
MDEQ Michigan Department of Environmental Quality
PPM parts per million
NCP National Oil and Hazardous Substance Pollution Contingency Plan
NOAA National Oceanic and Atmospheric Administration
NPL National Priorities List
NRC National Response Center
OSC On Scene Coordinator
PPE Personal Protective Equipment
PPM Parts per million
RCRIS Resource Conservation and Recovery Act Information System
RP Responsible Party
RRT Regional Response Team
START Superfund Technical Assessment and Response Team
US FWS United States Fish and Wildlife Service
USCG United States Coast Guard

6. Additional sources of information

6.1 Internet location of additional information/report

www.epaosc.net/northbridge

6.2 Reporting Schedule

No further EPA reporting is anticipated.

7. Situational Reference Materials

No information available at this time.

