

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Stackyard Hollow - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: POLREP #11
Progress and Continuing Assessment
Stackyard Hollow
Z3MD
Wheeling, WV
Latitude: 40.0772533 Longitude: -80.7054597

To:

From: Michael Towle/Debbie Lindsey, On-Scene Coordinators

Date: 12/1/2015

Reporting Period: 9/11/2015 through 12/1/2015

1. Introduction

1.1 Background

Site Number:	Z3MD	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	OPA	Response Type:	Time-Critical
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:		Operable Unit:	
Mobilization Date:	7/13/2015	Start Date:	1/14/2014
Demob Date:	7/16/2015	Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	WVDEP
FPN#:	E14302	Reimbursable Account #:	

1.1.1 Incident Category

Oil discharge into navigable waters of the United States from an abandoned oil production facility consisting of at least one well.

1.1.2 Site Description

The subject Site consists of a discharge of oil into a flowing perennial tributary of Wheeling Creek located in Ohio County, West Virginia. The tributary is mapped in Stackyard Hollow (noted as Stackyard Run in property deeds) and exists (at the location of the discharge) within a box culvert constructed over the flowing water. Stackyard Run discharges to Wheeling Creek which is a tributary of the Ohio River in Wheeling, WV. The oil discharges through a pipe, from around this pipe, and directly through the stone wall of the box culvert into Stackyard Run. The source of the oil has been determined to be at least one abandoned and leaking oil well found underneath a nearby residential dwelling. The well is less than about 25 feet from the flowing water of Stackyard Run and at the end of the above-mentioned pipe. The well is a component of an on-shore production facility that may contain 5 wells and relating equipment according to documents (deeds and leases) reviewed by the OSC.

1.1.2.1 Location

The discharge point for the oil onto the flowing waters of Stackyard Run is located in a box culvert beneath a residential structure located along Joan Street, Wheeling, Ohio County, WV 26003.

1.1.2.2 Description of Threat

See prior POLREPs.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

See prior POLREPs.

The OSC continues to conduct Assessment activities at this Site. Levels of oil and volatile organic compounds have been routinely monitored in the building and/or Stackyard Run every few days or so. These frequency of this activity was curtailed after placement of cement in the wellbore and installation of a system to direct gas emissions outside proved somewhat successful by early September 2015. Absorbent materials have been placed in Stackyard Run and changed when needed.

All actions continue to consider the safety of responders, safety of residents, effectiveness of operations, probability of success, and cost (considering the magnitude of the threat). The OSC provided NPFC with an evaluation of the options and an Oil Removal Project Plan.

The owner of the building continues to assist EPA and WVDEP through maintenance of building ventilation and direct ventilation of the well to the outside. This activity continues to contribute to the present level of safety in the building.

The OSC continues to define a substantial threat to the navigable waters. In addition, the Agency for Toxic Substances and Disease Registry (ATSDR) evaluated the situation and finds the incident to pose a public health hazard requiring continuing monitoring and relocation of the occupants of the structure. The City of Wheeling Health Department has also made similar recommendations. The residents have since been relocated by the owner of the property.

The OSC continues to assess the situation and conduct actions to help mitigate the situation. At the conclusion of removal actions on August 28, 2015 (during which the well bore was cleaned to about 70 feet and then cement was placed within the wellbore), gas was continuing to surface through the wellbore. Additionally, it now appears that the amount of oil entering Stackyard Run may have increased. The OSC is evaluating the effectiveness of the removal activity and believes that an ineffective cement job may have resulted in a condition in which gas will continue to surface to the top of the well bore through the cement and the flow of oil towards and into Stackyard Run may have been increased.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

At this time, an abandoned oil/gas well has been identified under the structure, the pipe from the culvert has been determined to originate from the area of the subject well. Oil has been found migrating within and alongside the pipe between the well and the culvert. EPA initiated actions intending to reduce the ability for oil to migrate to the water. EPA directed its contractor to remove oil and debris from the well (using hand methods) to an attainable depth and to place cement into the well. However, it appears that the attempt may not have been successful and may have increased the migration of oil into Stackyard Run without stopping the flow of gas to the surface of the well.

2.1.2 Response Actions to Date

See Prior POLREPs for activities through September 10, 2015.

In July 2015, EPA and its contractors attempted to remove oil and debris from the well using hand drilling methods and a high power vacuum truck in hopes of finding a shallow blockage. Concrete and brick debris along with rock were removed from the well. Operations could not initially advance past approximately 50 feet due to caving sidewalls.

In August 2015, EPA and its contractors attempted to clean the well to a deeper level by installing temporary PVC casing and using a water drill in addition to raising and lowering a bit by hand. These methods, along with a vacuum truck, resulted in removal of additional oil and debris to deepen the well to about 70 feet. Afterwards, the EPA contractor mixed sand and cement and poured the mixture into the wellbore using 5 gallon buckets while pulling the temporary casing. At the conclusion of this process, gas was observed bubbling to the surface through the just-placed column of the cement/sand mixture.

In September 2015, EPA and its contractors attempted to remove some of the cement from the wellbore and effect a tighter seal at the surface of the wellbore and minimize the migration of gas. A steel cap was welded in the wellbore with a nipple to allow the gas to be directed into a pipe and outside the structure. During this activity, the cement was found to not have hardened.

The OSC conducted monitoring of the well and inside the unit for LEL and VOCs utilizing a five gas Multi Rae meter. Monitoring was conducted 1 to 2 times a week through the beginning of October. Readings measured 0% LEL and VOCs ranged from 0 to 2.5 ppm within the unit. There were no LEL or VOC readings detected outside the unit. Weekly air monitoring was suspended after the results showed that the migration of gas is being contained by the welded cap and passive venting system to the outside. The OSC would conduct periodic air monitoring if deemed necessary. The OSC conducted monitoring the week of November 23, 2015 and confirmed that levels remain at 0% LEL and VOCs at 1.4 ppm.

The OSC and Property owner discussed the possible need for a vapor mitigation system should the removal activity result in a reduction of oil discharging to Stackyard Run. The OSC requested the owner not move forward with such construction pending observations and monitoring.

Beginning in September 2015, the OSC began periodic observations of the amount of oil on Stackyard Run to determine if the efforts of the removal action have resulted in a reduction of the amount of oil discharging into the flowing waters of Stackyard Run.

Observations in September showed a heavy silver and rainbow sheen coming out of the culvert during every monitoring event. A large amount of brown mousse-like oil was collected by the boom and subsequently removed by absorbent pads when possible. Overall observations for September showed an increase in oil on Stackyard Run after the completion of the removal activities completed in August. Monitoring of Stackyard Run during October continued to show a silver and rainbow sheen but not on a continual basis. Brown oil continued to collect at the boom area. The amount of oil had decreased since the monitoring in September

but overall there appears to be more oil than before the capping activities.

EPA continues to await for information relating to the disposal of oil and oil-contaminated debris resulting from the removal activities in August.

On November 3, 2015, the OSC evaluated the area of oil discharge in the culvert adjacent to the well. Oil was still observed seeping through the wall, although such seepage seemed to have slowed. However, oil droplets and blobs were observed coming up through cracks in the floor of the culvert directly into the waters of Stackyard Run. The discharge of oil appears to have increased from periods prior to removal activities intended to reduce the discharge. The OSC will continue to assess this situation.

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

See Prior POLREPs.

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>
oil	solids	4 - 55-gallon drums			X
oil	oily liquids	3100 gallons			X
oil	oil solids	2 tons			X

2.2 Planning Section

2.2.1 Anticipated Activities

Continue to contain oil and maintain absorbent materials on Stackyard Run while assessing the effectiveness of the removal action.

2.2.1.1 Planned Response Activities

2.2.1.2 Next Steps

Evaluate the effectiveness of the removal action and determine if additional actions are necessary for the mitigation of the threat of oil release from the well.

2.2.2 Issues

The removal actions have not reduced the flow of gas to the surface and a pipe system is necessary to direct this gas outside of the structure.

There is a potential that the removal action has resulted in no change or an increase in the amount of oil which can discharge to Stackyard Run.

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

2.5.1 Safety Officer

EPA served as the Site Health and Safety Officer during all activities.

2.5.2 Liaison Officer

EPA coordinated with various entities associated with the City of Wheeling and the owner of the property.

2.5.3 Information Officer

EPA coordinated with the property owner to address concerns from the neighboring residents.

3. Participating Entities

3.1 Unified Command

3.2 Cooperating Agencies

EPA
WVDEP
Ohio County Emergency Management Agency
City of Wheeling Fire Department
City of Wheeling Health Department
ATSDR

4. Personnel On Site

No information available at this time.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

6.1 Internet location of additional information/report

www.epaosc.org/stackyardhollow

7. Situational Reference Materials

No information available at this time.