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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: **POLREP #17**
Progress
Stackyard Hollow
Z3MD
Wheeling, WV
Latitude: 40.0772533 Longitude: -80.7054597

To:
From: Michael Towle/Debbie Lindsey, On-Scene Coordinators
Date: 5/12/2016
Reporting Period: 4/30/2016 through 5/12/2016

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

This incident is an 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 and known as Stackyard Run 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. A pipe was found running between the location of the well and Stackyard Run. Oil discharges from this 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 oil 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.

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 been relocated by the owner of the property.

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 and surrounding community.

The drilling activities in the well have advanced to a depth of 1092 feet which is determined to be the depth of the well. At this time, a bottom hole plug has been installed and it appears that the well is no longer generating oil and gas to the surface. Residual oil in the soils around the well still generate small amounts of oil into Stackyard Run.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Actions to remove debris and oil from the well and then to properly plug the well are underway. See prior POLREPs.

2.1.2 Response Actions to Date

See Prior POLREPs for activities through April 30, 2016. Removal of oil and debris from the well continues. During this period and on May 2, 2016 the bottom of the well was reached and a bottom hole plug of cement was installed. The well does not appear to be generating oil and gas to the surface.

The owner of the building continues to assist EPA.

On May 2, 2016, the Site team determined that the bottom of the well was reached. Wood and paraffin material being removed late last week was removed and only rock was being removed. The Site team believes that the last bit of a wooden plug was driven to the bottom of the well and then milled and removed. The bottom of the well was determined to be 1092 feet from the top of the casing. This depth correlates with available information to oil formation when comparing to other nearby wells and the likely bottom of the subject well. The well was circulated to remove remaining oil and debris in advance of setting cement plugs.

On May 3, the process of removing the milling bit was started. Each approximate 5-foot piece of the drilling stem was backed out of the hole and removed.

On May 4 the well was logged to assist in the plugging process. The Site team believed that it would be necessary to perforate the casing in order to get cement behind. Instead the logging showed that there was no casing pipe in the hole from the bottom of the surface casing to a depth of 240 feet. This indicates that the 1949 plugging record for the well was indeed somewhat accurate. Casing pipe was present between 240 feet and 880 feet and then open hole again to the bottom of the well. In addition, the casing appeared to be rotted in several locations. As such, the Site team decided there was no need to perforate the casing and the plugging process was begun. The drill stem was reconstructed in the well on May 5th.

On May 9, the first cement plug was set. The well was plugged from 1092 to 980 feet. On May 10th, it was found that this plug retreated 15 feet down the well. A second batch of cement was added. Although 18 sacks of cement were added, it was found on May 11th that only 5 feet was gained indicating that the cement was filling a shot hole. On May 11th, a 3rd batch of cement was added to the well to hopefully bring the cement plug up into the casing pipe.

On May 12th, the cement plug was verified to be present at a depth of 830 feet. This indicates that cement exists from the bottom of the hole at 1092 to a depth of 830 which is 50 feet into the casing that had remained in the well during its plugging in 1949. Plugging operations will continue this day.

The well does not appear to be producing oil and gas to the surface at this time.

The AreaRAE system continues to identify detections of VOCs above the alarm level. Most of these detections continue to relate to instances during which the equipment was being fueled or when the engines were started or adjusted. No detections were attributed to oil and gas from the well. One of the AreaRAEs malfunctioned this period providing high readings of VOCs. However, these readings were neither noticeable or detectable using available handheld equipment. The Site team believes that during the operations, no elevated benzene levels migrated beyond the working perimeter of the Site.

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

See Prior POLREPs.

WVDEP located records for the well (and 2 other nearby wells). The records indicated the well owner to be C.G. Broaddus and that the well was plugged. The plugging affidavit indicated that 249 feet of casing pipes were pulled from the well and the well was plugged in a manner prescribed by the State in 1949. The OSC originally believed that plugging did not occur due to the discovery of the 2 inch tubing and sucker rods in the well at about 35 feet. However, it has subsequently been determined that the well had indeed been plugged, but in a manner not completely documented on the plugging affidavit.

The OSC examined court records and consulted a civil investigator. There is no record of the whereabouts of C.G. Broaddus. Persons of that surname and initial do not fit the age range of Broaddus in 1949.

2.1.4 Progress Metrics

The table below reflects disposal from the Site through April 21, 2016

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
oil	solids	4 - 55-gallon drums			X
oil	oily liquids	4364 gallons			X
oil	oil solids	2 tons			X

2.2 Planning Section

2.2.1 Anticipated Activities

Continue and complete plugging activity and demobilize the site. Air monitoring will be discontinued.

2.2.1.1 Planned Response Activities

Continue and complete plugging and demobilization.

2.2.1.2 Next Steps

Complete plug and demobilize air monitoring equipment.

2.2.2 Issues

The EPA activities of 2015 did not enter the actual well. Instead, the drillers advanced alongside the outside of the actual well and installed cement initially into this new hole. Some cement however entered the actual well and had to be drilled out to allow for removal operations.

Drilling activities inside the building with the available rig are somewhat limiting; the length of the individual drill rods (about 5 feet) cause for a labor intensive operation.

The difficulty in drilling through the cement placed by EPA in 2015, the failed plug and obstruction (believed to be a tool used to set the top plug), and the type of plug used by the well owner (brush plug such as the tip of a pine tree) have caused unexpected delays.

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

The WVDEP will serve as the Site Health and Safety Officer during all activities. The EPA OSC will assist.

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 and WVDEP will continue to coordinate with the property owner to address concerns from the neighboring residents. The OSC conducted a news interview on March 23rd, 2016. The OSC has addressed questions from the press and community.

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.