

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: POLREP #5
Progress and Summary
Stackyard Hollow
Z3MD
Wheeling, WV
Latitude: 40.0772533 Longitude: -80.7054597

To:
From: Michael Towle, On-Scene Coordinator
Date: 10/20/2014
Reporting Period: 9/25/14 thru 10/20/14

1. Introduction

1.1 Background

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|----------------------------|--------|--------------------------------|--------------------|
| Site Number: | Z3MD | Contract Number: | |
| D.O. Number: | | Action Memo Date: | |
| Response Authority: | OPA | Response Type: | Time-Critical |
| Response Lead: | EPA | Incident Category: | Removal Assessment |
| NPL Status: | | Operable Unit: | |
| Mobilization Date: | | Start Date: | 1/14/2014 |
| Demob Date: | | 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 about 25 feet from the flowing water of Stackyard Run and at the end of the above-mentioned pipe.

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

A discharge of oil from an abandoned oil production facility continues to enter the waters of Stackyard Hollow. A nearby abandoned and leaking oil/gas well was known to have discharged about 1 to 2 gallons per day before it was properly plugged. The subject well, which exists under the residential structure, includes, minimally, a 10+ inch outer casing found to be full of volatile oily liquids. Abandoned oil wells in the area have discharged or intermittently unloaded their contents. The subject well is producing enough gas to imply that the oil-bearing formation(s) are active enough to enable the subject well to unload its contents. There is no suitable containment on the subject well and such can not likely be constructed within the structure. The facility poses a substantial threat of immediate discharge to the navigable waters of a minor discharge (est 1 to 5 BBLs) of oil and a continuing threat to discharge a gallon or more of oil per day. Of more immediate concern and threat to people is the discharge of gas and oil into the currently occupied residential structure - the well is under the building and is being vented up through the building.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

The OSC and WVDEP continue to conduct Assessment of the incident. The OSC obtained an FPN (E14302) on January 13, 2014 to initiate such Assessment. The Assessment began in January 2014 to include attempts to determine the source of the oil and Responsible Party for the discharge. The Assessment ultimately concluded that the source of the oil is an abandoned oil well positioned underneath a building adjacent to Stackyard Run. Assessment is supported by the owner of the structure (conducting all work to date that has resulted in damage to the structure such as removal of a portion of the concrete floor to verify the existence of the well) and has grown to include efforts to vent gas from the abandoned well to points outside the structure and efforts to contain and remove oil from Stackyard Hollow (conducted by EPA). The results of the Assessment are summarized as follows:

Oil was originally found discharging onto the flowing waters of Stackyard Run from a pipe penetrating through the wall of a box culvert constructed over Stackyard Run. The purpose of the pipe is unknown, but was uncovered under the building and verified to originate at the position of the abandoned oil well. Oil was also originally observed entering Stackyard Run directly through the stone and concrete wall of the culvert (e.g., seeping through cracks). Oil was also originally observed migrating up through the floor tiles of the nearby structure - a building housing multiple residences (i.e., apartment building).

Digging behind the apartment building found no evidence of oil in the soils. This suggested that the oil source does not likely originate from behind the apartment building so as to migrate beneath.

Electrical tracing of the pipe discharging oil within the culvert indicated that the pipe trended under the apartment building and towards a rear room of the building which had a strong magnetic signal. The oil (paraffin) clogging the pipe was removed in an effort to facilitate tracing the pipe to its source. The effort identified a blockage in the pipe under the structure. The paraffin and oil coating the wall and within the pipe was removed.

The owner of the structure agreed to remove the floor tiles in the area where oil was emerging from the floor into the structure in an effort to determine the source of the oil. Oil had penetrated the grout of the floor tiles over a sizable area. Once removed, a large crack in the concrete floor was determined to be the reason that oil had migrated up into the first floor of the apartment building.

The owner of the structure agreed to penetrate the concrete floor over an area of strong magnetic signal near the suspected termination point of the pipe passing through the culvert wall. Once accomplished, a 10+ inch vertically-oriented pipe was discovered. Inside this pipe was found bubbling oily liquid. The vertically-oriented pipe was believed to be a well. WVDEP further uncovered the vertically-oriented pipe and verified it likely to be a well casing based upon its size, position and presence of threads and pipe collar. Oil was observed in the soil around the outside of the suspect well. The liquid in the well was highly volatile. The odors in the structure were monitored and determined to pose a threat via elevated levels of VOCs and LEL.

The owner assisted EPA and WVDEP through construction of a temporary vent stack to allow vapors to leave the structure. This stack was a section of 8 inch plastic pipe cemented into the well casing and then piped outside and above the roofline of the building. The temporary vent stack allowed suitable reduction in the level of VOCs and LEL in the structure. The air within the occupied apartments was also checked. Coordination amongst EPA, WVDEP, and local officials resulted in a decision that the temporary vent stack suitably reduced the vapors, but that it was insufficient to eliminate the threat.

Absorbent material was placed around the base of the temporary vent stack to capture oil migrating from around the well casing up into the building.

Absorbent pads and boom were placed into Stackyard Run. The amount of oily liquids discharging onto the waters has been noted to be variable. The discharge ranges from a minor rainbow sheen, a gray sheen, and yellow-colored oil. The well is about 25 feet from the flowing waters of Stackyard Run.

The level of accumulated fluid in the well rose into the vent stack. On September 24th, it was found to have risen above the floor of the building. On September 25th, additional area of concrete flooring was removed to allow the OSC to determine that the pipe visible in the culvert and discharging oil indeed originated at the position of the well. Additionally, the OSC noted oil in the soils around the pipe and along a migration pathway from the well to the culvert.

The source of the oil discharge is determined to be an abandoned oil production facility; at least one of the wells component to the facility is located under the residential structure. Abandoned oil wells, component to an abandoned oil production facility, are known nearby the subject discharge and are known to have intermittently discharged their wellbore contents at / near the subject discharge. As such, the OSC further estimates that an additional 5 BBLs of oil could discharge at one time in addition to the continuing minor discharge. The situation poses a substantial threat of discharge of oil into or upon the adjoining shorelines of the navigable waters of the United States. Additionally, this oil discharge is occurring into an occupied structure. The size classification of this discharge of oil is expected to be minor as such is defined in the NCP. The OSC and WVDEP are unclear if the amount of oil will increase or decrease over time.

The discharge has resulted in an unknown amount of oil onto a flowing tributary (Stackyard Run) of Wheeling Creek. Wheeling Creek is a tributary of the Ohio River. The Ohio River is a navigable waterway allowing for barge and other traffic serving numerous industries along the River around Wheeling, WV. Locks and Dams exist both upriver and downriver of Wheeling, WV. Wheeling Creek is a small left-hand branch (tributary) of the Ohio River flowing westerly into the Ohio River at Wheeling, WV (e.g., see USGS Bull. 233, Gazetteer of West Virginia, dated 1904). Stackyard Run, which flows from Stackyard Hollow, is a perennial flowing tributary of Wheeling Creek located in Wheeling, WV and which has been mapped as such by the USGS since at least 1902. Stackyard Run is not specifically named as such on available USGS maps, but is named as such in the survey maps available and referenced in the legal deeds of

properties located along its course. According to USGS topographic maps, the water flowing from Stackyard Hollow (a/k/a Stackyard Run) is perennial (represented by a solid blue line on the maps) for at least one mile from its confluence with Wheeling Creek. Sometime prior to 1956 (based upon available USCGS maps), a box culvert was constructed over/around a portion of Stackyard Run. Oil presently discharges from a pipe passing through the box culvert walls from an unknown source and directly into the flowing waters of Stackyard Run. Oil also discharges directly through the stonework comprising the box culvert walls and then directly into the flowing waters of Stackyard Run. The point of oil discharge into Stackyard Run is approximately 1200 feet upstream of its confluence with Wheeling Creek. In this case, the adjoining shorelines of Stackyard Run are contained behind a constructed feature (box culvert). The soils behind the walls of the box culvert and the box culvert wall each contain oil.

The well is about 25 feet from the flowing waters of Stackyard Run. The oil from the well migrates through the pipe and through the soil towards Stackyard Run. The pipe and wall of the culvert are about 18" from the flowing water of Stackyard Run. The discharge point on Stackyard Run is about 1200 feet upstream of its confluence with Wheeling Creek.

The OSC is presently evaluating options for additional removal actions. The presence of the occupied structure atop the well, the very close proximity of residents to the leaking well, and the limited space available to conduct response actions will make effective removal actions particularly difficult to undertake. The OSC will coordinate with the NPFC Case Officer regarding the implementation of actions.

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 subject well, the temporary vent stack continues to suitably allow gas to exit the structure, Oil has been found migrating within and alongside the pipe between the well and the culvert. EPA continues to monitor the air and maintain containment and removal of oil from Stackyard Hollow.

2.1.2 Response Actions to Date

See Prior POLREPs for activities through September 25, 2014.

EPA continued routine air monitoring within and outside of the structure. The monitoring is necessary to assure that LEL does not exist in the structure. The onset of cold weather will make ventilation more disruptive and noticeable to residents. Additionally, it is expected that weather changes will increase the use of the utilities in the apartment building and may alter the effectiveness of the ongoing ventilation. LEL and VOC readings continue to indicate effective ventilation and suitable conditions for residents.

The amount of oil in the Creek continues to fluctuate from a light sheen (either rainbow or gray) to accumulations of yellow-colored oil. The OSC continues to arrange for deployment and maintenance, as needed, of absorbent pads and boom to contain and remove oil.

The OSC continued coordination with NPFC Case Officer. The OSC provided additional information relating to the migration pathway and definition of the navigable waterway.

The OSC is presently coordinating with WVDEP to evaluate options available for removal actions to address the discharge of oil from the well. Any action will necessarily need to take into account the presence of the structure atop the building, the close proximity of residents to the work area, the very limited space available for response operations, and the safety of responders and residents alike. The OSC is evaluating options that may involve blocking access to portions of the community, accessing the well from through the side, accessing the well through the roof of the structure and conducting partial or complete removal of the structure. All actions consider the safety of responders, safety of residents, effectiveness of operations, probability of success, and cost. The OSC will communicate with NPFC relating to available options.

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

The OSC continued evaluation of available information. There is no map of the oil facility along Joan Street. Through a courthouse deed and lease search, the Site was formerly identified as Lot 4 (and #5) of the Thompson Estate. Two leases relating to the subject property were identified which indicated 3 possible operators of an oil production facility (in order, they are Seybold, Octo Oil Company, and Glenwood Oil and Gasoline Company). In the 1920s, the assets of the Glenwood Oil and Gasoline Company were sold to A. Schmidt. The assets included a well located on Parcel #4 and #5 which is the land upon which the apartment building is constructed. Although, numerous deeds can be found which convey the surface property forward in time, any documentation of the fate of the remainder of the assets (controlled or owned by A. Schmidt) cannot be located. The OSC will continue to direct a search for such records.

Other than information indicating that Octo Oil was dissolved in the 1950s, the OSC could find no further information on Seybold, Octo Oil Company, Glenwood Oil and Gasoline Company, or A. Schmidt. The time period involved (1920s) in the sale of the assets suggests that such searching may not be successful. At this time, the OSC is not able to identify an RP to which notice may be sent.

The OSC will continue to attempt to determine a RP for the subject discharge of oil.

2.1.4 Progress Metrics

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|--|--|--|--|--|--|

| <i>Waste Stream</i> | <i>Medium</i> | <i>Quantity</i> | <i>Manifest #</i> | <i>Treatment</i> | <i>Disposal</i> |
|---------------------|---------------|-----------------|-------------------|------------------|-----------------|
| oil | solids | 55-gallon drum | | | X |
| | | | | | |
| | | | | | |

2.2 Planning Section

2.2.1 Anticipated Activities

Continue to monitor air for elevated LEL or VOCs that may threaten safety within the structure or health of occupants.

Continue to contain oil and maintain absorbent materials on Stackyard Run.

Continue to coordinate with NPFC relating to a course of action. Consideration of the location of the well underneath an occupied structure will require coordination between OSC and NPFC. At this time although several options for addressing the leaking well can be developed, the safest and surest response actions involve damage to the structure and the need to remove occupants.

2.2.1.1 Planned Response Activities

2.2.1.2 Next Steps

2.2.2 Issues

The structure is used as a residence for several people (the building is divided into 4 units).

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

No information available at this time.

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.