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

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region III

Subject: **POLREP #20**
Progress and Completion of on-Site Removal Actions
Stackyard Hollow
Z3MD
Wheeling, WV
Latitude: 40.0772533 Longitude: -80.7054597

To:
From: Michael Towle/Debbie Lindsey, On-Scene Coordinators
Date: 7/26/2016
Reporting Period: 7/5/2016 through 7/26/2016

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. Oil and gas is also observed issuing from the base of the wall and through seams in the concrete floor of the culvert. 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.

At this time, activities relating to the removal of oil and plugging of the well have completed and the equipment has been dismantled and removed. The remaining containerized wastes have been removed from the residential area in preparation for final disposal.

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.

Historically, oil has discharged from a pipe that begins near the subject well and penetrates through the wall of the culvert. The discharge has also occurred directly through the wall of the culvert and up through the floor of the culvert. At this time, it appears that the discharge is still occurring through the wall and through

the floor of the culvert and causing a sheen upon Stackyard Run. This discharge may result from residual oil in the soils around the well and/or from other wells nearby. Continued observation is required to determine this condition, but in the opinion of the OSC no further work in the subject well can be conducted to improve this condition. The OSC believes that the shallow zone with flowing water and gas found within the subject well is directly connected to Stackyard Run via fractures or other improperly plugged boreholes; it is probable that the discharge cannot be further addressed unless all other wells (known and unknown) in the immediate area are identified, evaluated. assessed, and addressed to prevent oil from entering this shallow flow zone.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

See prior POLREPS.

The OSC has continued to conduct Assessment activities at this Site throughout the conduct of the Removal activity. The oil facility which is the subject of this Action includes a well located beneath a residential structure along Joan Street (subject well). The OSC has found that several additional wells are located nearby (the exact plugging conditions are however unknown), several other wells are known to be in the area but cannot be located, and that there probably are other unknown wells nearby (since no records of any kind can be found relating to some of the known wells which were found simply because they leaked). Given this information and the discovery of the very shallow water flow zone in the subject well and its likely connection to Stackyard Run, the OSC believes that no further work can be done in the subject well to improve the oil condition in Stackyard Run. As such, a sheen is still present in Stackyard Run due to a discharge from an oil facility along Stackyard Run. It cannot be verified if the continuing discharge is from the subject well, another well component to the subject facility, or an unknown well.

At this time no gas or oil issues from the surface of the subject well into the overlying residential structure. The OSC believes that the minor discharge in Stackyard Run either results from residual oil in the soil around the subject well and/or from connections between Stackyard Run and a water zone found in the subject well (and likely in other nearby improperly plugged wells) about 100 feet below ground.

During investigations in the well bore to facilitate plugging operations, a four foot zone of turbulent flowing water was encountered beginning about 100 feet down. Obvious gas bubbles were observed by camera within the turbulent water flow. A caliper log indicated that the 4 foot zone of flowing water and gas was greater in diameter than the reach of the caliper indicative of a void, fracture, or large washout. A temperature log and gamma log also showed an obvious temperature drop below this zone and at about 115 feet suggestive of a possible productive sandstone. Geology of the area indicates an alternating series of sandstones, shale, mudstones, and clay. A shallow producing zone is not known, but caving material and shallow water zones have been noted in wells located within 5 miles of the subject well expected to be in similar geology. The OSC believes that any well drilled through this zone and improperly plugged is presently allowing oil and gas to travel along this zone and enter other well bores and/or Stackyard Run. There are several known and probably several unknown wells nearby comprising the facility which is the subject of this action. Any one of these other wells (or all of them) could be contributing to the subject discharge.

The subject well, as well as 2 other nearby wells, were plugged by CG Broaddus in 1949. EPA re-plugged one of these "Broaddus" wells in the 1990s along with 2 others. The third Broaddus well is not addressed, but a survey of its location is available. The State plugged an additional nearby well. EPA and WVDEP plugged still another nearby well in the 1990s. At least one other is known to exist nearby under a building. At least one other nearby well is suspected due to a visible discharge of oil. Two historic maps show up to 13 wells in the area, but so imprecisely located as to be of no value. The historical records indicate drilling for gas in Stackyard Hollow in the 1890's with no records of location. Given the re-development of the area as residential, the age of the oil activity (over 100 years ago) and the lack of good records, the OSC believes that it may not be possible to stop the flow of oil into Stackyard Run without re-entering previously plugged wells and finding other wells that comprise the facility. However, even the potential for nearby water wells must be considered.

The OSC continues to observe a discharge and identify a threat to the navigable waters. However, the evidence of this discharge can not be observed at the confluence of Stackyard Run and Wheeling Creek.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Actions to remove debris and oil from the subject well and then to properly plug the subject well are completed. Only completion of disposal remains. See prior POLREPs.

2.1.2 Response Actions to Date

See Prior POLREPs for activities up to July 5, 2016.

Removal of oil and attempts to plug the migration of gas/oil from the well to the surface have been completed. The dismantling of the rig and relating equipment was completed this period and all equipment was removed from the premises. The operational area was cleaned. The OSC and WVDEP communicated the Site status to the owner of the building. The owner will take responsibility for removal of bracing from the building and repair of the actual structure (ceiling joists and overhead flooring had been removed to allow the rig to be constructed in place) and floor atop the well.

Waste containers have been removed from the residential area and temporarily staged in Buckhannon for additional processing before disposal. Material had hardened in the containers. Responders continued communication with disposal facilities regarding disposal of the wastes from the Site. The increased amount of disposal was not anticipated in the scope of the project. The well delivered extra water due to its

artesian condition. Extra cement cuttings were generated since the several attempts were made to plug the top of the well. Extra cuttings were generated when the well collapsed. Extra gel was created when the well was re-drilled and extra gel was used to stabilize the borehole wall.

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

See Prior POLREPs.

2.1.4 Progress Metrics

The table below reflects disposal through June 13, 2016. Oily debris and liquids located in two boxes removed from the Site on June 30, 2016, is not yet disposed

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*
oil	solids	4 - 55-gallon drums			X
oil	oily liquids	8928 gallons			X
oil	oil solids	2 tons			X

2.2 Planning Section

2.2.1 Anticipated Activities

Complete disposal of wastes.

2.2.1.1 Planned Response Activities

Disposal.

2.2.1.2 Next Steps

Disposal.

2.2.2 Issues

A discharge of oil is still present on Stackyard Run.

Insufficient funding is available to complete disposal of wastes.

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

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