

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Beaver Creek Bridge Crude Oil Spill - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region IV

Subject: POLREP #4
Monitoring of Beaver Creek Spill Site Continues
Beaver Creek Bridge Crude Oil Spill

Glasgow, KY
Latitude: 36.9914130 Longitude: -85.9861300

To:
From: Perry Gaughan, OSC
Date: 11/5/2014
Reporting Period: 10/04/2014 through 11/04/2014

1. Introduction

1.1 Background

Site Number:	Z4ZB	Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:	OPA	Response Type:	Emergency
Response Lead:	EPA	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	9/19/2014	Start Date:	9/19/2014
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:	E14459	Reimbursable Account #:	

1.1.1 Incident Category

Region 4 Emergency Response and Removal Branch (ERRB) responded to a continuous release of crude oil along a one half mile section of Beaver Creek three miles west of Glasgow, Kentucky. Response efforts were initially requested by Kentucky Dept Environmental Protection (KDEP) and are being performed under the OSC's Oil Pollution Act authority.

1.1.2 Site Description

The spill Site is along the flood plain of a 50 acre farm three miles west of Glasgow. Crude oil continues to emanate from a creek bank into a 100 yard section of Beaver Creek in a remote section of the creek. Approximately a one half mile stretch of the creek has been impacted. The spill is located immediately south of a recent interchange construction by Kentucky DOT along the Louie B. Nunn Expressway between Interstate 65 and Glasgow, Ky.

1.1.2.1 Location

The spill is located along Beaver Creek on a 50 acre farm along State Route 1297 where it runs under the Louie B. Nunn Expressway.

1.1.2.2 Description of Threat

The crude oil release is most likely emanating from one of three abandoned oil wells along the flood plain. The most likely scenario is that one or more wells were improperly plugged or cemented during well closure and crude oil is communicating with groundwater levels below surface.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

EPA working with Kentucky DEP and the property owner has located three former well locations which could potentially be the source of crude. Kentucky DOT has recently built an interchange on the L. Nunn Expressway on an 8 acre parcel of the farm upgradient of the creek.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Saturday October 4th through Monday November 3rd 2014

EPA and ERRs contractors have continued to monitor the left descending bank of Beaver Creek for oil sheen and crude oil over the last four weeks. ERRs contractors have continued to switch out absorbent boom and place absorbent pads along the 100 yard stretch of bank which has been impacted by the

leaking abandoned well. During early October, this area of Glasgow, Kentucky received over 7 inches of rain which should have flushed the area of any residual crude oil. However, crude oil continues to flow from the area at two locations at a significant flow rate approximating 50-100 gallons per day.

Tuesday, November 4th 2014

The OSC met with EPA ERT's Greg Powell for assessment assistance to plan future operations. Powell observed that natural gas continues to also flow from the creek bank suggesting that crude oil continues to flow from a producing geological zone. Historically, this area has two producing zones of oil; one zone at approx 270 feet and a second producing zone, the Leeper formation, at 480 feet. Powell feels that an additional undiscovered well may be flowing crude oil along the creek shoreline or in the creek itself. Powell advised the OSC to conduct additional magnetometer assessment to find buried oil well casing and to also conduct soil gas studies to assess if the crude oil could be coming from one of two wells over 100 yards from the creek bank. In addition, crude oil samples will be collected and forwarded to US Coast Guards Coil Lab for fingerprinting analysis to determine the production zone.

The OSC also plans to excavate test trenches near two abandoned wells along the flood plain to assess if crude oil is leaking from these locations.

The OSC is unable to approximate the volume of crude oil which leaked from the well to subsurface soils and therefore, oil sheen may continue to flow from the creek bank for an extended time.

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

The OSC is working with Kentucky Oil and Gas in identifying previous drillers in the area. Once identified, EPA will pursue normal responsible party liability and request plugging records by operators. Wells in this area of Kentucky date back to 1930's to 1940's. Wells in an area of Boyds Creek less than ten miles from this site date back to 1865 (Civil War).

2.1.4 Progress Metrics

<i>Waste Stream</i>	<i>Medium</i>	<i>Quantity</i>	<i>Manifest #</i>	<i>Treatment</i>	<i>Disposal</i>

2.2 Planning Section

2.2.1 Anticipated Activities

EPA currently plans on having ERRs contractor solicit oil well service subcontract bids and well and cement bond logging capability bids.

2.2.1.1 Planned Response Activities

Methodical plugging of all abandoned oil wells along the flood plain until the threat has been mitigated.

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

Kentucky DEP, Kentucky Oil and Gas, Kentucky DOT

4. Personnel On Site

ERRs (CMC Inc.) - 1 response manager, 4 laborers.

5. Definition of Terms

No information available at this time.

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.