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 #7**
Special - OPA 90 Work Plan 3 Additional Funding Request to Replug Well
Beaver Creek Bridge Crude Oil Spill

Glasgow, KY
Latitude: 36.9914130 Longitude: -85.9861300

To:
From: Perry Gaughan, OSC
Date: 12/17/2014
Reporting Period: 12/17/2014

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.

An abandoned oil well located 80 feet from the spill was uncovered and cemented on October 3rd by EPA and ERRs contractors (reference Polrep #3). However, crude oil continues to flow from the creek bank after four weeks of rain and groundwater flow to flush saturated soils around the well casing.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

Thursday, December 11th, 2014

A recent metal assessment performed by START contractors indicated that a buried crude oil flow line was located near the Harrison #2 Well and ERRs began trenching operations to locate the flow lines. During this operation it became evident that crude oil was coming from the previously plugged well, most likely from a failure in the bridge plug placed at 140 feet. On Friday, December 12th, the oil well service subcontractor was mobilized and a rotary rig was brought in to start drilling through the cement plug.

Monday, Dec 15 through Wednesday, Dec 17th, 2014

The oil well service subcontractor (Barnett and Smith) began rotary rig operations and drilling through the previous cement plug. Apparently the cast iron bridge plug failed allowing oil and natural gas to "honeycomb" through the previous cementing.

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

Waste Stream	*Medium*	*Quantity*	*Manifest #*	*Treatment*	*Disposal*

2.2 Planning Section

2.2.1 Anticipated Activities

2.2.1.1 Planned Response Activities

Continue drilling through the failed cement plug and resetting a new cast iron bridge plug at a lower depth. The oil producing formation is reported to be at a depth of 600 feet (Leeper Formation) and attempts will be made to place the plug at that depth to avoid future issues.

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.