

United States Environmental Protection Agency
Region IV
POLLUTION REPORT

Date: Tuesday, November 21, 2006

From: Art Smith

Subject: Source Investigation Continues
SM Maple Lease/Rogers Fork Crude Oil Discharge
Pitts, KY
Latitude: 37.7322000
Longitude: -83.8911000

POLREP No.:	2	Site #:	Z4KS
Reporting Period:	11/16/2006 through 11/20/2006	D.O. #:	
Start Date:		Response Authority:	OPA
Mob Date:	11/17/2006	Response Type:	Emergency
Demob Date:		NPL Status:	Non NPL
Completion Date:		Incident Category:	Removal Action
CERCLIS ID #:		Contract #	
RCRIS ID #:		Reimbursable Account #	Z4KS
FPN#	E07407		

Site Description

On 11/15/06, the Kentucky Department for Environmental Protection (KYDEP) was notified of a potential crude oil spill in a mountain stream in rural Estill County, Kentucky. Estill County emergency management officials procured the use of a backhoe to divert the crude oil spill into a small farm pond at the base of the mountain. The pond, which serves as a containment basin for the crude oil spill, is located along Pitts Road, approximately 5 miles northeast of Ravenna, KY. (The GPS coordinates for the pond are N 37.73222 degrees latitude, and W 83.89111 degrees longitude.) Prior to establishing containment of the oil spill at the farm pond on 11/15/06, the crude oil discharged directly into the Rogers Fork to Cow Creek, which flows directly into the Kentucky River in Ravenna, KY. The Kentucky River is a navigable water of the United States.

KDEP's Environmental Response Team (KDEP ERT) responded on 11/15, and identified the source of the oil discharge to be coming from multiple springs originating from the mountainside approximately 0.25 mi. uphill of the pond. KDEP mobilized PECCO, Inc. of Nicholasville, KY to respond and mitigate the oil discharge. KDEP also filed NRC Report No. 818332 on 11/15. On 11/16, OSC Smith was dispatched by the Region 4 Phone Duty Officer to further investigate the source of the discharge and monitor cleanup efforts.

Current Activities

On 11/17/06, OSC Smith met with representatives from KDEP, and the KY Oil and Gas Division (KDOG). Also present was a representative of Arrowhead Enterprises of KY, Inc. (Arrowhead), a local oil field operator and production manager. OSC Smith walked the site with KDEP, and found that:

- There are multiple seeps along the base of a rock cliff near the top of the ridge upgradient of the containment pond. Water flows intermittently from the springs, and crude oil was observed to be exiting and flowing with the water which collects in perennial streams within the ravines. The streams converge near the base of the hill where it is diverted into the farm pond for oil to be concentrated and removed with a drum skimmer. Along the quarter mile path on the hillside where oil has migrated, crude oil was found to be accumulating in pockets in the amount of 10-15 gallons per every 50 feet of linear distance.
- There are numerous oil production leases in the area, many of which are inactive currently. KDOG identified that Well No. 2 on the Tilford McIntosh Lease was a possible source of the oil discharge, due to the close proximity of the well to the seep locations. The Tilford McIntosh Lease was acquired by United American Energy (UAE), and Arrowhead is responsible for managing production of wells on the McIntosh Lease.

From 11/18-11/20, tubing was pulled from McIntosh Wells 1 and 2. However, KDOG has subsequently ruled out these wells as source locations, due to the fact the well materials were observed to be dry when retrieved from the borehole.

Because of the complexity in determining the source of the discharge, and the continued need to mitigate the threatened discharge of oil into navigable waters, EPA obtained a Federal Project Number and funding from the National Pollution Funds Center (NPFC) on 11/20. Of the \$50,000 ceiling, EPA has issued a Pollution Removal Funding Authorization (PRFA) in the amount of \$45,000 to the KDEP to continue onscene response actions.

Planned Removal Actions

- On 11/20, a representative with KDEP's Division of Water/Groundwater Branch visited the Site and identified two active oil wells as possible sources of the oil discharge. In addition to the fact that these actively producing wells are upgradient of the seep, a karst feature identified in a surface depression along the ridge exhibited a strong crude oil odor, as reported by KDEP. The 2 active wells in question which are operated under the Maple Lease, are located nearby. KDOG is presently evaluating options for investigation of the active production wells as the source of the continued oil discharge.
- Continue oil containment and recovery operations until such time as the oil release ceases to constitute a substantial threat of a discharge to surface water. To date, KDEP reports that their contractor has removed over 2,800 gallons of an oil/water mixture in response to this incident. The daily recovery rate is currently less than 500 gallons per day.

Next Steps

EPA has tasked Tetra Tech, Inc., the Region 4 Superfund Technical Assistance and Response Team (START) contractor, with performing a study to identify the source of the oil discharge and all potentially responsible parties. This will consist of a records search to identify owners of mineral rights leases, and well-related information. To the extent that additional field investigation is warranted, the study will involve collection of fluid level measurements in the vicinity of the oil seeps, with the goal of pinpointing the facilities responsible for the discharge. EPA anticipates that the study will be completed by 12/15/06.

Because of the additional costs involved with the groundwater study, and the need to continue response actions for up to 30 days, the OSC is requesting that NPFC approve an increase of additional \$130,000 be added to the FPN ceiling.

response.epa.gov/rogersfork