

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Lockport Illinois Buckeye Oil Spill - Removal Polrep  
Initial Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region V

**Subject:** POLREP #1  
Initial  
Lockport Illinois Buckeye Oil Spill  
  
Lockport, IL  
Latitude: 41.6354890 Longitude: -88.0487240

**To:**  
**From:** James Mitchell, OSC  
**Date:** 12/17/2010  
**Reporting Period:** 12/14/2010-12/16/2010

## 1. Introduction

### 1.1 Background

<b>Site Number:</b>	<b>Contract Number:</b>
<b>D.O. Number:</b>	<b>Action Memo Date:</b>
<b>Response Authority:</b>	<b>Response Type:</b> Emergency
<b>Response Lead:</b>	<b>Incident Category:</b>
<b>NPL Status:</b> Non NPL	<b>Operable Unit:</b>
<b>Mobilization Date:</b> 12/14/2010	<b>Start Date:</b> 12/14/2010
<b>Demob Date:</b>	<b>Completion Date:</b>
<b>CERCLIS ID:</b>	<b>RCRIS ID:</b>
<b>ERNS No.:</b>	<b>State Notification:</b>
<b>FPN#:</b>	<b>Reimbursable Account #:</b>

#### 1.1.1 Incident Category

Emergency Response

#### 1.1.2 Site Description

##### 1.1.2.1 Location

The site is located on New Avenue approximately 0.5 miles south of 135<sup>th</sup> Street in Lockport, Illinois. The site is bordered to the east by New Avenue, to the north and south by open wetland areas, and to the west by railroad tracks serviced by Amtrack, Metra, and freight companies.

##### 1.1.2.2 Description of Threat

An estimated 500 barrels (21,000 gallons) of crude oil was released into a drainage ditch which flows to a wetland area via a culvert. The spill occurred in an area near critical habitat for federally endangered species, including the Hine's Emerald Dragonfly and Leafy Prairie Clover, a threatened species.

#### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

At approximately 0720, the Lockport Fire Department responded to the incident. At approximately 0745, the pipeline was shutdown. At approximately 0820, the Responsible Party (RP), West Shore Pipeline (owner) and Buckeye (operator), responded to the incident. In addition, U.S. EPA and its Superfund Technical Assessment and Response Team (START) contractor arrived on-site to conduct oversight of cleanup activities. At this time a Unified Command was implemented with U.S. EPA, Illinois Environmental Protection Agency (IEPA), Lockport Fire Department, and Buckeye. Starting on 12/15/2010, Unified Command consists of U.S. EPA, IEPA, and Buckeye.

Initial air monitoring conducted by West Shore personnel indicated a maximum benzene reading of 6.0 parts per

million (ppm) in ambient air. Based on initial air monitoring readings, West Shore personnel delineated the area with high readings as the hot zone. START personnel oversaw West Shore personnel and contractors air monitoring activities. START also conducted air monitoring at spill site and work zones to confirm West Shore air monitoring results. Air monitoring was conducted for oxygen (O<sub>2</sub>), the lower explosive limit (LEL), volatile organic compounds (VOCs), carbon monoxide (CO), and hydrogen sulfide (H<sub>2</sub>S).

Center for Toxicology and Environmental Health (CTEH) was contracted by CN Railroad to facilitate the opening of the west track to commuters. CTEH conducted monitoring in the commuter trains as they passed the spill site to ensure commuter safety.

West Shore and Buckeye Pipeline contracted CTEH to conduct air monitoring at the site and in the nearby residential areas. CTEH has utilized AreaRAEs for continuous air monitoring in work zones and residential areas. One AreaRAE is deployed on a moving vehicle that makes rounds in the work zones and residential areas. CTEH collects air samples using summa canisters. Summa canisters are sent for laboratory analysis for VOCs and semi-volatile organic compounds (SVOCs). CTEH personnel have reported that no VOC readings have exceeded background levels in the residential area. VOC readings near the spill have been detected at up to 25 ppm. Respiratory protection is required of on-site workers in the spill area. START personnel are overseeing CTEH air monitoring work as well as conducting and collecting separate air monitoring data points utilized the Rapid Assessment Tool (RAT) system.

West Shore and Buckeye Pipeline cleanup contractors, Future Environmental and Veolia Environmental, are using vacuum trucks to remove the crude oil from the drainage ditch and wetland area. The crude oil is transferred from the vacuum trucks to tanker trucks for off-site transport and disposal. In addition, cleanup contractors are excavating contaminated soil and transporting off-site for disposal.

In accordance with Section 7 of the Endangered Species Act and the rule at 50 CFR Part 402.05, US EPA requested emergency consultation by US Fish and Wildlife Service at West Shore Crude Line S0257EM in Lockport, Illinois. US Fish and Wildlife Service is on-scene and providing input on response actions.

**2.1.2 Response Actions to Date**

West Shore contractor, Midwest Mechanical, has placed a temporary clamp on the pipeline break. The break is at the bottom of the pipe and is approximately the size of a quarter. The pipeline is approximately six feet below ground. Buckeye submitted a plan to Department of Transportation (DOT) Pipelines and Hazardous Materials Safety Administration (PHSMA) to conduct an integrity test. The plan was accepted and the test was conducted on the pipeline by Midwest Mechanical. The pipeline passed the integrity test on 12/16/2010.

East of the railroad tracks, in the drainage ditch, excavation of contaminated soil has commenced. Soil excavation started from the furthest north and the furthest south extents working toward each other. Vac trucks are continuing to collect free product in the drainage ditch.

West of the railroad tracks, vac trucks are collecting free product in the wetland areas adjacent to the access road. START conducted product and soil sampling activities near the culvert connecting the drainage ditch to the wetlands.

As of 12/17/2010 at approximately 0900, an estimated 20,000 gallons of crude oil had been recovered from the drainage ditch and wetland area. In addition, approximately 650 cubic yards (yd<sup>3</sup>) of contaminated soil has been removed from the drainage ditch. Recovery operations on 12/14/2010 and 12/15/2010 were slow due to the low temperatures freezing valves on vac trucks and frac tanks and the viscosity of the product.

Discussions were held to determine preliminary remediation options of the impacted wetlands area between Buckeye, U.S. EPA, IEPA, DOT, USFWS, IDNR, and a representative of the wetlands property owner.

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

The RPs, West Shore Pipeline and Buckeye Pipeline, have responded to the incident and have contractors working to recover the crude oil.

**2.1.4 Progress Metrics**

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

**2.2 Planning Section**

**2.2.1 Anticipated Activities**

U.S. EPA will continue to conduct oversight of the cleanup activities and operating as the lead agency.

Buckeye plans to restart the pipeline today. The pipeline will run at a reduced pressure until permanent repair occurs in January 2011.

Excavation of contaminated soil and clearing and grubbing of vegetation continues along the New Avenue drainage ditch. The cleanup contractors are excavating approximately 1 to 2 feet below ground surface to remove impacted soil. Cleanup contractors will maintain a protective boom in the drainage ditch and continue product recovery.

Cleanup contractors are developing plans to assess the crude oil contamination under the railroad tracks and culvert. Cleanup contractors are also developing an excavation plan for cleanup of the possible oil contamination under the rail lines. Product from under the railroad tracks will be recovered using temporary collection systems to prevent recontamination of the drainage ditch while developing the cleanup plans.

Cleanup contractors will continue to recover crude oil contamination. Begin trenching in the gross contaminate areas to increase the effectiveness of free product recovery by vac trucks and decrease product migration westward. Continue monitoring oil migration into the wetlands. Develop a systematic approach to determine plume migration within the wetlands. Review West Shore/Buckeye plans for addressing remaining contamination and discuss strategy with West Shore/Buckeye, IEPA, DOT, USFWS, and IDNR regarding remediation strategies in environmentally sensitive areas west of the railroad tracks.

CTEH will continue to conduct air monitoring and air sampling activities in work zones, along the rail tracks, and the nearby residential areas.

#### **2.2.1.1 Planned Response Activities**

#### **2.2.1.2 Next Steps**

#### **2.2.2 Issues**

Residual pooling of free product within the excavated areas of drainage ditch needs be assessed and cleaned up before restoration efforts start along the drainage ditch.

On 12/14/2010, the east rail line of CN Railroad was shut down to train traffic. Railroad was shut down to allow workers to safely excavate the drainage ditch. The east rail line is anticipated to be operational by 12/22/2010.

Crude oil has impacted areas of the railroad ballast. Per CN Railroad guidelines, excavation cannot occur within two feet of the end of the railroad ties or underneath the railroad tracks without undermining the track. A plan needs to be developed to assess impact to the railroad ballast and soil beneath the track. The capture methods for the oil underneath the railroad need to be evaluated and implemented to prevent recontamination of the remediated drainage ditch.

A systemic approach for the delineation of the extent of contamination and plume migration within the wetland area needs to be developed and implemented.

### **2.3 Logistics Section**

Currently there are 11 vac trucks, four backhoes, six frac tanks, and 14 roll-offs from Buckeye's contractors being used for removal of product. Buckeye's contractors received permission from United States Army Corps of Engineers (USACE) for vac trucks to operate on the west side of railroad tracks in the environmentally sensitive area (wetlands).

Recovered oil is being sent to the Citgo Refinery in Lockport, Illinois. Excavated soil will be staged at the Citgo Refinery. Samples will be collected from the staged soil to determine if it will be disposed as a hazardous waste.

### **2.4 Finance Section**

No information available at this time.

### **2.5 Other Command Staff**

#### **2.5.1 Safety Officer**

START prepared a Site-Specific Health and Safety Plan (HASP) for emergency response activities at the site. The RP and their contractors are working under their own HASP.

#### **2.6 Liaison Officer**

#### **2.7 Information Officer**

##### **2.7.1 Public Information Officer**

##### **2.7.2 Community Involvement Coordinator**

### **3. Participating Entities**

#### **3.1 Unified Command**

Unified Command has been implemented at the site and U.S. EPA is the lead agency. The incident Commander (IC) is U.S. EPA OSC Jim Mitchell. The command post is located at 12920 Bell Road in Lemont, Illinois. Unified Command currently consists of U.S. EPA, IEPA, and Buckeye.

### **3.2 Cooperating Agencies**

RPs – West Shore Pipeline and Buckeye Pipeline

RP Contractors

- CTEH (air monitoring)
- Delta (environmental)
- Future Environmental (cleanup)
- Veolia Environmental (cleanup)
- Midwest Mechanical (pipeline repair)
- Entrix (environmental – wetlands)

U.S. EPA START Contractor – Weston Solutions, Inc.

### **4. Personnel On Site**

U.S. EPA – 2 (day ops), 1 (night ops)

START – 2 (day ops), 1 (night ops)

RP and contractors – 100 (estimated)

IEPA – 2

USFWS - 1

### **5. Definition of Terms**

CO = carbon monoxide

CTEH = Center for Toxicology and Environmental Health

DOT = Department of Transportation

HASP = Health and Safety Plan

H<sub>2</sub>S = hydrogen sulfide

IC = Incident Commander

IDNR = Illinois Department of Natural Resources

IEPA = Illinois Environmental Protection Agency

LEL = lower explosive limit

O<sub>2</sub> = oxygen

OSC = On-Scene Coordinator

PHSMA = Pipeline and Hazardous Materials Safety Administration

ppm = parts per million

RAT = Rapid Assessment Tool

RP = Responsible Party

START = Superfund Technical Assessment and Response Team

SVOC = semi-volatile organic compound

USACE = United States Army Corps of Engineers

U.S. EPA = United States Environmental Protection Agency

USFWS = United States Fish and Wildlife Services

VOC = volatile organic compound

yd<sup>3</sup> = cubic yards

### **6. Additional sources of information**

#### **6.1 Internet location of additional information/report**

#### **6.2 Reporting Schedule**

Pol/Sit Rep will be on a three day reporting schedule.

### **7. Situational Reference Materials**

NRC Report #895256

NRC Report #962178

NRC Report #962179