

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



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region V

Subject: POLREP #4
Progress
Lockport Illinois Buckeye Oil Spill

Lockport, IL
Latitude: 41.6354890 Longitude: -88.0487240

To:
From: James Mitchell, OSC
Date: 12/30/2010
Reporting Period: 12/30/2010 - 1/5/2011

1. Introduction

1.1 Background

Site Number:		Contract Number:	
D.O. Number:		Action Memo Date:	
Response Authority:		Response Type:	Emergency
Response Lead:		Incident Category:	
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	12/14/2010	Start Date:	12/14/2010
Demob Date:		Completion Date:	
CERCLIS ID:		RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:	E11505	Reimbursable Account #:	

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 135th 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 were released into a drainage ditch which flows in 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.

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.

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 (PHMSA) 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 and Buckeye received

approval from PHMSA to operate the pipeline at reduced pressure to provide feedstock to Shell refinery. Permanent repairs are expected to occur in January 2011.

The two railroad tracks (the east and west lines) were initially shut down after the incident. The west track was opened up on 12/14 at reduced speeds. The east rail line was opened on 12/19 at reduced speeds.

West Shore and Buckeye Pipeline contracted CTEH to conduct air monitoring at the site and in the nearby residential areas. CTEH personnel have reported that no VOC readings have exceeded background levels in the residential area. VOC readings near the spill were detected at up to 25 ppm. START personnel are overseeing CTEH air monitoring work. START has performed ambient air monitoring near excavation activities and in general work areas with a Multi Rae. There have not been any readings above background in several days.

CTEH has submitted an addendum to the Air Monitoring Plan to US EPA which requests a reduction in the frequency and expanse of residential air monitoring. US EPA approved the addendum to the Air Monitoring Plan on 12/21.

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.

East of the railroad tracks, in the drainage ditch, excavation of contaminated soil from the furthest north to the furthest south extents of the release has been completed and a French Drain system has been installed. The French Drain system is currently collecting product. Monitoring and removal of oil via standpipes distributed along the drainage ditch is ongoing.

West of the railroad tracks, product removal activities continue into the wetlands. Westshore/Buckeye contractor Entrix has completed delineation of the extent of impact in the wetlands. Work crews have deployed absorbent boom, containment boom, and wheat bails around the extent of the oil plume and are attempting to prevent any further spreading of product. Product recovery trenches have been installed along the eastern edge of the wetlands and product recovery operations utilizing skimmers and vacuum trucks are ongoing. All activities in the wetlands are being coordinated with U.S. FWS and representatives of the land owner.

2.1.2 Response Actions to Date

A Daily Incident Action Plan (IAP) is developed to guide onsite work activities. IAPs can be viewed in the document section of this website for staff that have password access. IAPs are also up loaded to the Buckey's share website for viewing. Contact OSC Jim Mitchell for access to IAPs.

12/30/2010

An estimated 88,772 gallons of oil/water mixture have been recovered from the drainage ditch and wetlands area. To date, 42,222 gallons of water have been shipped to Beaver Oil Company in Hodgkins, IL and 46,550 gallons of oil/water mixture remains stored in frac tanks. Approximately, 1,350 yd³ of contaminated soil have been excavated from the site and stored in roll off boxes awaiting disposal.

Product recovery operations continue in the areas west of the railroad and in the wetlands area. Warmer temperatures have facilitated a melt in the ice and snow in and around the recovery trenches. Two skimmers units were in operation throughout the wetlands area and two vacuum hoses were pulling product directly from the trench. Containment and absorbent boom have been installed strategically throughout the trench to ensure that cleaned areas remain free of the crude product.

Work crews have constructed primary containment and an underflow dam near the culvert that connects the east side of the tracks to the wetlands.

Product has been observed by US EPA OCSs beneath the ice layer in the northwest edge of the plume. In response, work crews used handily to trench in to the ice and deployed absorbent boom. Observations throughout the day have indicated that the absorbent boom has provided a satisfactory boundary and has prevented oil from moving out of the containment area.

Containment boom around the perimeter of the plume has been properly secured with stakes in preparation for the potential rain event.

US EPA and START will continue to monitor weather reports via the National Oceanic and Atmospheric Administration throughout the week.

12/31/2010

An estimated 91,153 gallons of oil/water mixture have been recovered from the drainage ditch and wetlands area. To date, 47,652 gallons of water have been shipped to Beaver Oil Company in Hodgkins, IL and 43,501 gallons of oil/water mixture remains stored in frac tanks. Approximately, 1,350 yd³ of contaminated soil have been excavated from the site and stored in roll off boxes awaiting disposal.

Heavy rain and thunderstorms in combination with snow melt and runoff contributed to flooding and high surface water levels throughout the Site. Contingency measures had been put in place to prevent the release of product from the containment area, and Site observations indicated that these measures were effective. Work crews have continued to install absorbent boom, containment boom, and hay bails as necessary. Monitoring and adjustment of the countermeasures will continue through the day and in to the night until the storm cell has passed.

Product recovery activities continue in the wetlands area. Three skimmer units and four vacuum trucks are in use in the area and focusing their efforts on product which has moved towards the southwest portion of the containment

area. Product collection and night shift operations will continue through the weekend.

01/03/2011

An estimated 95,772 gallons of oil/water mixture have been recovered from the drainage ditch and wetlands area. To date, 47,652 gallons of water have been shipped to Beaver Oil Company in Hodgkins, IL and 48,120 gallons of oil/water mixture remains stored in frac tanks. Approximately, 1,350 yd3 of contaminated soil have been excavated from the site and stored in roll off boxes awaiting disposal.

Over the weekend, the rain event on 12/31 combined with snow melt in the wetlands and surrounding areas, led to a significant amount of flooding on Site. Much of the north/south mat road (which parallels the railroad tracks) was underwater and required pumping. Recovery operations in the center of the Site were temporarily suspended due to flooding and unsafe conditions on that mat road. Additional hay bails were deployed to help contain the product on Site. Night operations continued to pull product until freezing conditions prevented them from further activities.

Product recovery continued as usual on 01/03/2011. Steam lines hoses were utilized to melt ice on the recovery trenches and move product towards the skimmers. Skimmers were in place on the south west recovery trench and on the north west recovery trench. Open hose vacuuming continues in various spots depending on access and presence of product.

Westshore/Buckeye will begin the excavation of heavily contaminated soils from the wetlands in the near future. Investigation has begun on the potential placement of soil storage cells on the north side of the Site (outside the product containment area). A 100' x 200' soil storage cell will be installed by the end of the week.

Night operations have been canceled moving forward due to continuing freezing temperatures in the evenings.

01/04/2011

An estimated 100,456 gallons of oil/water mixture have been recovered from the drainage ditch and wetlands area. Approximately, 1,350 yd3 of contaminated soil have been excavated from the site and stored in roll off boxes awaiting disposal.

Product recovery continues in the wetlands area. Warmer temperatures have allowed the continued use of skimmers and vacuum hoses throughout the area. Steam lines have been utilized to melt ice in the recovery trenches and move product towards the skimmers and vacuum hoses. Open hose vacuuming continues in various spots depending on access and presence of product.

Permanent repairs are underway on the portion of pipeline at the break site by Westshore/Buckeye contractor Midwest Mechanical. Flow at the pipeline will be temporarily suspended while new pipeline is welded in to place.

01/05/2011

An estimated 105,612 gallons of oil/water mixture have been recovered from the drainage ditch and wetlands area. Approximately, 1,350 yd3 of contaminated soil have been excavated from the site and stored in roll off boxes awaiting disposal.

Product recovery continues in the wetlands area. Skimmers and vacuum hoses are being utilized to collect free product in recovery trenches on the southwest and northwest portions of the containment area. Steam lines have been utilized to melt ice in the recovery trenches and move product towards the skimmers and vacuum hoses. Open hose vacuuming continues in various spots depending on access and presence of product.

With an extended period of freezing temperatures in the forecast, Westshore/Buckeye has decided to move forward with the excavation phase of the removal. Excavators will be utilized to remove product saturated soils and vegetation down to bedrock. The excavated soil will be temporarily staged in soil storage cells on the north portion of the wetlands. Construction of the 100' x 100' soils cells will begin when proper clearance is obtained from the property owners.

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

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

A Consent Agreement Order for Compliance under section 311(c) of the Clean Water Act was signed by USEPA OSC, Buckeye, and Westshore Pipeline on Dec. 16, 2010.

2.1.4 Progress Metrics

Waste Stream	Medium	Quantity	Manifest #	Treatment	Disposal
Oil/Water		105,612 gal		Yes	
Soil		1,350 yd3			Staged

2.2 Planning Section

2.2.1 Anticipated Activities

US EPA will continue to conduct oversight of the cleanup activities and operate as the lead agency.

Product recovery operations will continue in the area west of the railroad tracks for as long as weather conditions permit. Vacuum trucks will continue to pull product from areas in the wetlands as necessary.

US EPA will work with Westshore/Buckeye to develop strategies to combat weather conditions and increase product recovery efficiency.

Westshore/Buckeye will construct a 100' x 100' soil storage cell in preparation of soil excavation activities on the Site.

Excavation of the contaminated soil is expected to begin by the end of the week.

Monitoring and removal of product from the French Drain system will continue as necessary.

Cleanup contractors will continue to recover crude oil contamination. Review of the 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.

Air monitoring activities will continue to support overall worker protection.

Delta will continue to conduct daily surface water sampling and weekly soil sampling. START personnel will collect 10% split samples every third day of sampling.

2.2.1.1 Planned Response Activities

2.2.1.2 Next Steps

Product recovery activities will continue in the area west of the railroad tracks utilizing recovery trenches and skimmer units as long as the weather permits. Product recovery will also be maintained on the east side of the tracks.

Westshore/Buckeye will install a 100' x 100' soil storage cell on the north portion of the Site pending approval by the landowner. The soil storage cell will be utilized during excavation of contaminated soil on the Site.

Excavation of contaminated soil will begin by the beginning of next week.

Based on EPA approval, soil staged in rolloffs at the Citgo facility will begin to be shipped off for disposal.

EPA review and approval of final Work Plan.

A meeting will take place at the West Shore facility on Bell Avenue on Monday January 10, 2010 to discuss sampling results to date.

2.2.2 Issues

12/30/2010

Warmer temperatures during the day have begun to melt the snow and ice throughout the work zones. Colder temperatures at night are refreezing the standing water and creating icy conditions in the morning. Sand and gravel have been spread over the swamp mats to increase traction and prevent slip and trip hazards.

Product was discovered beneath the ice, near the northwest edge of the plume. Oil had not been previously observed in this area. Work crews have trenched in to the ice and installed additional absorbent boom in the area. Observations throughout the day have indicated that the boom has done a satisfactory job in preventing product from moving out of the containment area.

12/31/2010

A heavy rain event and snow melt in the wetlands area have created flooding conditions throughout the Site. Measures such as additional absorbent boom, containment boom, and hay bails have been put in place to assure that product does not escape the containment area.

Continued flooding of the work area will make use of the mat road system difficult. Pumps will need to be put in place to help mitigate rising water levels and flooding on the mat road system.

01/03/2010

The flooding conditions on site remain and the addition of recent freezing temperatures have led to an increased amount of ice on the Site. Product recovery activities are now being completed using a steam hose to break up ice and move product towards the skimmers. The flooded areas of mat road continue to be pumped as necessary.

01/04/2010

Freezing conditions continue to hinder product collection activities in the wetland area. Steam lines are being utilized to melt ice and move product towards the collection hoses and skimmers.

Cold temperatures have also made the remaining product thick and difficult to recover with skimmers and vacuum hoses. Excavation of contaminated soil will begin at the end of the week.

01/05/2010

Freezing temperatures have caused additional seeping of product from the French Drain system in the trench east of the railroad tracks. Work crews have installed absorbent boom and absorbent pads throughout the French Drain system in the trench.

2.3 Logistics Section

Monitoring of the plume's leading edge continues on the western portion of the site. Absorbent boom, containment boom, and hay bails have been installed to prevent the further spreading of product towards the edge of the containment area.

A 100' x 100' soil storage cell is being installed in the northern portion of the site in preparation for the excavation of contaminated soil from the wetlands. Construction is pending while awaiting approval by land owner.

Excavation is expected to begin by the end of the week.

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. On 12/22/2010, START issued a full HASP which supersedes the emergency HASP. The RP and their contractors are working under their own HASP.

OSHA inspected the site on 12/16 -17 with the Buckeye and no health and safety issues were noted.

New Avenue was reopened on 12/18/10. Buckeye hired contractors to meet federal requirements for construction areas.

Extreme cold weather (below 0F) conditions are a major safety factor and are being addressed on a day to day basis.

2.6 Liaison Officer

2.7 Information Officer

2.7.1 Public Information Officer

USEPA contact is Jayna Legg

2.7.2 Community Involvement Coordinator

USEPA contact is Don Deblasio

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)

START – 2 (day ops)

RP and contractors – 60

IEPA – 2

USFWS - 2

5. Definition of Terms

CTEH = Center for Toxicology and Environmental Health
DOT = Department of Transportation
HASP = Health and Safety Plan
IC = Incident Commander
IDNR = Illinois Department of Natural Resources
IEPA = Illinois Environmental Protection Agency
OSC = On-Scene Coordinator

PHSMA = Pipeline and Hazardous Materials Safety Administration
ppm = parts per million
RP = Responsible Party
START = Superfund Technical Assessment and Response Team
USACE = United States Army Corps of Engineers
U.S. EPA = United States Environmental Protection Agency
USFWS = United States Fish and Wildlife Services
yd³ = cubic yards

6. Additional sources of information

6.1 Internet location of additional information/report

6.2 Reporting Schedule

POLREPS will be provided every Wednesday throughout the duration of the response.

7. Situational Reference Materials

NRC Report #895256
NRC Report #962178
NRC Report #962179