

United States Environmental Protection Agency
Region I
POLLUTION REPORT

Date: Monday, June 28, 2004

From: Gary Lipson

Subject: note: this is actually the seventh POLREP, due to a typographical error, the fourth POREP was accidentally titled POLREP #5
Roosevelt Drive Oil Site
140 Roosevelt Drive, Derby, CT
Latitude: 41.3228000
Longitude: -73.0958000

POLREP No.:	8	Site #:	696
Reporting Period:		D.O. #:	
Start Date:	8/25/1994	Response Authority:	OPA
Mob Date:		Response Type:	Time-Critical
Demob Date:		NPL Status:	
Completion Date:		Incident Category:	Removal Action
CERCLIS ID #:		Contract #	
RCRIS ID #:		Reimbursable Account #	01R0X08302D91CHRZ108
FPN#	014504		

Site Description

The site is located at 140 Roosevelt Drive in Derby Connecticut at the former site of the Hull Dye and Print industrial complex.

On August 25, 1994, USEPA received a call from the Connecticut Department of Environmental Protection (DEP), requesting access to the Oil Spill Liability Trust Fund, in order to conduct removal actions to prevent the continuing discharge of oil to the Housatonic River from the former Hull Dye facility located at 140 Roosevelt Avenue in Derby, Connecticut.

EPA OSC Thomas Condon responded to the scene, and opened FPN # 014504. The OSC and the NPFC Case Officer prepared a Pollution Removal Funding Authorization (PRFA), which was issued to the DEP for costs associated with recovery of the oil. DEP hired a cleanup contractor and initiated cleanup operations.

Oil was discharging to the river from beneath the river bed, and floating to the surface. Boom and absorbent materials were applied to the spill area, effectively containing the spilled oil on the River. The River is tidally influenced, and oil removal activities could not effectively be undertaken at high tide.

Sampling of the river bottom in the area of the discharge indicated that the river sediments were saturated with oil in an area approximately 30 ft. by 100 ft. The oil saturated sediments were present at thicknesses of up to 8 ft. Augured samples on the river bank indicated the presence of a large volume of oil floating on the groundwater.

A coffer dam was constructed around the area of sediment contamination. The oil soaked sediments were excavated and shipped off site for disposal. The excavation of the sediments released a large quantity of oil which was collected using a vacuum truck. In total 10,000 gallons of oil and 1,500 cubic yards of oil saturated sediments were removed.

An interceptor trench and recovery well system was installed to contain and collect the oil, thereby preventing the continued discharge to the river. The system has been operating continuously, and approximately 4,500 additional gallons of oil have been recovered.

Operation of this recovery system resulted in the minimization, but not complete elimination of the discharge to the river. A small amount of oil periodically bubbles up from beneath the tailrace. To control this release, boom and sorbents have been continuously maintained in the area around the tailrace.

On August 20, 1999, DEP received a report of an oil sheen on the river at the site. The sheen appeared

to be emanating from the tailrace of the facility. The oil recovery system was functioning properly, but it now appeared some of the oil was discharging to the river upgradient of the recovery trench. DEP and EPA initiated an investigation to attempt to better delineate the plume of oil, and to develop a plan to prevent the discharge. Several wells were installed and gauged. Information from the wells indicated that the oil was migrating under the facility (and under the tailrace) to the river. In addition, the investigation indicated that the plume extended onto an adjacent property

Based upon the information generated, plans to construct a recovery system in the suspected source area were developed, and removal operations began on December 6, 1999.

First, the 400,000 gallon above ground storage tank was dismantled and removed. Then the 20,000 gallon underground day tank was excavated and removed. The removal of the day tank revealed the apparent source of the release to be an underground pipe between the day tank and the pumphouse. During operation of the facility, oil in the pipe would have been heated and under pressure. Because the leak was underground, it apparently went undetected over an extended period of time. Also, due to the inefficiency of #6 oil boiler systems, detection of an inventory loss would have been unlikely.

Prior to excavating, a series of ten 10 inch diameter wells were installed surrounding the planned trench excavation. These wells were then pumped to depress the water table in the area to be excavated. The pumped water was sent through a treatment system consisting of an oil water separator and frac tanks, and then discharged to the river.

The trench was excavated, approximately 350 feet in length, and 25 to 30 feet deep. Several unexpected problems were encountered during the installation of the trench. The soil was less stable than expected, and specialized shoring equipment was needed to excavate the trench. Also, the groundwater recharged faster than expected. A larger groundwater treatment system than was originally planned was necessary. In addition, a large underground structure (believed to be a steam box) was encountered running along the path of the trench. The structure was constructed of steel reinforced concrete. Removal of the structure was difficult and time consuming.

Approximately 4,276 tons of oil contaminated soil which had been excavated was shipped off site for disposal by thermal desorption. In addition approximately 8,000 gallons of oil was recovered during the excavation and shipped off site to be recycled.

A series of five 24 " diameter recovery wells were installed in the trench, and the trench was backfilled with pea stone.

An oil recovery system was designed utilizing the five recovery wells. Each of the wells contains a submersed pump to suppress the groundwater table and enhance the flow of oil into the recovery well. The groundwater is pumped to frac tanks, and then treated with activated carbon prior to discharge to the River. Each of the recovery wells contains a skimmer which recovers oil which is then accumulated in a storage tank and subsequently shipped off site to be recycled.

System installation began in May 2000, and was completed in August 2000. The system has been operating since that time, and to date the system has recovered approximately 130,000 gallons of oil.

Over time there is an apparent trend toward increased oil seepage into the tail race. Possible causes of this are scouring of the bottom of the tailrace as a result of previous operation of the turbines, and a water main break along Roosevelt Drive during the summer of 2003. The oil seepage continues to be contained and recovered using boom and sorbents. EPA and DEP are evaluating the possibility of taking action to more effectively control the oil in this area.

Current Activities

EPA and DEP have determined that an assessment of the current subsurface free product contamination at the site should be conducted. The assessment would better establish the extent of the remaining oil product in the ground, investigate the possibility of additional oil sources, and help determine the appropriate course of action with regard to future work at the site.

The OSC has requested the assistance of ERT and their Response Engineering and Analytical Contract personnel in conducting the investigation. A scoping meeting was held on site on June 8. On site work is planned for July and August.

During the June 8 site visit several problems were identified with the source area recovery system. The

contractor was notified of the situation, responded to the site identified the source and nature of each problem and made the appropriate repairs to the system. DEP has directed the contractor to submit a written report documenting the causes of the system malfunctions and the actions taken to restore the system to its proper operating condition. In addition, DEP is developing detailed protocols for periodic inspections of the recovery systems.

Planned Removal Actions

The OSC and DEP will coordinate removal activities to the extent that the exigencies of the situation require. Actions are anticipated to include: continued operation of the original oil recovery system to remove the oil which is posing a threat to the river, and continued operation of the second recovery system.

Next Steps

Upon completing the subsurface free product investigation, ERT and REAC will generate a report of their findings. After reviewing the data, EPA and DEP intend to meet to identify what actions should be taken at the site, and evaluate how to make best use of state and federal resources.

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