United States Environmental Protection Agency
Region X
POLLUTION REPORT

Date: Monday, May 19, 2003
From: Andrew Smith

Subject: Initial POLREP
Fort Hill Gasoline Release to South Yamhill River
25850 Salmon River Highway, Fort Hill, OR
Latitude: 45.0600000
Longitude: -123.5592000

POLREP No.:	1	**Site #:**	Z0A2
Reporting Period:		**D.O. #:**	
Start Date:	5/7/2003	**Response Authority:**	OPA
Mob Date:	5/6/2003	**Response Type:**	Emergency
Demob Date:	5/9/2003	**NPL Status:**	Non NPL
Completion Date:		**Incident Category:**	Removal Assessment
CERCLIS ID #:		**Contract #**	(ERRS)68-S7-01-64
RCRIS ID #:		**Reimbursable Account #**	
FPN#	E03011		

Current Activities

I. Site Information

A. Incident Category

Emergency Response Action

B. Site Description

1. Site Location

The gasoline release site is located in Fort Hill, Oregon, approximately 8 miles west of Sheridan, Oregon, and approximately 26 miles east of Lincoln City, Oregon. The site includes the western bank of the South Yamhill River, and is located adjacent to a bridge where highway 18 crosses the South Yamhill River. The street address of the property where the release occurred is 25850 Salmon River Highway, Fort Hill, Oregon. The property owner is Mr. Larry Hofenbredle. Mr. Hofenbredle operates a small timber company on the property in addition to his residence.

2. Description of Threat

The gasoline release occurred beneath a small shed with a gasoline pump. Two 1000-gallon above-ground storage tanks (ASTs) are located next to the shed. One tank holds diesel fuel and the other holds unleaded gasoline. The diesel fuel is dispensed next to the diesel tank itself while the unleaded gasoline is dispensed from a pump inside the shed. A transfer pipe which runs from the gasoline tank to the shed ran underground for about 10 feet to the pump inside the shed. Gasoline appears to have been leaking through two small (< 1mm) holes in the corroded transfer pipe into shallow surface soils and vertically to shallow groundwater. The owner dug up the buried pipe and has replaced it with an aboveground pipe.

Because the holes are so small, it is speculated that the leak must have been ongoing for a long time and the seeping of fuel was provoked by the rise in groundwater level due to the heavy rainfall.

The release is migrating underneath the site on the local surface water table. The surface water table occurs at approximately 8-feet to 11-feet below ground surface (BGS) across the site and is at least 6 feet thick. The water table occurs in mostly silty sands and appears to be underlain by bedrock (basalt). The continuity and degree of fracturing of the bedrock is not known at this time. The distance from the shed to where the fuel is seeping into the river is about 75 yards.

A threat to navigable waterways exists to the South Yamhill River due to seepage of gasoline from the riverbank, at the river's edge. The seep occurs on the property described in section 1. Free product (immiscible clear fluid) and sheen are discharging from the riverbank at a very slow rate producing a visible sheen near the bank. The river flow is relatively swift and rapids occur immediately downstream from seep location. There is evidence of wildlife in the area of the seep, including swimming geese and riverbank-burrowers.

A 12-inch pressurized natural gas transmission pipeline is also threatened by the release. The pipeline transits underneath the site at approximately 5-feet to 6-feet BGS from east to west. The pipeline is coated by a protective tar layer that can be degraded by a solvent such as gasoline. The gasoline plume in groundwater appears to be intersecting part of the pipeline near the riverbank.

C. Notifications

Complaints of petroleum odors were made by residents near the spill site up to 3 weeks prior to EPA's notification. The complaints were made to local emergency dispatch, but the source of the odors was not found.

DEQ was notified of the release through Oregon's Emergency Response System (OERS). The spill was reported to OERS by Northwest Natural Gas on May 5, 2003.

DEQ notified EPA on May 6, 2003.

II. Response Information

A. Situation

1. Initial Situation

May 6, 2003 (Tuesday): EPA OSC Michael Boykin notified START to be ready to respond to a gasoline seep near a natural gas transmission line that was reported near Fort Hill, Oregon. OSC Boykin mobilized START at approximately 1200 hours (noon). Two START members (STMs) arrived at the spill site at 1500 hours and rendezvoused with 2 responders from the Willamina, Oregon fire department. START, with the fire department, investigated both sides of the riverbank near the natural gas pipeline crossing. No evidence of seepage was noted on the east bank, but seepage was very apparent on the west bank. The fire department had earlier deployed sorbent boom around the seep, and START verified that the boom was placed as effectively as possible. After relaying site information to OSC Boykin, START returned to Portland. OSC Boykin handed off the response to OSC Michael Sibley at approximately 1700 hours. OSC Sibley requested one STM to return the following morning (May 7, 2003) at 0800 to meet DEQ State OSC Wes Gebb.

May 7, 2003 (Wednesday): One STM, DEQ SOSC Gebb, Foss Environmental, and Northwest Natural Gas met at the site at 0800. EPA OSCs Sibley and Andy Smith and ERRS arrived later at the site. Initial response activities included deploying skirt boom and additional sorbent around the seep area, requesting emergency utility locates, coordinating response activity with the Willamina Fire Department and Northwest Natural Gas containment crew, and further reconnaissance of the site. After ERRS and their excavator arrived on site, an investigation around Mr. Hofenbredle's pump was conducted, with Mr. Hofenbredle's permission. Petroleum free product was soon discovered floating on surficial groundwater immediately next to the shed. The site investigation then proceeded on the assumption that Mr. Hofenbredle's ASTs were the source of the seep on the South Yamhill River.

START initially provided assistance to SOSC Gebb until EPA arrived on site. START provided documentation assistance, offered to assist in establishing ICS, and provided some recommendations, such as notification to interested parties (natural resource agencies, tribal stakeholders). SOSC Gebb declined to establish ICS. Mr. Hofenbredle also noted that DEQ had inspected his ASTs recently and did not recommend any corrective action.

ERRS proceeded to excavate trenches across Mr. Hofenbredle's field (the site) to determine the approximate lateral extent of free product. ERRS also exposed the natural gas pipeline in two locations to determine if free product was migrating along the pipeline bedding. ERRS found that free product had a relatively wide extent, was migrating along surficial groundwater, and did not follow the pipeline bedding.

START contracted a push-probe rig and crew from the Portland, Oregon area, and began probing late in the day. START and the probe crew delineated the upgradient boundary of the petroleum free product plume with 3 borings.

START also collected a free-product sample from the trench next to the shed for laboratory hydrocarbon identification and analysis of MTBE.

START, ERRS, and the OSCs stopped work for the night at approximately 1900 hours.

May 8, 2003 (Thursday): Two STMs, ERRS, and OSCs Smith and Sibley arrived on site at 0800 to continue response activity at the site. ERRS continued trenching, and began designing temporary wells to place in the trenches for the purpose of short term free product extraction. START, using the push-probe crew, began delineating the cross-gradient (lateral) boundaries of the free product plume.

ERRS proposed installing a series of extraction wells across the width of the plume near the river's edge. These wells were intended to extract free product from the surficial water table, and to reduce the volume of free product seeping into the South Yamhill River. The wells were planned to be constructed of wide-diameter slotted pipes installed vertically in the field. These wells were intended to be used temporarily, for emergency mitigation activities.

ERRS also assumed river-seep booming and clean up activities from Foss Environmental. ERRS installed their own skirt boom and replaced sorbent materials as necessary.

START delineated approximately two-thirds of the lateral plume boundaries. Three transects, north to south, across the plume were investigated. Borings were located to coincide with the anticipated plume boundary, and were extended outward, or inward, as required to locate the approximate outer extent of the free product plume. The outer limit of boring was extended until no sheen, or only light sheen was encountered in groundwater. Each boring was logged for lithology, PID readings, and a visual sample of groundwater (for sheen or free product detection). The borings representing the "clean" edge of each transect was sampled for laboratory BTEX analysis to confirm visual observations and PID readings.

START also collected one sample from the river-seep for laboratory hydrocarbon identification and MTBE analysis.

START and ERRS demobilized from the site for the night at approximately 1730 hours. EPA demobilized from the site to Seattle, Washington.

May 9, 2003 (Friday): START and ERRS arrived on site at 0800 hours to continue response activities from May 8, 2003. ERRS resumed tending of the river-seep, and constructed a small weir around the seep to aid in free product containment and clean-up.

ERRS completed the extraction wells during the day. ERRS began by slotting 12" diameter pipe for use in constructing the wells. A trench in the appropriate position for each well was prepared and filled with a layer of clean gravel. The 12" pipe was then placed vertically in the trench and additional gravel was placed to cover the slotted portion of the pipe. A two-foot collar of bentonite was then placed and the remaining space was backfilled with excavated soils. Finally, the pipe was cut off approximately a foot off the ground and capped.

START completed delineation of the lateral extent of the free product plume boundary with the push-probe crew. The push-probe results seem to indicate that the interior of the plume is not uniformly free product, but is discontinuous. However, additional investigation would be required to better define the behavior of the interior of the plume. This additional investigation is outside the scope of the immediate emergency response measures, but should be considered as part of future remedial or removal actions.

START also collected two continuous cores to 20-feet BGS for geotechnical analysis. The cores were limited to 2-inch diameter, 4-foot long segments, because of the use of the push-probe. Cores were appropriately marked, and will be transported to Seattle, Washington for further analysis by START.

Finally, START conducted a GPS survey of boring locations, extraction wells, and pertinent site features. The survey will aid in devising a site remediation plan. Analytical samples were also delivered to North Creek Analytical laboratory.

START demobilized from the site at approximately 1500 hours. START plans to meet on site with ERRS on Monday, May 12, 2003 to assess the success of the emergency mitigation measures. START will also begin developing a remediation plan and analyzing the data collected during the emergency site investigation.

2. Removal Actions to Date

No removal of site soils, except soils incidental to push-probe borings, has occurred to date.

Groundwater has been removed using suction pumps in open trenches (before the trenches were backfilled) and in extraction wells. Extracted water was pumped into a portable tank placed on site by ERRS.

Free product discharged at the river-seep has been removed using sorbent pads and boom. The recovered free-product and sorbents have been bagged and are presently stored on site pending disposal.

ERRS plans to continue removal actions until otherwise directed by EPA.

3. Enforcement

Presently, there are no plans for enforcement actions in this incident.

B. Planned Response Activities

Removal activities are planned to continue as discussed in section A (2) by ERRS.

START plans to develop a site remediation plan.

Planned Removal Actions
To be determined

Next Steps
EPA will meet with START and ERRS contractors to review information from monitoring the wells and the rate of gasoline seep into the river. It needs to be determined if additional removal actions need to be taken. The Potential Responsible Part has requested to resume responsibility for monitoring the wells and removing product. He is sending an employee to take a 40-hour HAZWOPER course. The PRP will be included in planning process.

Estimated Costs *

	Budgeted	Total To Date	Remaining	% Remaining
Extramural Costs				
ERRS - Cleanup Contractor	$100,000.00	$49,000.00	$51,000.00	51.00%
RST/START	$20,000.00	$6,000.00	$14,000.00	70.00%
Intramural Costs				
USEPA - Direct (Region, HQ)	$30,000.00	$6,000.00	$24,000.00	80.00%
Total Site Costs	$150,000.00	$61,000.00	$89,000.00	59.33%

* The above accounting of expenditures is an estimate based on figures known to the OSC at the time this report was written. The OSC does not necessarily receive specific figures on final payments made to any contractor(s). Other financial data which the OSC must rely upon may not be entirely up-to-date. The cost accounting provided in this report does not necessarily represent an exact monetary figure which the government may include in any claim for cost recovery.

Disposition of Wastes
Wastes generated from the cleanup are presently stored on site pending classification and disposal.