United States Environmental Protection Agency
Region X
POLLUTION REPORT

Date: Saturday, November 25, 2006
From: Jeffry Rodin

To: Jeff Fowlow, Ecology & Environment, Inc. Steven Merritt, Ecology & Environment, Inc.

Subject: Preparing for Contaminated Soil Removal
PSE Crystal Mountain Diesel Spill
Crystal Mountain, WA
Latitude: 46.9430000
Longitude: -121.4740000

POLREP No.:	6	**Site #:**	Z0BR
Reporting Period:		**D.O. #:**	
Start Date:	11/4/2006	**Response Authority:**	OPA
Mob Date:	11/4/2006	**Response Type:**	Emergency
Demob Date:	12/31/2006	**NPL Status:**	Non NPL
Completion Date:	2/28/2007	**Incident Category:**	Removal Action
CERCLIS ID #:		**Contract #**	
RCRIS ID #:		**Reimbursable Account #**	
FPN#	E07001		

Site Description

On November 3rd, 2006, a Puget Sound Energy (PSE) generator above ground storage tank (AST) was overfilled when automatic shutoff valves failed. The storage tank is filled by three 12,000 gallon underground storage tanks (UST's). It is estimated that 18,000 gallons of diesel fuel spilled onto the generator pad and drained downhill into a drainage ditch which flows under Crystal Mountain Drive to Silver Creek and the diesel fuel spilled down an access road close to ¼ of a mile in distance. The fuel spilled at a rate of approximately 18 gallons per minute.

Temporary containment measures were implemented in an attempt to minimize fuel moving offsite towards Silver Creek. Containment measures include a series of trenches, use of absorbent materials, and construction of an underflow dam with PVC pipes and earth. Additional interceptor trenches have been excavated to collect product seeping down gradient of the generator site.

Current Activities

Friday, November 17, 2006

- Silver Creek: A sediment sampling plan was outlined to assess the impacts of the fuel release to Silver Creek, including the stream channel and adjacent banks. Sediment assessment areas will include the areas of Silver Creek adjacent to the Seep Area, the Horse Camp sand flats and wetlands, and the area above the anadromous fish barrier approximately 3 miles downstream of the release site. A walk-though assessment will be conducted to determine the appropriate sample spacing.
- Power Generation Station: An exploration trench was excavated approximately 50 feet north of the intersection of the Powerline Access Road and PSE Generator Station Road. Free product was visible on the surface of the water that had entered the trench. Recovery of the water and fuel is planned for tomorrow morning when a vacuum truck is available.
- Lower Wetlands Area: A shallow drainage ditch was cut on the south side of the Silver Creek Access Road to direct water from the culvert under Crystal Mountain Boulevard. Sorbent booms and pads were placed in the ditch to capture fuel and visible surface sheen. An underflow dam was built where the road curves north and the ditch flows toward Silver Creek. Approximately 500 gallons of product and water were recovered with a vacuum truck from the interceptor trench at the Seep Area. Plans are pending to enlarge the recovery trench to approximately 150 feet to capture product along the seep area. Product and surface sheen recovery with sorbent pads and booms continued in the springs and feeder stream channels at the Seep Area, the ditch along the Silver Creek Access Road, and the stream flowing around the PSE Generator Station. Plans are pending to divert surface water around the PSE Generator Station.
- Powerline Access Road: A new road alignment is being constructed adjacent (west) of the current Powerline Access Road alignment to allow excavation of the fuel-impacted soils beneath the roadway. Tree removal and grading is underway. Soil boring and well installation continued, with borings placed at 100-foot intervals along the Powerline Access Road, and in locations between Crystal Mountain

Boulevard and Powerline Access Road. A 22 soil borings have been installed, and 17 monitoring wells have been installed.

Saturday, November 18, 2006

- Lower Wetlands Area: Plans were developed for an approximately 150-foot long by 10-foot wide rock-filled product recovery trench were developed. The trench will extend along the toe of the slope from the initial Seep Area trench southwest to the Silver Creek Access Road. The trench will be excavated down to bedrock which is expected to be at 6 to 7 feet. Improvements to the Silver Creek Access Road and tree cutting to accommodate the trench began. Approximately 12 feet of the northern end of Seep Area recovery trench was excavated. Five additional borings were drilled and five wells installing today including in the immediate vicinity of the diesel "seep" by Silver Creek. Plans have been made to install an interceptor trench at the oil "seep" area pending the diversion of surface water run-off from today's heavy rain and snow melt. The total number of wells installed is 19.
- Silver Creek: Sampling teams continue to collect sediment samples from downstream locations on Silver Creek to characterize diesel impacts to wetlands, shorelines, and gravel bars.
- Power Generation Station: The exploration trench near the Powerline Access Road/PSE Generator Station Road intersection was pumped out with a vacuum truck and backfilled. One monitoring well and three soil borings were installed along the Powerline Access Road and up-slope of Crystal Mountain Boulevard. A total of 18 wells and 25 soil borings have been completed to date.
- Powerline Access Road: Construction continued on the adjacent haul road parallel to the Powerline Access Road. This road will allow more efficient flow of traffic necessary to move the anticipated 12,000 cubic yards of material to build the road, and excavated contaminated soils and backfill with uncontaminated soil. Soil borings are continued to be installed to delineate vertical extent of soil contamination. A draft haul truck traffic plan was prepared to mitigate the traffic issues arising from contaminated soil removal and importing rock and aggregate.
- Drinking Water Sampling: Samples from 3 drinking water wells have been collected and analyzed on a daily basis. Thus far, all sample results have been "non-detect" for petroleum. Drinking water continues to be supplied to residents as requested (currently 4 residents). A summary of drinking water, surface water, and ground water sampling results is being finalized.

Sunday, November 19, 2006

- Powerline Access Road: Installation of the adjacent Haul Road is approximately 50% complete. Excavation of contaminated soil on the Powerline Access Road cannot begin until the Haul Road is complete. A total of 13 soil borings were completed along the Powerline Access Road. Soil boring activities in this area are now completed. Unified Command is awaiting soil sample analysis.
- Lower Wetlands Area: Work began on the expanded recovery trench in the Lower Wetlands Area. The removal of approximately 80 cubic yards of disturbed soil was required to build an access road ("Silver Creek Access Road") down to the site of the expanding recovery trench. Recovery of oil in the existing trench has reduced to approximately 4 bags of sorbent material per day. It is anticipated that installation of the expanded trench will enhance recovery.
- Power Generation Station: Two additional boreholes were installed. Assessment began to determine methods of isolating contaminated soil around the Generation Station from uncontaminated surface and groundwater emitting from the adjacent hillside.
- Silver Creek: Surface water sampling is ongoing on Silver Creek; 14 locations sampled today.
- Drinking Water: Domestic well sampling ongoing; 3 domestic wells sampled today. All previously collected domestic well samples have been analyzed as "non-detect" for petroleum.

Monday, November 20, 2006

- Powerline Access Road: Construction of the Haul Road is approximately 75% complete.
- Lower Wetlands Area: Construction of Silver Creek Access Road has been completed. Trees are being removed to accommodate the expanded recovery trench. Design change
- Power Generation Station: A french drain, designed to divert uncontaminated groundwater from contacting contaminated soil or groundwater near the Power Generation Station, was installed.
- Silver Creek: Surface water sampling is ongoing on Silver Creek; 14 locations sampled today.
- Drinking Water: Domestic well sampling ongoing; 3 domestic wells sampled today. All previously collected domestic well samples have been analyzed as "non-detect" for petroleum.

Tuesday, November 21, 2006

- Powerline Access Road: Construction of the Haul Road is approximately 90% complete. A french drain was installed to divert water emitting from the adjacent hillside from running into the soil excavation when it begins on the Powerline Access Road. UC agreed that Washington State Model Toxics Control

Act-Method A regulated concentrations for diesel (2,000 mg/kg) would be an appropriate action level for the soil removal along the Powerline Access Road. Soil analytical data from samples collected from the boreholes was made available to the UC. Based on a 2,000 mg/kg action level, it appears that the soil contamination along Powerline Access Road is greatest on the road surface and in isolated subsurface areas. Approximately 2.3" of product was recovered from MW-2 (southern end of Powerline Road near Generation Station).

- Lower Wetlands Area: Trees continue being removed to accommodate the expanded recovery trench. Two test borings were completed to determine the depth to bedrock and to check for the presence of diesel in fractures.
- Power Generation Station: An interception trench was installed downgradient of the Power Generation Station to collect and treat diesel and contaminated groundwater.
- Silver Creek: Surface water sampling is ongoing on Silver Creek; 14 locations sampled today.
- Drinking Water: Domestic well sampling ongoing; 3 domestic wells sampled today. All previously collected domestic well samples have been analyzed as "non-detect" for petroleum.

Wednesday, November 22, 2006

- Powerline Access Road: Construction of the Haul Road is approximately 100% complete. Approximately 3" of product was recovered from MW-2 (southern end of Powerline Road near Generation Station).
- Lower Wetlands Area: Trees continue being removed to accommodate the expanded recovery trench. One test boring was completed to determine the depth to bedrock and to check for the presence of diesel in fractures.
- Power Generation Station: The "clean" water diversion culvert was completed which directs uncontaminated water away from contaminated soil and groundwater associated with the Power Generation Station
- Silver Creek: Surface water sampling is ongoing on Silver Creek; 22 locations sampled today.
- Drinking Water: Domestic well sampling ongoing; 3 domestic wells sampled today. All previously collected domestic well samples have been analyzed as "non-detect" for petroleum.
- Monitoring Wells: Groundwater samples from 12 monitoring wells were collected today.
- Soil Removal: Four truck loads of contaminated soil from the Powerline Access Road and Power Generation Station were removed off site.

Planned Removal Actions

- PSE will continue to recover product from the ground and maintain all spill control measures.
- PSE will continue surveying and conducting soil borings.
- PSE plans to continue daily water sampling for both drinking water and surface water.
- Excavation of the Powerline Access Road begins on Friday at 1000.
- Installation of the expanded recovery trench in the lower wetlands area.

Next Steps

- Continuation of soil borings and site geology characterization.

Key Issues

- Awaiting results of geophysical site investigation in hopes of identifying large pockets of petroleum product and/or contaminant transportation pathway.

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