

U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Pier 99 - Portland - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Region X

Subject: POLREP #7
Special Report #1
Pier 99 - Portland

Portland, OR
Latitude: 45.6063108 Longitude: -122.6825854

To:

From: Angie Zavala, OSC

Date: 7/18/2014

Reporting Period: 01/27/2014 to 7/18/2014

1. Introduction

1.1 Background

Site Number:	10KM	Contract Number:	
D.O. Number:		Action Memo Date:	8/15/2013
Response Authority:	CERCLA	Response Type:	Non-Time-Critical
Response Lead:	PRP	Incident Category:	Removal Action
NPL Status:	Non NPL	Operable Unit:	
Mobilization Date:	9/9/2013	Start Date:	9/9/2013
Demob Date:		Completion Date:	7/14/2014
CERCLIS ID:	ORN001002699	RCRIS ID:	
ERNS No.:		State Notification:	
FPN#:		Reimbursable Account #:	

1.1.1 Incident Category

CERCLA - non-time critical removal action.

1.1.2 Site Description

Refer to initial PolRep for a discussion of the site conditions and background.

1.1.2.1 Location

The site is located at 1610 North Pier 99 Street in Portland, Oregon on the bank of the Columbia River.

1.1.2.2 Description of Threat

Refer to initial PolRep.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Refer to initial PolRep.

2. Current Activities

2.1 Operations Section

2.1.1 Narrative

During the removal action in September 2013, several confirmation samples were taken after excavation, as indicated in the work plan. Towards the end of the removal action, Apex, the PRP contractor, continued with the removal and restoration activities at the site without having the confirmation results from two areas: the area where burned materials were removed (REX-16) and the area near the stairs (RAC-2). The confirmation samples from REX-16 and RAC-2 were both collected during the first week of October.

All removal and restoration activities at the site were completed as of 10/10/2013.

The analytical results from confirmation samples from locations RAC-2 and REX-16 indicated the presence of lead at concentrations that exceeded the established cleanup criteria for the site. After consultation with an EPA Risk Assessor, EPA attorneys, and the ODEQ representative, the OSC determined that additional work at the site was required.

The PRP Contractor did not agree with the EPA OSC decision and he presented an argument to avoid conducting more work at the site. He asked the OSC to discuss the applicability to incorporate a Reasonable Maximum Exposure (RME) approach (also referred to as the high-end or upper bound approach) into the evaluation of whether the removal action objectives (RAOs) have been achieved. He noted that the Oregon's Hazardous substance remedial action rules and EPA risk assessment guidance

define the RME as either the 90% or 95% upper confidence limit of the mean. He explained that the 90% UCL was calculated to be 580 mg/kg and 95% UCL was calculated to be 665 mg/kg, both below EPA's RML of 800 mg/kg. He presented these calculations in Appendix G of the underdevelopment Removal Action Report. He claimed that when the data was evaluated using an RME approach, it indicated that the first RAO has been achieved.

After consultation with an EPA Risk Assessor, EPA attorneys, and the ODEQ representative, it was determined that this approach does not apply to the site. As the EPA risk assessor, Mar Stifelman, said "Generally, EPA makes decisions based on an Exposure Point Concentration defined as a 95% upper confidence limit on the mean, but lead is the exception to the rule. Because lead cleanups are based on predicted geometric mean blood lead levels, the EPC is a Central Tendency Estimate, defined as an average. We still protect at an RME level by estimating the 95th percentile blood lead by applying a Geometric Standard Deviation to the Geometric Mean". In addition, this approach was not included in the work plan. Even more, when this approach is taken, there are certain requirements that need to be taken into consideration when this approach is used, such as using Incremental Sampling Methodology, numbers of samples collected, etc.

The PRP was informed of this determination and given two options to address the two areas.

Option #1. The contaminated soil could remain in place with same conditions as outlined in the work plan submitted on September 26, 2013.

Option #2: Remove the contaminated soil from both of these areas. Collect confirmation samples from each area, backfill each area with clean soil, and re-vegetate the area. One-year monitoring and maintenance should be conducted as described in the Proposal for Monitoring and Maintenance Plan (dated 17 February 2014).

2.1.2 Response Actions to Date

Option #2 was chosen and a proposed work plan was submitted to EPA on May 16, 2014. After review, the work plan was accepted and the limited removal was scheduled to be conducted on June 26, 2014. The soil removal was conducted on June 30, 2014. The reason for the schedule delay is discussed further in Section 2.2.2 below.

On June 30, 2014, the EPA OSC and one START personnel traveled to the site to conduct oversight of the limited soil removal activities. APEX and their subcontractor were already on-site. The soil removal had been started in the RAC-2 and REX-16 locations. Soil in the RAC-2 location was removed to 1 foot below ground surface (bgs). The EPA OSC requested that soil be removed to 1 foot below the lowest level of the previously placed sand material to ensure residual contamination removal criteria (as outlined in the proposed work plan). This request was complied with. After additional soil material was removed, a field-portable x-ray fluorescence (XRF) unit was used to evaluate the effectiveness of the removal on the side walls as well as the floor of the excavated area. Based on the XRF results, additional soil was removed from the area until results on the XRF indicated lead levels were below 800 parts per million (ppm). Following this, a 9-point composite sample (1 from each of the 4 side walls and five from the excavation floor) was collected for off-site fixed laboratory analysis for lead (REX-18).

The soil in the area of REX-16 as proposed in the Work Plan was removed and the same XRF technique was employed to determine contamination levels. Based on these results, the northern portion of the excavation was extended to the silt fence. Once the silt fence was reached, no further removal could be conducted based on Peninsula 1 Drainage District restrictions. The total depth of the excavation near the silt fence was a total of approximately 28 inches in depth. It appeared that a layer of clean fill material approximately 6 inches thick was over the layer of debris and contaminated soil. The integrity of the bank was considered and it was determined that no additional excavation in the area would be conducted. At this time, excavation activities ceased.

The following confirmation samples were collected from the REX-16 excavation area on July 2, 2014:

- In the northernmost excavation area along the south side wall, a 3-point composite sample from 18 to 20 inches bgs were collected. (REX-21)
- In the northernmost excavation area along the south side wall, one grab sample from 6 to 12 inches bgs was collected. (REX-20)
- Along the northern trench area, a 5-point composite sample along the floor was collected. (REX-22)
- Along the main excavation area, a 10-point composite sample consisting of the following parameters, was collected. (REX-19)
 - 2 locations along both the east and west sidewalls.
 - 1 location on the southern sidewall.
 - 5 locations along the excavation floor.

The samples were submitted for off-site fixed laboratory analysis for lead.

Sample results from REX-20 grab sample indicated lead levels to be below the established cleanup level. Sample results from the RAC-2 area (REX-18) indicate lead levels below the established cleanup level. The remaining composite samples, REX-19, REX-21, and REX-22 all contained lead at concentrations that exceed the RML at concentrations that ranged from 950 mg/kg (REX-19) to 6,460 mg/kg (REX-22). Please see attached document "Burn Area Removal Sketch".

2.2 Planning Section

2.2.1 Next Steps

The Proposal for Monitoring and Maintenance Plan (attached) was submitted to EPA on 17 February 2014. The plan stated that monitoring at the site (consisting of a visual inspection of the bank) had been

conducted monthly since December 2013. The plan proposed conducting additional monitoring of the bank through May 2014 with a final inspection to be conducted in October 2014. The plan also proposed the submission of inspection reports to EPA in April, July, and November 2014 of the results of their bank inspections. The proposed maintenance consisted of ground repairs if sloughing or subsidence is observed and removal of blackberry bushes should they reappear on the bank. A revised proposal was submitted to EPA on 18 June 2014 and included updated tasks that had been completed by the owner to include:

- Maintenance of the working silt fence erosion controls;
- Removal of blackberry bushes in June 2014; and
- Installation of a wire fence around RAC-2 area to restrict access and encourage grass growth.

After the one-year monitoring has been conducted, EPA will reassess site conditions to determine whether any Long Term Post Removal Site Controls will be necessary.

2.2.2 Issues

1. The confirmation samples results from locations (RAC-2 and REX-16) were not received until after demobilization on September 9, 2013.
2. These locations needed additional work.
3. The PRP proposed not to conduct additional work on the two locations based on an Exposure Point Concentration defined as a 95% upper confidence limit on the mean.
4. The EPA provided two options to the PRP that would allow the additional removal action to be completed. The removal activities were delayed while the options were evaluated by the PRP. It took several conference calls with the PRP, PRP's contractor, and sometimes the site attorney to clarify the goals of each option and the differences between them.
5. The EPA OSC, ODEQ representative, and START contractor traveled to the site on June 26, 2014 for the scheduled removal activities. After arrival at the site, a message was received from the RP consultant (John Foxwell, Apex) that work at the site was being delayed due to wet weather. Mr. Foxwell proposed Monday, June 30 to conduct the removal activities and sampling. The ODEQ representative was not able to attend removal, sampling, and backfill operations the week of June 26, 2014 due to schedule conflicts.
6. ODEQ received the confirmation results from the entire bank and expressed concerns regarding the concentrations of some detected analytes. The EPA OSC addressed all of these concerns in an email attached named "Email to ODEQ Addressing Concerns on the Pier 99 Site Removal Action.pdf"
7. The soil removal activities were completed on June 30, 2014. More than anticipated soil removal was conducted; therefore, confirmation soil sampling in the REX-16 area was not conducted. Mr. Foxwell, requested that sample collection activities for this area be conducted on July 1, 2014 due to a scheduling conflict. The OSC concurred that sampling activities could occur on July 1. However, the sampling activities occurred on July 2.

2.3 Logistics Section

No information available at this time.

2.4 Finance Section

No information available at this time.

2.5 Other Command Staff

No information available at this time.

3. Participating Entities

3.1 Unified Command

N/A

3.2 Cooperating Agencies

ODEQ personnel were on-site on June 26 but were not available to be present for the removal activities on June 30.

4. Personnel On Site

Personnel on-site for the June 30, 2014 removal activities included:

- EPA OSC Angie Zavala
- One START personnel
- One APEX (RP consultant)
- Four APEX subcontractors
- The owner of the property (PRP)

5. Definition of Terms

EPA- Environmental Protection Agency

MCDD- The Multnomah County Drainage District
OSC- On-Scene Coordinator
E&E, Inc- Ecology and Environmental Inc.
START- Superfund Technical Assessment & Response Team
PVC- Poly Vinyl Chloride
ODEQ- Oregon Department of Ecology Quality

6. Additional sources of information

No information available at this time.

7. Situational Reference Materials

No information available at this time.