U.S. ENVIRONMENTAL PROTECTION AGENCY
POLLUTION/SITUATION REPORT
Lapwai School District Dry Well - Removal Polrep
Final Removal Polrep

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**
**Region X**

**Subject:** **POLREP #4**
**FINAL**
**Lapwai School District Dry Well**
**10LT**
**Lapwai, ID**
**Latitude: 46.3963900 Longitude: -116.8043200**

**To:**
**From:** Greg Weigel, OSC
**Date:** 9/18/2014
**Reporting Period:**

## 1. Introduction

### 1.1 Background

| | | | |
|---|---|---|---|
| **Site Number:** | 10LT | **Contract Number:** | |
| **D.O. Number:** | | **Action Memo Date:** | |
| **Response Authority:** | CERCLA | **Response Type:** | Time-Critical |
| **Response Lead:** | EPA | **Incident Category:** | Removal Action |
| **NPL Status:** | Non NPL | **Operable Unit:** | |
| **Mobilization Date:** | 2/24/2014 | **Start Date:** | |
| **Demob Date:** | 3/2/2014 | **Completion Date:** | |
| **CERCLIS ID:** | IDN001003088 | **RCRIS ID:** | |
| **ERNS No.:** | | **State Notification:** | Yes |
| **FPN#:** | | **Reimbursable Account #:** | |

#### 1.1.1 Incident Category

EPA-lead CERCLA Removal Site Investigation and PRP-lead cleanup under UAO.

#### 1.1.2 Site Description

The Lapwai School District performs maintenance and repair of school buses and equipment at the Bus Transportation and Maintenance facility. The facility contains a building with two repair bays and an office. In June 2012, the EPA Region 10 Underground Injection Control (UIC) Program conducted an inspection at the facility. The inspection identified a floor drain in the bus bay and a drain from a shop sink that emptied into a nearby dry well located underneath an asphalt parking lot next to the building.The dry well was made of concrete blocks and was 4' in diameter and 6' deep, with about 4 feet of sludge in it.

A sample of the dry well contents showed elevated concentrations in the well of chlorinated solvents and other VOCs including tetrachloroethylene at 22.5 milligrams/kilogram (mg/Kg), trichloroethylene at 168 mg/Kg. On the same property within approximately 110 feet of the contaminated dry well is one of two public drinking water supply wells installed and operated by the Bureau of Indian Affairs (BIA). The BIA wells supply drinking water for approximately 300 people in Lapwai, including the Lapwai Elementary School that is adjacent to the school district bus maintenance facility. The BIA wells were sampled in January 2013 for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs), including the contaminants found in the dry well. As of that time the BIA wells did not indicated any contamination associated with contaminants in the dry well.

On January 16, 2013 EPA Region 10 issued a CERCLA Unilateral Administrative Order (UAO) to the Lapwai School District, requiring removal of the dry well contents and the dry well itself, and cleanup of associated contaminated soils Work per the UAO was completed by the School District on February 5, 2012. Sample analytical results reported on February 25, 2013 indicated that high levels of TCE, PCE and some other VOCs remained in soils beyond the 14.5 foot extent of excavation. Excavation depth was limited by proximity of the excavation pit to the bus garage building footing.

On March 7, 2013 the OSC, the Lapwai School District and their contractor held a teleconference to discuss data and a proposed investigative approach to evaluate remaining contamination at the site. EPA had proposed an investigative approach that would require installation of soil borings and monitoring wells. The School District had scoped the cost of doing such work and had determined that they did not have the financial resources to carry on the necessary work, and requested that EPA take over the lead for additional necessary work at the site.

In June 2012, EPA mobilized to the site to perform a passive soil gas survey to inform an anticipated subsequent shallow subsurface soil and groundwater investigation. The soil gas survey included the installation of 49 passive shallow soil gas samplers deployed in a grid around the Site. The soil gas survey results indicated the presence of PCE and other VOCs in subsurface soil at the Site.

In February 2014, EPA mobilized to the Site to advance five soil borings and monitoring wells. A vapor intrusion investigation was also performed to assess the potential for VOCs to migrate from the subsurface soil into the nearest residence located 100 feet to the south of the property. In March 2014, groundwater samples were collected from the five monitoring wells and two municipal wells.

The results indicate that that PCE and other chlorinated VOCs are present in low concentrations in the subsurface of the site. However, the data show no impact to drinking water nor do concentrations of chlorinated solvents in shallow groundwater and unconsolidated soils appear to present an immediate threat to the BIA drinking water wells. Vapor intrusion results from the filed portable GC/MS and laboratory date indicate that there is not a completed contamination pathway from soil vapor to indoor air inside the residence for chlorinated VOCs from the former dry well source.

In July, the Nez Perce Tribe collected a second round of groundwater (5) and drinking water (2) samples at the Site. Low concentrations of PCE and TCE in the two impacted monitoring wells had dropped from the February sampling and there were again no detections in the two BIA drinking water wells. The data supported EPA's conclusion that residual contamination remaining in shallow groundwater and unconsolidated soils next to the former dry well do not appear to represent an immediate threat to the nearby drinking water wells.

#### 1.1.2.1 Location

The site address is 204 District Road, Lapwai, Idaho. The site is adjacent to the Lapwai Elementary School. The site property is owned by the Lapwai School District and is within the Nez Perce Tribal Reservation.

#### 1.1.2.2 Description of Threat

Chlorinated solvents (TCE and PCE) and other volatile organic compounds that contaminated the former dry well present a threat of vertical migration through vadose zone soils to groundwater. The contaminant that is most elevated above applicable screening levels is PCE. Penetration into the lower aquifer would contaminate a drinking water supply. TCE and PCE soil vapors can also migrate and present a threat of vapor intrusion into nearby occupied structures.

### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Analytical results of samples taken from the final excavation depth of 14.5 feet showed remaining PCE,TCE and other VOC contamination in unexcavated soils. In June, 2013 EPA mobilized to the site to perform a soil gas survey to assist with delineation of a possible chlorinated solvent groundwater plume within shallow unconfined groundwater. The survey included the installation of 49 passive shallow soil gas samplers deployed in a grid around the former dry well. The laboratory data showed elevated concentrations of PCE in soil vapors at the site, with the highest concentration at the former dry well and lower concentrations moving away in any direction. The data does not indicate a PCE contamination plume direction from the source. Within the footprint of PCE shallow soil vapors is the bus maintenance facility and offices, the BIA #1 municipal drinking water well, and a residential double-wide trailer that is on school district property but occupied privately by a family with children. The BIA #1 drinking water well is within approximately 110 feet of the former dry well. It was reportedly constructed in 1926 and there is no well log, nor is it known if the well is cased.

The results of the soil gas survey indicated the need to conduct additional assessment including soil boring and installation of monitoring wells necessary to characterize the threat of contaminant migration to the drinking water aquifer, and soil vapor intrusion survey to characterize potential indoor exposure of residents and building occupants within the PCE soil vapor footprint.

In February 2014, EPA mobilized to the Site to advance five soil borings and monitoring wells. A vapor intrusion investigation was also performed to assess the potential for VOCs to migrate from the subsurface soil into the nearest residence located 100 feet to the south of the property. Sampling showed shallow groundwater present in a thin saturated zone in the alluvium at the top of the weathered basalt bedrock. No PCE or other chlorinated solvents were detected above MCL concentrations any of the monitoring wells, including the well located nearest the former dry well source. Low concentrations of PCE were detected in two wells near the dry well source. No chlorinated solvents were detected in monitoring wells located nearest the BIA wells to the northeast of the former dry well location.

The soil and groundwater data did not suggest that chlorinated solvents in the shallow unconsolidated materials at the Site present an immediate threat to the BIA wells. Contaminant concentrations in the shallow groundwater apparently impacted by the dry well are low, and the impacted groundwater did not appear to flow toward the BIA wells, at the time of the sampling in March 2014.

## 2. Current Activities

### 2.1 Operations Section

#### 2.1.1 Narrative

In February 2013, the Lapwai School District contractor (Strata) performed a removal action in accordance with a CERCLA UAO, with EPA OSC oversight. The removal action consisted of removal of the dry well contents and dry well itself, and excavation of 30 cubic yards of contacting soils that showed contamination from visual observation and PID field monitoring results. The excavation pit reached a depth of 14.5 feet, when the OSC determined, in coordination with the Nez Perce Tribe and Lapwai School District, that it was not practicable to continue the excavation deeper for fear of potentially undermining the adjacent bus maintenance building, even though PID monitoring results continued to show contamination in soils and cobbles at the bottom of the pit. Samples were collected from the pit floor and side walls and the pit was

subsequently backfilled with clean soil.
Analytical results confirmed that high levels of PCE and TCE remained in soils beyond the 14.5 foot extent of excavation.

In March 2013, the Lapwai School District determined that they did not have the financial resources to carry on necessary additional investigation work to determine the extent of remaining contamination at the Site, and requested that EPA take over the lead for additional site investigation.

**2.1.2 Response Actions to Date**

**2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**
Owner and operator of the facility is the Lapwai School District.

**2.1.4 Progress Metrics**

| *Waste Stream* | *Medium* | *Quantity* | *Manifest #* | *Treatment* | *Disposal* |
|---|---|---|---|---|---|
| F002 Sludge | | 7 drums | | | |
| F002 Soils | | 26 tons | | | |
| Non-haz Soils | | 23 tons | | | |

**2.2 Planning Section**

**2.2.1 Anticipated Activities**
EPA anticipates no further activities at the Site.

**2.2.1.1 Planned Response Activities**

**2.2.1.2 Next Steps**

**2.2.2 Issues**

**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 Incident Command**
EPA

**3.2 Cooperating Agencies**
Nez Perce Tribe
Lapwai School District

**4. Personnel On Site**
No information available at this time.

**5. Definition of Terms**
No information available at this time.

**6. Additional sources of information**
No information available at this time.

**7. Situational Reference Materials**
No information available at this time.