

***Parcel 3***

Seven borings (GEI-3 through GEI-5, GEI-17, GEI-21, GEI-24, and GEI-25) were advanced to depths of 6 to 14 feet bgs on Parcel 3. Soils on the eastern portion of Parcel 3 generally consisted of sand, silt, and peat to a depth of approximately 7 to 10 feet bgs. Wood debris consisting of sawdust, wood chips, and shredded wood was encountered at approximately 10 feet bgs and deeper. Hydrogen sulfide-like odors were noted within the wood debris. Concrete and brick debris were encountered in boring GEI-3 from just below ground surface to 12.5 feet bgs, and in boring GEI-25 where drilling refusal was met at 5 feet bgs.

Evidence of potential petroleum contamination was noted in borings GEI-5, GEI-21, and GEI-24 as described in the Parcel 2 discussion, above. No field screening evidence of potential soil contamination was observed in borings GEI-3, GEI-4, GEI-17, or GEI-25.

**SOIL ANALYTICAL RESULTS**

The soil analytical data for the Port Uplands Area were evaluated in the RI report (GeoEngineers et al. 2008) by comparing the detected chemical concentrations directly to the protective soil concentrations that were considered in the development of the preliminary soil cleanup levels presented in Table 1 of the RI report. These protective soil concentrations include concentrations protective of direct human contact and terrestrial ecological receptors. The soil analytical data from the September 2008 supplemental soil investigation were evaluated in the same manner, as discussed below.

Locations at the Port Uplands Area where one or more constituents were detected in soil during the RI at a concentration exceeding the preliminary cleanup levels protective of direct human contact and terrestrial ecological receptors are shown in Figures 13 through 16 of the RI report. These figures have been updated with the September 2008 supplemental soil data, and are included in the Cleanup Action Plan (CAP) as Figures 3 through 6. The locations of preliminary soil cleanup level exceedances are displayed for four different depth intervals in the CAP figures: 0 to 2 feet bgs (Figure 3), 2 to 6 feet bgs (Figure 4), 6 to 10 feet bgs (Figure 5), and 10 to 15 feet bgs (Figure 6).

***Parcel 1***

The soil analytical results for Parcel 1 are summarized in Table A-1. Copper, lead, and zinc were detected at concentrations above the preliminary cleanup levels in soil between 2 and 6 feet bgs at boring GEI-15 (CAP Figure 4).

TCLP lead was analyzed in the soil sample obtained from 2 to 6 feet bgs at GEI-15; lead was not detected in the TCLP leachate.

***Parcel 2***

The soil analytical results for Parcel 2 are summarized in Table A-2. Diesel- and motor oil-range TPH were detected at concentrations above the preliminary cleanup levels in soil between 10 and 14 feet bgs at borings GEI-6 and GEI-23 (CAP Figure 6). At boring GEI-6, total cPAHs (toxicity equivalent quotient [TEQ]) also were detected above the preliminary cleanup level in soil between 10 and 14 feet bgs. The TPH detected at borings GEI-6 and GEI-23 appears to be connected with the area of petroleum contamination immediately west of the Seafarers' Park Building.

Total furans (TEQ) were detected at concentrations above the preliminary cleanup level in soil between 6 and 10 feet bgs at borings GEI-10 and GEI-13 (CAP Figure 5). Total dioxins (TEQ) were detected at a

concentration above the preliminary cleanup level in soil between 10 and 14 feet bgs at boring GEI-1 (CAP Figure 6). Copper was detected at a concentration above the preliminary cleanup level in soil between 10 and 14 feet bgs at borings GEI-1 and GEI-13 (CAP Figure 6).

### **Parcel 3**

The soil analytical results for Parcel 3 are summarized in Table A-3. Diesel-range TPH, copper, and zinc were detected at concentrations above the preliminary cleanup levels in soil between 6 and 14 feet bgs at boring GEI-24 (CAP Figures 5 and 6). Motor oil-range TPH also was detected at a concentration above the preliminary cleanup level at boring GEI-24, in soil between 6 and 10 feet bgs (CAP Figure 5). The TPH detected at boring GEI-24 appears to be connected with the area of petroleum contamination immediately west of the Seafarers' Park Building. Total furans (TEQ) were detected at concentrations above the preliminary cleanup level in soil between 6 and 10 feet bgs at boring GEI-5 (CAP Figure 5).

TCLP lead was analyzed in the primary and duplicate soil samples obtained from 10 to 14 feet bgs at GEI-24; lead was not detected in the TCLP leachate for either sample.

### **WATER ANALYTICAL RESULTS**

The analytical results for the groundwater and rinsate blank samples are summarized in Table A-4. Diesel- and motor oil-range TPH were detected at concentrations above the preliminary cleanup levels in the groundwater grab sample obtained from boring GEI-24.

Copper was detected at a concentration equal to the method reporting limit of 0.004 milligrams per liter in the rinsate blank sample. This detection is suspect, as copper had elevated spike recoveries in the laboratory control sample (107%), matrix spike sample (125%), and matrix spike duplicate sample (113%). No other analytes were detected in the rinsate blank sample.

### **SUMMARY**

The September 2008 supplemental investigation was conducted to address data gaps regarding the extent of soil contamination at the Port Uplands Area. The supplemental investigation data are combined with previous RI data in CAP Figures 3 through 6. A summary of constituents detected at concentrations above the RI preliminary cleanup levels in the September 2008 and previous soil samples collected at the Port Uplands Area is presented below.

- **0 to 2 feet bgs (CAP Figure 3).** Arsenic was the only constituent detected at concentrations above the preliminary cleanup levels. Arsenic exceeded the preliminary cleanup level at one location in Seafarers' Memorial Park on Parcel 3.
- **2 to 6 feet bgs (CAP Figure 4).** Metals (arsenic, lead, zinc, copper, and mercury), dioxins/furans, and cPAHs were detected at concentrations above the preliminary cleanup levels. Copper and dioxins/furans exceeded preliminary cleanup levels in the southern portion of Seafarers' Memorial Park on Parcel 3. Metals (arsenic, lead, zinc, and copper) and cPAHs exceeded preliminary cleanup levels at three locations at the southern end of "R" Avenue. On Parcel 2, cPAHs exceeded the preliminary cleanup level at two locations, copper and zinc exceeded preliminary cleanup levels at one location, and mercury exceeded the preliminary cleanup level at one location.
- **6 to 10 feet bgs (CAP Figure 5).** Diesel- and motor oil-range TPH, metals (arsenic, antimony, copper, lead, chromium, nickel, mercury, and zinc), dioxins/furans, polychlorinated biphenyls (PCBs), and cPAHs were detected at concentrations above the preliminary cleanup levels at multiple

locations on Parcels 2 and 3. Arsenic was detected at a concentration above the preliminary cleanup level at one location on Parcel 1.

- **10 to 15 feet bgs (CAP Figure 6).** Diesel- and motor oil-range TPH, metals (copper, lead, and zinc), dioxins/furans, and cPAHs were detected at concentrations above the preliminary cleanup levels at multiple locations on Parcels 2 and 3. TPH impacts are primarily located in an area west and northwest of the Seafarers' Park Building. With one exception (lead at location LSB-5), all of the metal exceedances in the 10 to 15-foot depth interval were south of the Seafarers' Park Building.

One of the objectives of the supplemental soil investigation was to provide data to evaluate the potential waste designation of lead-impacted soil that may be removed during future cleanup actions. TCLP lead analyses were performed on two primary soil samples (GEI15-2-6 and GEI24-10-14) and one field duplicate sample (DUP-2; duplicate of GEI24-10-14). These samples that had total lead concentrations of the order of 100 milligrams per kilogram (mg/kg) or greater. Lead was not detected above method reporting limits (0.4 to 4.0 milligrams per liter) in the TCLP leachate for these samples. These results suggest that soil at the Port Uplands Area with total lead concentrations as high as 680 mg/kg (the concentration reported in sample GEI15-2-6) likely would not exhibit the toxicity characteristic for lead, and thus would not be designated as a dangerous waste under Washington State Dangerous Waste Regulations (Washington Administrative Code Chapter 173-303-090).

## **REFERENCES**

- GeoEngineers et al. 2008. Final Remedial Investigation Report – Port Uplands Area, MJB North Area, and Marine Area, Former Scott Paper Company Mill Site, Anacortes, Washington. November 7, 2008.
- GeoEngineers. 2008. Final Supplemental Soil Investigation Sampling and Analysis Plan, Former Scott Paper Mill Site, Anacortes, Washington. September 4, 2008.

## **Tables**

- Table A-1. Soil Analytical Data Summary, Port Parcel 1 – September 2008  
Table A-2. Soil Analytical Data Summary, Port Parcel 2 – September 2008  
Table A-3. Soil Analytical Data Summary, Port Parcel 3 – September 2008  
Table A-4. Water Analytical Data Summary – September 2008

## **Figures**

- Figure A-1. September 2008 Supplemental Sampling Boring Locations

## **Attachments**

- Attachment 1 Boring Logs  
Attachment 2 Data Quality Assessment Summary