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January 6, 2012 Project No. 8006.31.01 Mr. Guy Barrett Washington Department of Ecology PO Box 47775 Olympia, Washington 98504-7775

Re: Former Park Laundry Site, Ridgefield Washington Agreed Order No.: DE 6829

Work Plan for Additional Site Characterization

Dear Mr. Barrett:

Maul Foster & Alongi, Inc. (MFA) has prepared this work plan on behalf of Union Ridge Investment Company (URIC) for the property located at 122 N. Main Avenue in Ridgefield, Washington (the Property) (see Figure 1). The first phases of the remedial investigation (RI) indicated that volatile organic compounds (VOCs) are present in soil and groundwater on the Property and on neighboring properties. The Property was historically used by Park Laundry, which may have performed dry cleaning operations that resulted in the release of tetrachloroethene (PCE).

To date, MFA has performed soil, groundwater, and soil-gas investigations in March 2010, October 2010, and most recently in June 2011 to characterize the nature and extent of contamination. The purpose of this letter and attachments is to discuss the results of the most recent round of site characterization activities and to make recommendations for additional data collection as required by the Washington State Department of Ecology. Investigations have included the evaluation of environmental media (i.e., soil, groundwater, and soil gas) for PCE and its degradation products (including trichloroethene [TCE], cis-1, 2-dichloroethene [DCE], trans-1, 2-DCE, and vinyl chloride).

SITE INVESTIGATION

In June 2011, borings were advanced to the north, northeast, and northwest of the Property to further delineate contamination in the uppermost water bearing zone (UWBZ). Borings advanced include GP68 through GP81 (see Figure 1). At Ecology's request, monitoring wells were installed on and hydraulically downgradient of the Property (MW-1 through MW-7) and additional soil-gas probes (SG11 through SG15) were advanced in areas with elevated concentrations of PCE in groundwater (i.e. near the Post Office Property; on Figure 1). Boring logs, field sampling data sheets, laboratory analytical reports, and a data validation memorandum were included in the August 29, 2011 data submittal to Ecology (MFA, 2011b).

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RESULTS

Soil

The soil results from the March 2010 investigation were presented in the 2010 Memorandum (MFA, 2010b). The results indicated a shallow source of chlorinated VOCs on the Property. Characterization of the nature and extent of contamination in soil is complete. Concentrations of indicator hazardous substances (IHSs) in soil below Ecology's Method Toxics Control Act (MTCA) Method A cleanup levels (CULs) for unrestricted land use were fully delineated.

Groundwater

Reconnaissance groundwater analytical results from the March and October 2010 and the June 2011 investigation (MFA, 2010a; MFA, 2011a; MFA, 2011b) in the shallow-perched WBZ sampling are shown in Table 2 and on Figure 1. PCE detections in the shallow-perched WBZ indicated that the highest concentration of PCE is on the eastern side of the Property and that is considered the source area of contamination. To help characterize the nature and extent of groundwater impacts, additional data from the 2008 Ecology and Environment, Inc., investigation (E&E, 2008) prepared for the USEPA were initially evaluated and the results included along with the current MFA data set in the evaluation of PCE impacts in shallow groundwater. Concentrations from USEPA borings GP18 through GP22, located between the Property and the Post Office property to the northwest, were all non-detect or near the reporting limit of 5 µg/L. Based on limited boring log information available (GP01 through GP15, and BG01) from the investigation conducted for the USEPA, it appears that the borings were not advanced to the clay layer in most locations, especially toward the west. Based on this and inconsistencies with current data, MFA has determined that the USEPA data from the GP18 through GP22 borings may have not been representative of actual groundwater impacts in that area. Moving forward, MFA will not be using USEPA historical data as part of site characterization efforts.

Impacted groundwater in the UWBZ appears to be migrating to the north, northwest, and west, concurrent with groundwater flow direction. The objective of the June 2011 investigation was to attempt to bound the plume. Results of this investigation have indicated that concentrations of PCE in shallow groundwater are still above MTCA Method A CUL of 5 µg/L and the plume has not completely been bounded. Results have indicated that the plume has been bounded on the eastern side. The results indicate, however, that additional data is needed directly west of the Property, and in the north-northwest direction of the current shallow plume boundary see Figure 1). In addition to these areas, Ecology indicated in a December 13, 2011, email that the area near the marina south of GP-62 and the Port of Ridgefield well, MW-47D, has not been fully characterized (Ecology, 2011)

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In areas of the site where we have both reconnaissance groundwater data as well as monitoring well data, there are marked differences in PCE concentrations between the monitoring well and reconnaissance data. Typically, monitoring well data are more representative and reliable than reconnaissance data. With that in mind, it is likely that any additional groundwater investigation will be accomplished primarily by adding to the existing monitoring well network.

SOIL GAS

At Ecology's request, soil gas samples were collected from nine locations (SG1 through SG5, and SG7 through SG10) in March 2010. An additional five soil gas samples (SG11 through SG15) were collected during the June 2011 investigation (see Figure 3).

Results indicated that soil gas data were in excess of the draft MTCA Method B subslab soil gas screening levels, which are intended for screening soil gas collected just beneath the building foundation. Although none of the soil gas samples were collected beneath a building and represent subslab soil gas, Ecology recommends the use of subslab soil gas screening levels in the Tier 1 evaluation. The subslab soil gas screening levels are based on an assumed attenuation factor (α) of 0.1, which corresponds to an assumed 10-fold reduction in concentration in indoor air relative to the VOC concentrations in the subslab soil gas.

Because some soil gas concentrations exceeded the draft MTCA Method B subslab soil gas screening levels, a Tier II assessment was performed. Consistent with draft Ecology guidance (Ecology, 2009), the Johnson and Ettinger model (JEM) was used to estimate indoor air concentrations of PCE and TCE at locations where collected soil gas samples contained concentrations above the subslab soil gas screening level. The JEM used was the United States Environmental Protection Agency's (USEPA's) SG-ADV spreadsheet model (Version 3.1, last updated February 2004).

Default JEM inputs for building construction representing a residential building with slab-on-grade construction were used in the JEM. Site-specific JEM inputs included the soil gas concentrations of PCE or TCE, the depth of the soil gas sample, average soil temperature, and soil type for the vadose zone soil. The JEM input for soil temperature (13 degrees Celsius) was based on Ecology (2009) recommended input value for Washington and was not measured. Based on lithological observations from soil borings, the default soil type in the JEM that best represented vadose zone soils is a silty loam. The default model assumptions for bulk density, porosity, and moisture content for silty loam soil were used in the JEM. Soil moisture content can greatly influence the rate of attenuation of vapors in the vadose zone and slight increases in soil moisture will result in decreased rates of vapor migration through the vadose zone (i.e., increased attenuation).

Table 5 provides the model-predicted indoor air concentrations for samples where PCE or TCE was detected in soil gas samples above the draft MTCA Method B subslab soil gas

screening level. The attachment presents output from the recent modeling effort. All model-predicted PCE concentrations associated with June 2011 soil gas data were below the Method B indoor air CUL. Only borings SG2, SG7, and SG10, completed during previous investigations, were associated with model-predicted PCE concentrations above the Method B indoor air CUL. However, those soil gas borings were completed in a vacant lot and not in the near vicinity of an existing building. All model-predicted TCE concentrations were below the Method B indoor air CUL.

The JEM predicted a 500-fold reduction ($\alpha = 0.002$) in concentration for shallow soil gas samples collected at depths of 2.5 feet bgs to 4 feet bgs, and a 1,000-fold reduction ($\alpha = 0.001$) in concentration for shallow soil gas samples collected at depths of 5 feet bgs. These predicted rates of attenuation were orders of magnitude higher than the default assumption of a 10-fold reduction in concentration from subslab soil gas to indoor air. Predictions of indoor air concentrations and rates of VOC attenuation obtained through use of the JEM should be evaluated in the context of the uncertainties and limitations of the JEM.

The JEM model used for this evaluation assumed slab-on-grade construction for a residential home; however, building construction information for existing structures are required in order to validate the building construction inputs used in the JEM. The JEM predictions are sensitive to model assumptions regarding building construction. The JEM may not provide conservative predictions of indoor air concentrations for residential buildings with crawlspaces or earthen or stone floors, or sumps in the basement (Ecology, 2009). Building construction factors that influence the rate of vapor intrusion include: building dimensions (length and width), ceiling height, foundation type (e.g., basement, crawlspace, slab-on-grade), foundation condition (e.g., thickness, cracks, sumps, vents), weatherization information (window types and insulation), and heating, ventilation, and air conditioning (HVAC) systems.

The JEM includes building construction assumptions. It may be necessary to obtain specific construction information on building/residences as well as potential preferential pathways in the vicinity of the groundwater plume in order to better assess potential impacts to indoor air.

CONCLUSIONS

- Characterization of the nature and extent of contamination in soil has been completed. Concentrations of indicator hazardous substances above Method A CULs for unrestricted land use were fully delineated.
- The results of site characterization thus far indicate that there is a source of PCE at the Property. Detections of PCE in shallow-perched WBZ indicate that the plume generally extends to the north-northwest; however, the plume has not been fully delineated in that direction. In addition, there are areas directly west of the Property, and further downgradient at the marina, that have not been evaluated.

- There are discrepancies between the reconnaissance data and monitoring well data in groundwater. While the reconnaissance data is useful, monitoring well data is considered more representative of the existing groundwater condition.
- The lithology in borings west and northwest of the Property suggests that the impacted groundwater in the shallow WBZ may be hydraulically connected to the sandy gravel unit under the Port of Ridgefield (Port) where PCE has also been detected.
- The JEM predictions of indoor air concentrations using soil gas data collected in June 2011 indicate that vadose zone conditions at the site favor attenuation of VOCs from the shallow WBZ. The predicted rates of attenuation of VOCs in the vadose zone suggest that PCE and TCE in the shallow WBZ may not migrate into existing buildings at rates resulting in indoor air concentrations exceeding the MTCA Method B CUL. Concentrations of PCE in the shallow WBZ beneath the undeveloped Property and properties directly to the north, however, are relatively higher than at the June 2011 boring locations. Additional evaluation is required at these areas with elevated VOC concentrations to assess the vapor intrusion pathway if the land were to be developed. In addition, the model makes certain assumptions regarding building construction. Specific construction details of commercial buildings and residences in the area may be necessary to fully evaluate the potential for vapor intrusion into buildings.

RECOMMENDATIONS

The extent of the shallow groundwater plume downgradient of the Property has not been fully delineated. It is recommended that additional monitoring wells be advanced west and northwest of the Property (see Figure 1). Monitoring wells will be installed consistent with methods described in the Remedial Investigation Work Plan prepared by MFA (MFA, 2010a). Although the nature and extent of soil impacts on the Property have been delineated, in the event that field parameters (i.e. elevated PID readings) indicate the presence of VOCs during drilling, MFA will collect a soil sample for analysis. This additional soil data will help identify other sources of PCE, if they exist.

Monitoring wells will be screened immediately above the top of the clay aquitard. After completion, the wells will developed after waiting at least 24 hours. Following development and recovery, depth to water will be measured and the wells will be sampled for PCE and its breakdown products, consistent with previous work.

To enhance the data set from the URIC wells and to further evaluate a connection from the source area on the former Park Laundry Property and the Port, deep upper water bearing zone monitoring wells from Cell 3 at the Port will be added to the URIC monitoring

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program. The Port wells to be sampled simultaneously with the URIC wells include MW-20D, MW-23, MW-29D, MW-45D, MW-46D, and MW-47D (see Figure 1).

A next step in the vapor intrusion evaluation will be to obtain information on specific building construction in the area of the Site. The building survey will apply to all buildings on and within 100 feet of the known groundwater plume above the MTCA Method B shallow groundwater screening level for vapor intrusion of 1 μ g/L.

Please call either of us if you have questions or require additional information.

Sincerely,

Maul Foster & Alongi, Inc.

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MERIDETH D'ANDREA

7/10/

Merideth D'Andrea, LG Project Geologist

James J. Maul, LHG

Principal Geologist/President

Attachments: Limitations

References Tables Figure

cc: Robert Hyatt, Union Ridge Investment Company

Lou Ferriera, Stoel Rives LLP

The services undertaken in completing this report were performed consistent with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. These services were performed consistent with our agreement with our client. This report is solely for the use and information of our client unless otherwise noted. Any reliance on this report by a third party is at such party's sole risk.

Opinions and recommendations contained in this report apply to conditions existing when services were performed and are intended only for the client, purposes, locations, time frames, and project parameters indicated. We are not responsible for the impacts of any changes in environmental standards, practices, or regulations subsequent to performance of services. We do not warrant the accuracy of information supplied by others, or the use of segregated portions of this report.

E&E. 2008. Park Cleaners and Laundry site investigation report TDD 08-01-0010. Prepared by Ecology and Environment, Inc. October.

Ecology. 2009. Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action. Washington State Department of Ecology Toxics Cleanup Program. October.

Ecology. 2011. Email (re: Park Laundry Additional Characterization). To. M. D'Andrea, Maul Foster & Alongi, Inc., Vancouver, Washington, from G. Barrett, Washington Department of Ecology. December 1.

MFA. 2010a. Remedial investigation work plan, former Park Laundry. Maul Foster & Alongi, Inc., Vancouver, Washington. January 21.

MFA. 2010b. Memorandum (re: Data Submittal for March 2010 Site Investigation at the Union Ridge Investment Company property in Ridgefield, Washington). Maul Foster & Alongi, Inc., Vancouver, Washington. June 29.

MFA. 2011a. Memorandum (re: Data Submittal for October 2010 Phase 2 Site Investigation at the Union Ridge Investment Company property in Ridgefield, Washington). Maul Foster & Alongi, Inc., Vancouver, Washington. February 1.

MFA. 2011b. Letter (re: Data Submittal for Former Park Laundry Property, Ridgefield, Washington). To G. Barrett, Washington Department of Ecology, from M. D'Andrea, Maul Foster & Alongi, Inc., Vancouver, Washington. August 29.

TABLES



Table 1
Water Level Elevations in Shallow Groundwater
Former Park Laundry
Union Ridge Investment Company
Ridgefield, Washington

Location	Water Level (feet bgs)	TOC Elevation (feet MSL)	Water Level Elevation (feet MSL)
Deep Borings		<u>l</u>	
B5	5.2	84.95	79.75
В6	7.9	85.54	77.64
В7	5.9	85.39	79.49
В8	9.2	85.30	76.10
В9	8.3	79.57	71.27
hallow Borings	S	•	
GP24	7	85.72	78.72
GP25	8	85.74	77.74
GP26	5.8	85.43	79.63
GP27	7.8	85.53	77.73
GP28	5.9	85.57	79.67
GP29	6.6	85.43	78.83
GP30	4.7	85.84	81.14
GP31	7.5	85.86	78.36
GP32	6.5	85.65	79.15
GP33	7.3	85.51	78.21
GP34	6.8	85.15	78.35
GP35	8.8	85.61	76.81
GP36	5.5	85.37	79.87
GP37	7.4	85.83	78.43
GP38	8.3	85.30	77.00
GP39	4.4	85.06	80.66
GP40	6.9	85.61	78.71
GP41	6.4	85.76	79.36
GP42	6.2	85.69	79.49
GP43	6.1	85.44	79.34
GP44	6.2	85.56	79.36
GP45	6.9	85.59	78.69
GP46	6.2	85.25	79.05
GP47	5.4	84.77	79.37
GP48	4.8	84.88	80.08
GP49	6.2	84.77	78.57
GP50	6	84.96	78.96
GP51	7.2	85.14	77.94
GP52	7.7	85.26	77.56
GP53	6.7	85.67	78.97
GP54	5.9	85.27	79.37
GP55	7	84.43	77.43

Table 1 **Water Level Elevations in Shallow Groundwater Former Park Laundry Union Ridge Investment Company** Ridgefield, Washington

Location	Water Level (feet bgs)	TOC Elevation (feet MSL)	Water Level Elevation (feet MSL)
GP56	6.2	84.97	78.77
GP57	6.7	84.88	78.18
GP58	4.9	85.38	80.48
GP59	8.7	84.90	76.20
GP60	9	84.55	75.55
GP61	7.8	84.96	77.16
GP68	9.1	85.85	76.75
GP69	9.3	86.25	76.95
GP70	9.5	85.52	76.02
GP71	9.1	84.50	75.40
GP72	9.5	84.19	74.69
GP73	8.9	83.98	75.08
GP74	9.9	82.93	73.03
GP75	12.5	83.37	70.87
GP76	11.4	82.59	71.19
GP77	12.8	80.54	67.74
GP78	12.8	83.64	70.84
GP79	8.8	83.87	75.07
GP80	8.9	84.30	75.40
GP81	9.1	84.49	75.39
Monitoring We	ells		
MW1	5.89	85.20	79.31
MW2	5.75	84.78	79.03
MW3	6.25	84.70	78.45
MW4	5.98	83.05	77.07
MW5	7.46	83.46	76.00
MW6	7.96	85.11	77.15
MW7	9.01	82.01	73.00
NOTES:			·

bgs = below ground surface.

MSL = mean sea level.

TOC = top of casing.

Location	Sample ID	Date	Depth (feet bgs)	1,1-Dichloro- ethene	cis-1,2- Dichloroethene	Tetra- chloroethene	trans-1,2- Dichloroethene	Trichloro- ethene	Vinyl chloride
MTCA Metho	od A			NV	NV	50	NV	30	NV
MTCA Metho	od B			4,000,000	800,000	1,900	1,600,000	11,000	670
B5	B5-S-0.5	03/03/2010	0.5	7.72 U	7.72 U	23.8	7.72 U	7.72 U	7.72 U
	B5-S-5.0	03/03/2010	5	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U	7.2 U
	B5-S-12.5	03/03/2010	12.5	6.99 U	6.99 U	7,490	6.99 U	6.99 U	6.99 U
	B5-S-14.0	03/03/2010	14	6.45 U	6.45 U	1,880	6.45 U	6.45 U	6.45 U
	B5-S-39.0	03/15/2010	39	9.13 U	9.13 U	9.13 U	9.13 U	9.13 U	9.13 U
В6	B6-S-0.5	03/05/2010	0.5	9.64 U	9.64 U	23.7	9.64 U	9.64 U	9.64 U
	B6-S-5.0	03/05/2010	5	11.5 U	11.5 U	11.5 U	11.5 U	11.5 U	11.5 U
	B6-S-12.0	03/05/2010	12	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U
В7	B7-S-14.0	03/03/2010	14	9.72 U	9.72 U	9.72 U	9.72 U	9.72 U	9.72 U
	B7-S-15.5	03/03/2010	15.5	8.42 U	8.42 U	351	8.42 U	8.42 U	8.42 U
B8	B8-S-0.5	03/08/2010	0.5	9.63 U	9.63 U	9.63 U	9.63 U	9.63 U	9.63 U
	B8-S-5.0	03/08/2010	5	9.67 U	9.67 U	15.3	9.67 U	9.67 U	9.67 U
	B8-S-14.5	03/08/2010	14.5	48.9 U	48.9 U	31,400	48.9 U	48.9 U	48.9 U
	B8-S-16.5	03/08/2010	16.5	8.81 U	8.81 U	4,370 HT	8.81 U	8.81 U	8.81 U
	B8-S-40.0	03/17/2010	40	10.7 U	10.7 U	10.7 U	10.7 U	10.7 U	10.7 U
В9	B9-S-19.0	03/09/2010	19	11.6 U	11.6 U	271	11.6 U	21.0	11.6 U
	B9-S-21.5	03/09/2010	21.5	9 U	9 U	507	9 U	332	9 U
	B9-S-42.0	03/19/2010	42	9.33 U	9.33 U	9.33 U	9.33 U	9.33 U	9.33 U
	B9-S-75.0	03/22/2010	75	8.77 U	8.77 U	8.77 U	8.77 U	8.77 U	8.77 U
	B9-S-89.0	03/22/2010	89	8.94 U	8.94 U	8.94 U	8.94 U	8.94 U	8.94 U
B10	B10-S-33.0	03/23/2010	33	8.19 U	8.19 U	8.19 U	8.19 U	8.19 U	8.19 U
	B10-S-57.0	03/24/2010	57	9.41 U	9.41 U	9.41 U	9.41 U	9.41 U	9.41 U
B11	B11-S-88.0	03/26/2010	88	7.78 U	7.78 U	7.78 U	7.78 U	7.78 U	7.78 U
GP24	GP24-S-11.0	03/09/2010	11	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U

Location	Sample ID	Date	Depth (feet bgs)	1,1-Dichloro- ethene	cis-1,2- Dichloroethene	Tetra- chloroethene	trans-1,2- Dichloroethene	Trichloro- ethene	Vinyl chloride
MTCA Metho	od A			NV	NV	50	NV	30	NV
MTCA Metho	od B			4,000,000	800,000	1,900	1,600,000	11,000	670
GP25	GP25-S-11.5	03/04/2010	11.5	10.9 U	10.9 U	10.9 U	10.9 U	10.9 U	10.9 U
GP26	GP26-S-11.0	03/04/2010	11	10.5 U	10.5 U	10.5 U	10.5 U	10.5 U	10.5 U
GP27	GP27-S-12.5	03/04/2010	12.5	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U	10.3 U
GP28	GP28-S-14.0	03/04/2010	14	8.23 U	8.23 U	8.23 U	8.23 U	8.23 U	8.23 U
GP29	GP29-S-12.0	03/08/2010	12	10.9 U	10.9 U	10.9 U	10.9 U	10.9 U	10.9 U
GP30	GP30-S-0.5	03/04/2010	0.5	8.8 U	8.8 U	37.5	8.8 U	8.8 U	8.8 U
	GP30-S-5.0	03/04/2010	5	9.77 U	9.77 U	9.77 U	9.77 U	9.77 U	9.77 U
	GP30-S-12.0	03/04/2010	12	9.55 U	9.55 U	9.55 U	9.55 U	9.55 U	9.55 U
GP32	GP32-S-0.5	03/05/2010	0.5	9.69 U	9.69 U	11.3	9.69 U	9.69 U	9.69 U
	GP32-S-5.0	03/05/2010	5	9.57 U	9.57 U	9.57 U	9.57 U	9.57 U	9.57 U
	GP32-S-12.0	03/05/2010	12	12.1 U	12.1 U	12.1 U	12.1 U	12.1 U	12.1 U
GP33	GP33-S-0.5	03/05/2010	0.5	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U	12.2 U
	GP33-S-5.0	03/05/2010	5	9.9 U	9.9 U	9.9 U	9.9 U	9.9 U	9.9 U
	GP33-S-12.0	03/05/2010	12	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U	11.4 U
GP35	GP35-S-14.0	03/04/2010	14	7.98 U	7.98 U	7.98 U	7.98 U	7.98 U	7.98 U
GP36	GP36-S-12.5	03/08/2010	12.5	11 U	11 U	11 U	11 U	11 U	11 U
GP37	GP37-S-0.5	03/05/2010	0.5	10.1 U	10.1 U	10.1 U	10.1 U	10.1 U	10.1 U
	GP37-S-5.0	03/05/2010	5	9.82 U	9.82 U	9.82 U	9.82 U	9.82 U	9.82 U
	GP37-S-12.5	03/05/2010	12.5	11.1 U	11.1 U	11.1 U	11.1 U	11.1 U	11.1 U
GP38	GP38-S-0.5	03/05/2010	0.5	13.6 U	13.6 U	62.5	13.6 U	13.6 U	13.6 U
	GP38-S-12.0	03/05/2010	12	11.8 U	11.8 U	11.8 U	11.8 U	11.8 U	11.8 U
GP39	GP39-S-0.5	03/05/2010	0.5	8.66 U	8.66 U	9.74	8.66 U	8.66 U	8.66 U
	GP39-S-5.0	03/05/2010	5	9.81 U	9.81 U	9.81 U	9.81 U	9.81 U	9.81 U
	GP39-S-12.0	03/05/2010	12	9.35 U	9.35 U	9.35 U	9.35 U	9.35 U	9.35 U

Location	Sample ID	Date	Depth (feet bgs)	1,1-Dichloro- ethene	cis-1,2- Dichloroethene	Tetra- chloroethene	trans-1,2- Dichloroethene	Trichloro- ethene	Vinyl chloride
MTCA Meth	od A			NV	NV	50	NV	30	NV
MTCA Meth	od B			4,000,000	800,000	1,900	1,600,000	11,000	670
GP40	GP40-S-0.5	03/01/2010	0.5	7.77 U	7.77 U	13.3	7.77 U	7.77 U	7.77 U
	GP40-S-5.0	03/01/2010	5	7.74 U	7.74 U	7.74 U	7.74 U	7.74 U	7.74 U
	GP40-S-11.5	03/01/2010	11.5	7.41 U	7.41 U	7.41 U	7.41 U	7.41 U	7.41 U
GP41	GP41-S-0.5	03/01/2010	0.5	7.03 U	7.03 U	7.94	7.03 U	7.03 U	7.03 U
	GP41-S-5.0	03/01/2010	5	8.25 U	8.25 U	8.25 U	8.25 U	8.25 U	8.25 U
	GP41-S-12.5	03/01/2010	12.5	6.97 U	6.97 U	6.97 U	6.97 U	6.97 U	6.97 U
GP42	GP42-S-0.5	03/01/2010	0.5	6.67 U	6.67 U	16.1	6.67 U	6.67 U	6.67 U
	GP42-S-5.0	03/01/2010	5	6.96 U	6.96 U	26.2	6.96 U	6.96 U	6.96 U
	GP42-S-12.5	03/01/2010	12.5	7.95 U	7.95 U	10.7	7.95 U	7.95 U	7.95 U
GP43	GP43-S-0.5	03/02/2010	0.5	11.6 U	11.6 U	11.6 U	11.6 U	11.6 U	11.6 U
	GP43-S-5.0	03/02/2010	5	13.4 U	13.4 U	58.1	13.4 U	13.4 U	13.4 U
	GP43-S-12.5	03/02/2010	12.5	10.6 U	10.6 U	115	10.6 U	10.6 U	10.6 U
GP44	GP44-S-0.5	03/01/2010	0.5	6.89 U	6.89 U	54.0	6.89 U	6.89 U	6.89 U
	GP44-S-5.0	03/01/2010	5	8.11 U	8.11 U	8.11 U	8.11 U	8.11 U	8.11 U
	GP44-S-13.0	03/01/2010	13	7.86 U	7.86 U	7.86 U	7.86 U	7.86 U	7.86 U
GP45	GP45-S-0.5	03/01/2010	0.5	8.22 U	8.22 U	109	8.22 U	8.22 U	8.22 U
	GP45-S-5.0	03/01/2010	5	6.91 U	6.91 U	8.58	6.91 U	6.91 U	6.91 U
	GP45-S-12.5	03/01/2010	12.5	7.65 U	7.65 U	12.9	7.65 U	7.65 U	7.65 U
GP46	GP46-S-0.5	03/01/2010	0.5	6.8 U	6.8 U	98.7	6.8 U	6.8 U	6.8 U
	GP46-S-5.0	03/01/2010	5	6.61 U	6.61 U	6.61 U	6.61 U	6.61 U	6.61 U
	GP46-S-12.0	03/01/2010	12	7.96 U	7.96 U	74.3	7.96 U	7.96 U	7.96 U
GP47	GP47-S-0.5	03/02/2010	0.5	18.6 U	18.6 U	19.8	18.6 U	18.6 U	18.6 U
	GP47-S-5.0	03/02/2010	5	12.5 U	12.5 U	31.1	12.5 U	12.5 U	12.5 U
	GP47-S-12.0	03/02/2010	12	12 U	12 U	6,820	12 U	12 U	12 U

Location	Sample ID	Date	Depth (feet bgs)	1,1-Dichloro- ethene	cis-1,2- Dichloroethene	Tetra- chloroethene	trans-1,2- Dichloroethene	Trichloro- ethene	Vinyl chloride
MTCA Meth	od A			NV	NV	50	NV	30	NV
MTCA Meth	od B			4,000,000	800,000	1,900	1,600,000	11,000	670
GP48	GP48-S-0.5	03/03/2010	0.5	7.93 U	7.93 U	24.3	7.93 U	7.93 U	7.93 U
	GP48-S-5.0	03/03/2010	5	7.17 U	7.17 U	7.17 U	7.17 U	7.17 U	7.17 U
	GP48-S-12.5	03/03/2010	12.5	7.71 U	7.71 U	349	7.71 U	7.71 U	7.71 U
GP49	GP49-S-12.5	03/03/2010	12.5	8.06 U	8.06 U	8.06 U	8.06 U	8.06 U	8.06 U
GP50	GP50-S-0.5	03/01/2010	0.5	8.69 U	8.69 U	49.3	8.69 U	8.69 U	8.69 U
	GP50-S-5.0	03/01/2010	5	6.62 U	6.62 U	6.62 U	6.62 U	6.62 U	6.62 U
	GP50-S-12.5	03/01/2010	12.5	7.69 U	7.69 U	7.69 U	7.69 U	7.69 U	7.69 U
GP51	GP51-S-0.5	03/02/2010	0.5	9.14 U	9.14 U	147	9.14 U	9.14 U	9.14 U
	GP51-S-5.0	03/02/2010	5	6.26 U	6.26 U	23.4	6.26 U	6.26 U	6.26 U
	GP51-S-12.5	03/02/2010	12.5	8.18 U	8.18 U	117	8.18 U	8.18 U	8.18 U
GP52	GP52-S-0.5	03/03/2010	0.5	7.44 U	7.44 U	33.7	7.44 U	7.44 U	7.44 U
	GP52-S-5.0	03/03/2010	5	7.33 U	7.33 U	11.9	7.33 U	7.33 U	7.33 U
	GP52-S-12.5	03/03/2010	12.5	7.82 U	7.82 U	316,000	7.82 U	7.82 U	7.82 U
GP53	GP53-S-12.5	03/02/2010	12.5	7.88 U	7.88 U	7.88 U	7.88 U	7.88 U	7.88 U
GP54	GP54-S-0.5	03/02/2010	0.5	12.4 UH	12.4 UH	26.0 H	12.4 UH	12.4 UH	12.4 UH
	GP54-S-5.0	03/02/2010	5	13 UH	13 UH	13 U	13 UH	13 UH	13 UH
	GP54-S-12.5	03/02/2010	12.5	8.8 U	8.8 U	37.7	8.8 U	8.8 U	8.8 U
GP55	GP55-S-0.5	03/03/2010	0.5	6.94 U	6.94 U	6.94 U	6.94 U	6.94 U	6.94 U
	GP55-S-5.0	03/03/2010	5	7.61 U	7.61 U	7.61 U	7.61 U	7.61 U	7.61 U
	GP55-S-12.5	03/03/2010	12.5	9.81 U	9.81 U	862	9.81 U	9.81 U	9.81 U
GP56	GP56-S-0.5	03/03/2010	0.5	12.5 UH	12.5 UH	12.5 UH	12.5 UH	12.5 UH	12.5 UH
	GP56-S-5.0	03/03/2010	5	13.1 UH	13.1 UH	13.1 UH	13.1 UH	13.1 UH	13.1 UH
	GP56-S-13.5	03/03/2010	13.5	7.8 U	7.8 U	49.1	7.8 U	7.8 U	7.8 U
GP57	GP57-S-14.0	03/03/2010	14	6.75 U	6.75 U	17.9	6.75 U	6.75 U	6.75 U

Location	Sample ID	Date	Depth (feet bgs)	1,1-Dichloro- ethene	cis-1,2- Dichloroethene	Tetra- chloroethene	trans-1,2- Dichloroethene	Trichloro- ethene	Vinyl chloride
MTCA Method A				NV	NV	50	NV	30	NV
MTCA Metho	MTCA Method B			4,000,000	800,000	1,900	1,600,000	11,000	670
GP58	GP58-S-15.0	03/08/2010	15	10.5 U	10.5 U	10.5 U	10.5 U	10.5 U	10.5 U
GP59	GP59-S-15.0	03/08/2010	15	10.7 U	10.7 U	10.7 U	10.7 U	10.7 U	10.7 U
GP60	GP60-S-14.5	03/08/2010	14.5	52.1 U	7.08 Q	53.8	52.1 U	52.1 U	52.1 U
GP61	GP61-S-14.5	03/09/2010	14.5	10 U	10 U	10 U	10 U	10 U	10 U

NOTES:

bgs = below ground surface.

Bold = value exceeds MTCA Method B screening levels.

H = sample was analyzed outside recommended hold time.

MTCA = Model Toxics Control Act.

μg/kg = milligrams per kilogram.

NV = no value.

PCE = tetrachloroethene.

Q = detedtion levels elevated due to sample matrix.

Shading = value exceeds MTCA Method A screening levels.

U = not detected at or above method reporting limits.

Table 3
PCE and Breakdown Products in Reconnaissance Groundwater (µg/L)
Former Park Laundry
Union Ridge Investment Company
Ridgefield, Washington

Location	Sample ID	Date	Depth (feet bgs)	1,1-Dichloro- ethene	cis-1,2- Dichloro- ethene	Tetra- chloroethene	trans-1,2- Dichloroethene	Trichloro- ethene	Vinyl chloride
MTCA Meth	od A			NV	NV	5	NV	5	0.2
MTCA Meth	od B			400	80	0.081	160	0.49	0.029
B5	B5-W-12.5	03/03/2010	12.5	1 U	1 U	6510	1 U	4.71	1 U
В6	B6-W-12.0	03/05/2010	12	1 U	1 U	1.00	1 U	1 U	1 U
В7	B7-W-14.0	03/03/2010	14	1 U	1 U	5.87	1 U	1 U	1 U
B8	B8-W-14.5	03/08/2010	14.5	1 U	1 U	2600	1 U	2.54	1 U
В9	B9-W-19.0	03/09/2010	19	1 U	1 U	60.0	1 U	2.87	1 U
	B9-W-75.0	03/22/2010	75	1 U	1 U	5.29	1 U	1.32	1 U
	B9-W-75.0-Dup	03/22/2010	75	1 U	1 U	5.16	1 U	1.47	1 U
	B9-W-89.0	03/22/2010	89	1 U	1 U	5.46	1 U	1 U	1 U
B10	B10-W-33.0	03/23/2010	33	1 U	1 U	3.69	1 U	1.36	1 U
	B10-W-57.0	03/24/2010	57	1 U	1 U	4.69	1 U	1 U	1 U
B11	B11-W-88.0	03/26/2010	88	1 U	1 U	1.81	1 U	1 U	1 U
GP24	GP24-W-11.0	03/08/2010	11	1 U	1 U	1 U	1 U	1 U	1 U
GP25	GP25-W-11.5	03/04/2010	11.5	1 U	1 U	1 U	1 U	1 U	1 U
GP26	GP26-W-11.0	03/04/2010	11	1 U	1 U	1 U	1 U	1 U	1 U
GP27	GP27-W-12.5	03/04/2010	12.5	1 U	1 U	1.03	1 U	1 U	1 U
GP28	GP28-W-14.0	03/04/2010	14	1 U	1 U	1.17	1 U	1 U	1 U
	GP28-W-14.0-Dup	03/04/2010	14	1 U	1 U	1.21	1 U	1 U	1 U
GP29	GP29-W-12.0	03/08/2010	12	1 U	1 U	1 U	1 U	1 U	1 U
GP32	GP32-W-12.0	03/05/2010	12	1 U	1 U	1 U	1 U	1 U	1 U

Table 3 PCE and Breakdown Products in Reconnaissance Groundwater (µg/L) Former Park Laundry Union Ridge Investment Company Ridgefield, Washington

Location	Sample ID	Date	Depth (feet bgs)	1,1-Dichloro- ethene	cis-1,2- Dichloro- ethene	Tetra- chloroethene	trans-1,2- Dichloroethene	Trichloro- ethene	Vinyl chloride
MTCA Meth	od A			NV	NV	5	NV	5	0.2
MTCA Meth	od B			400	80	0.081	160	0.49	0.029
GP33	GP33-W-12.0	03/05/2010	12	1 U	1 U	1 U	1 U	1 U	1 U
GP35	GP35-W-14.0	03/04/2010	14	1 U	1 U	1.66	1 U	1 U	1 U
GP36	GP36-W-12.5	03/08/2010	12.5	1 U	1 U	1 U	1 U	1 U	1 U
GP38	GP38-W-12.0	03/05/2010	12	1 U	1 U	3.78	1 U	1 U	1 U
GP39	GP39-W-12.0	03/05/2010	12	1 U	1 U	1.97	1 U	1 U	1 U
GP40	GP40-W-11.5	03/01/2010	11.5	1 U	1 U	1 U	1 U	1 U	1 U
GP41	GP41-W-12.5	03/01/2010	12.5	1 U	1 U	7.49	1 U	1 U	1 U
GP42	GP42-W-12.5	03/01/2010	12.5	1 U	1 U	111	1 U	1 U	1 U
GP43	GP43-W-12.5	03/02/2010	12.5	1 U	1 U	3670	1 U	7.46	1 U
GP44	GP44-W-13.0	03/01/2010	13	1 U	1 U	11.9	1 U	1 U	1 U
GP45	GP45-W-12.5	03/01/2010	12.5	1 U	1 U	21.8	1 U	1 U	1 U
GP46	GP46-W-12.0	03/01/2010	12	1 U	1 U	1710	1 U	1.01	1 U
GP47	GP47-W-12.0	03/02/2010	12	1 U	1 U	5090	1 U	12.1	1 U
GP48	GP48-W-12.5	03/03/2010	12.5	1 U	1 U	915	1 U	1.31	1 U
GP49	GP49-W-12.5	03/03/2010	12.5	1 U	1 U	24.5	1 U	1 U	1 U
GP50	GP50-W-12.5	03/01/2010	12.5	1 U	1 U	6.14	1 U	1 U	1 U
GP51	GP51-W-12.5	03/02/2010	12.5	1 U	1 U	660	1 U	1 U	1 U
GP52	GP52-W-12.5	03/03/2010	12.5	1 U	1 U	37,700	1 U	20.4	1 U
GP53	GP53-W-12.5	03/02/2010	12.5	1 U	1 U	3.38	1 U	1 U	1 U
GP54	GP54-W-12.5	03/02/2010	12.5	1 U	1 U	148	1 U	1 U	1 U
GP55	GP55-W-12.5	03/03/2010	12.5	1 U	1 U	1970	1 U	1 U	1 U

Table 3
PCE and Breakdown Products in Reconnaissance Groundwater (µg/L)
Former Park Laundry
Union Ridge Investment Company
Ridgefield, Washington

Location	Sample ID	Date	Depth (feet bgs)	1,1-Dichloro- ethene	cis-1,2- Dichloro- ethene	Tetra- chloroethene	trans-1,2- Dichloroethene	Trichloro- ethene	Vinyl chloride
MTCA Meth	MTCA Method A				NV	5	NV	5	0.2
MTCA Meth	od B			400	80	0.081	160	0.49	0.029
GP56	GP56-W-13.5	03/03/2010	13.5	1 U	1 U	37.4	1 U	1 U	1 U
GP57	GP57-W-14.0	03/03/2010	14	1 U	1 U	2.44	1 U	1 U	1 U
GP58	GP58-W-15.0	03/08/2010	15	1 U	1 U	3.46	1 U	1.64	1 U
GP59	GP59-W-15.0	03/08/2010	15	1 U	1 U	5.39	1 U	1.96	1 U
GP60	GP60-W-14.5	03/08/2010	14.5	1 U	1 U	27.8	1 U	4.87	1 U
GP61	GP61-W-14.5	03/09/2010	14.5	1 U	1 U	18.6	1 U	1 U	1 U
GP62	GP62-W-15.0	10/19/2010	15	1 U	1 U	16.0	1 U	4.92	1 U
GP63	GP63-W-21.0	10/19/2010	21	1 U	1 U	4.25	1 U	1 U	1 U
GP64	GP64-W-15.0	10/18/2010	15	1 U	1 U	1 U	1 U	1 U	1 U
GP65	GP65-W-21.0	10/18/2010	21	1 U	1.52	1630	1 U	436	2.23
GP66	GP66-W-15.0	10/18/2010	15	1 U	1 U	2.12	1 U	1 U	1 U
GP67	GP67-W-17.0	10/18/2010	17	1 U	1 U	175	1 U	6.41	1 U
GP68	GP68-W-15.5	6/21/2011	15.5	1 U	1 U	1 U	1 U	1 U	1 U
GP69	GP69-W-17.0	6/21/2011	17	1 U	1 U	1 U	1 U	1 U	1 U
GP70	GP70-W-17.0	6/21/2011	17	1 U	1 U	1 U	1 U	1 U	1 U
GP71	GP71-W-22.1	6/21/2011	22.1	1 U	1 U	1 U	1 U	1 U	1 U
GP72	GP72-W-20.0	6/20/2011	20	1 U	1 U	1 U	1 U	1 U	1 U
GP73	GP73-W-19.0	6/17/2011	19	1 U	1 U	63.2	1 U	4.83	1 U
GP74	GP74-W-17.0	6/17/2011	17	1 U	6.24	150	1 U	6.44	1 U
GP75	GP75-W-18.5	6/16/2011	18.5	1 U	23.1	268	4.54	18.3	1 U
GP76	GP76-W-18.8	6/16/2011	18.8	1 U	7.12	119	1 U	6.39	1 U
GP77	GP77-W-19.0	6/16/2011	19	1 U	5.88	316	4.59	16.3	1 U

Table 3 PCE and Breakdown Products in Reconnaissance Groundwater (µg/L) Former Park Laundry Union Ridge Investment Company Ridgefield, Washington

Location	Sample ID	Date	Depth (feet bgs)	1,1-Dichloro- ethene	cis-1,2- Dichloro- ethene	Tetra- chloroethene	trans-1,2- Dichloroethene	Trichloro- ethene	Vinyl chloride
MTCA Meth	od A			NV	NV	5	NV	5	0.2
MTCA Meth	od B			400	80	0.081	160	0.49	0.029
GP78	GP78-W-31.0	6/20/2011	31	1 U	1 U	1 U	1 U	1 U	1 U
GP79	GP79-W-21.0	6/17/2011	21	1 U	1 U	4.47	1 U	1 U	1 U
GP79	GP79-W-21.0-DUP	6/17/2011	21	1 U	1 U	4.51	1 U	1 U	1 U
GP80	GP80-W-30.0	6/17/2011	30	1 U	1 U	5.76	1 U	5.85	1 U
GP81	GP81-W-19.0	6/23/2011	19	1 U	1 U	1 U	1 U	1 U	1 U

NOTES:

bgs = below ground surface.

Bold = value exceeds MTCA Method B screening levels.

MTCA = Model Toxics Control Act.

μg/L = micrograms per liter.

NV = no value.

Shading = value exceeds MTCA Method A screening levels.

TCE = trichloroethene.

U = not detected at or above the method reporting limit.

Location	Sample ID	Date	Depth (feet bgs)	1,1- Dichloro- ethene	cis-1,2- Dichloro- ethene	Tetra- chloroethene	trans-1,2- Dichloroet hene	Trichloro- ethene	Vinyl chloride
MTCA Me	thod A			NV	NV	5	NV	5	0.2
MTCA Me	thod B			400	80	0.081	160	0.49	0.029
MW1	MW1-12.5	6/24/2011	12.5	1 U	1 U	19.5	1 U	1 U	1 U
MW2	MW2-14.0	6/24/2011	14	1 U	1 U	8.84	1 U	1 U	1 U
MW3	MW3-15.0	6/24/2011	15	1 U	1 U	12500	1 U	3.47	1 U
MW4	MW4-16.0	6/24/2011	16	1 U	1 U	226	1 U	13.9	1 U
MW4	MW4-16-DUP	6/24/2011	16	1 U	1 U	216	1 U	15.8	1 U
MW5	MW5-16.5	6/24/2011	16.5	1 U	1 U	2240	1 U	3.61	1 U
MW6	MW6-16.0	6/24/2011	16	1 U	1.31	3.77	1 U	19.1	1 U
MW7	MW7-15.0	6/24/2011	15	1 U	1 U	11.7	1 U	1 U	1 U

NOTES:

bgs = below ground surface.

Bold = value exceeds MTCA Method B screening levels.

MTCA = Model Toxics Control Act.

μg/L = micrograms per liter.

NV = no value.

Shading = value exceeds MTCA Method A screening levels.

TCE = trichloroethene.

U = not detected at or above the method reporting limit.

Location	Sample ID	Lab Code	Date	Depth (feet bgs)	1,1-Dichloro- ethene	cis-1,2- Dichloro- ethene	Tetra- chloro- ethene	trans-1,2- Dichloro- ethene	Trichloro- ethene	Vinyl chloride
MTCA Method B Subslab Soil Gas Screening Level					910	160	4.2	320	1	2.8
SG1	SG1-4.0	1003288-01A	03/09/2010	4	0.14 U	0.27 U	200	1.4 U	0.37 U	0.087 U
SG2	SG2-3.0	1003288-02A	03/09/2010	3	12 U	12 U	3800	12 U	17 U	7.9 U
SG3	SG3-3.5	1003288-03A	03/10/2010	3.5	0.064 U	0.13 U	0.22 U	0.64 U	0.17 U	0.050
SG4	SG4-3.5	1003288-04A	03/10/2010	3.5	0.065 U	0.13 U	1.2	0.65 U	0.18 U	0.042 U
SG5	SG5-3.5	1003288-05A	03/10/2010	3.5	0.065 U	0.13 U	2.9	0.65 U	0.18 U	0.042 U
SG7	SG7-3.5	1003288-07A	03/10/2010	3.5	1.2 U	2.5 U	2800	12 U	32	0.81 U
SG8	SG8-3.5	1003288-08A	03/10/2010	3.5	0.057 U	0.11 U	35	0.57 U	0.15 U	0.037 U
SG9	SG9-3.5	1003288-09A	03/10/2010	3.5	0.060 U	0.12 U	3.5	0.60 U	0.16 U	0.094
SG10	SG10-2.5	1003288-10A	03/10/2010	2.5	1.2 U	2.4 U	1600	12 U	3.3 U	0.79 U
SG11	SG11	1106496-01A	6/20/2011	5	4 U	4 U	6.8 U	4 U	5.4 U	2.6 U
SG12	SG12	1106496-02A	6/20/2011	5	4 U	4 U	15	4 U	5.4 U	2.6 U
SG13	SG13	1106496-03A	6/20/2011	5	4 U	4 U	150	4 U	5.4 U	2.6 U
SG14	SG14	1106496-04A	6/21/2011	5	4 U	4 U	6.8 U	4 U	5.4 U	2.6 U
SG15	SG15	1106496-05A	6/20/2011	5	4 U	4 U	6.8 U	4 U	5.4 U	2.6 U

NOTES:

bgs = below ground surface.

Bold = value exceeds the MTCA Method B screening level.

MTCA = Model Toxics Control Act.

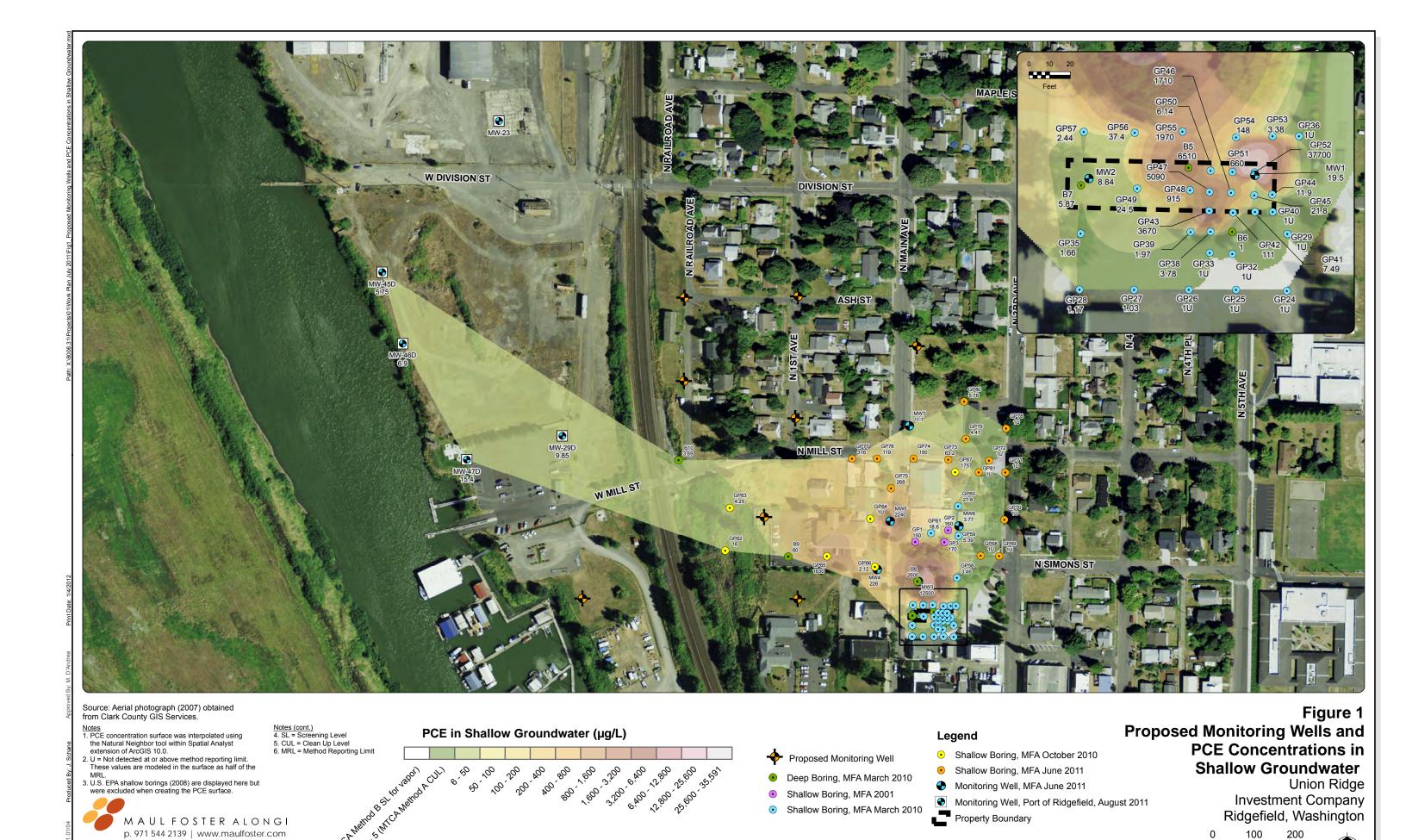
 $\mu g/m^3$ = micrograms per cubic meter.

PCE = tetrachloroethene.

U = not detected at or above the method reporting limit.

FIGURE





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