



March 18, 2020

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**Re: Environmental Review and Workplan for Site Closure**

Fifth Wheel Truck Repair Site  
307 to 309 East Arlington Street, Yakima, Washington Cleanup Site ID: 1914  
Facility/Site ID: 554  
Project No. 190558

Dear Lisa:

Aspect Consulting, LLC (Aspect) has prepared this letter to provide our opinion of the environmental conditions and the steps needed to pursue a No Further Action (NFA) Determination from the Washington State Department of Ecology (Ecology) for the Fifth Wheel Truck Repair Site located at 307 to 309 East Arlington Street in Yakima, Yakima County, Washington (the Site; Figure 1). The Site comprises a single parcel (no. 191330-12008) totaling approximately 0.51 acres and is currently developed with a 14,000 square foot commercial building. The building is bisected into two tenant spaces and was constructed between 1948 and 1969 for use as auto repair facilities. The current tenants include Precision Auto Body (east tenant space) and UC Signs, an aluminum and plastic sign manufacturing facility (west tenant space).

The Site has been the subject of environmental investigations and remedial actions by others since the late 1980s and is included within the groundwater monitoring network for the Yakima Railroad Area (YRRA) Site groundwater plume. The Site is listed on Washington State Department of Ecology's (Ecology) Confirmed and Suspected Contaminated Sites List (CSCSL) under Facility/Site ID no. 554 and Cleanup Site ID no. 1914.

## **Background**

This section presents background information and a summary of the known environmental conditions as a basis of our opinion and work plan. The information presented in this section is based on research conducted by others. The cited reports, records, and/or correspondence should be referred to for complete detail.

## ***Development and Use History***

The west portion of the Site building was originally constructed in 1948 and used as a truck repair shop by Fifth Wheel Truck Repair and the east portion of the building was constructed as an addition in 1969 and used as an auto body shop by S&S Auto Body. These operations continued under various companies until at least 2018 (Adapt Engineering, 2018).

Use of underground storage tanks (USTs) has not been identified by the research and studies completed to date; however, three sumps were formerly in use in the east tenant space during the

auto repair operations until they were removed in 1995. Additionally, three drywells have reportedly been in use at the Site historically; for ease of reference, the three drywells are referred to throughout this letter as follows:

- **Drywell 1**, formerly located in the paved rear storage lot in the northwest corner of the Site, collected stormwater runoff and truck steam cleaning fluids from the paved areas north of the building until it was excavated and removed in 1991.
- **Drywell 2**, formerly located inside the west tenant space, collected fluids in the vicinity of the auto repair operations until it was removed in 1991.
- **Drywell 3**, which is the only existing drywell at the Site, was installed following removal of Drywell 1 in the same location, and currently collects stormwater runoff from the paved areas north of the existing building (Maxim, 1996 and Adapt Engineering, 2018).

The locations of the former sumps and former and existing drywells are shown on Figure 2. Removal of the former sumps and drywells and associated remedial actions are described in the following section.

## ***Investigation and Remediation History***

Since 1989, several environmental investigation and remediation activities have been conducted at the Site by others. Reports documenting the prior environmental studies indicate that the purpose for the studies was to evaluate the potential for releases associated with auto repair facility features, and evaluate the Site as a potential contributor to the area-wide PCE groundwater impacts associated with the YRRA Site (Figure 1). The following is a chronology of the environmental activities based on our review of the cited reports.

- **1989 to 1991 Investigation, Removal and Remedial Action at Drywell 1.** In October 1989, one soil boring (B-3; Figure 2) was advanced near Drywell 1 to evaluate the potential for subsurface soil and groundwater contamination. Total petroleum hydrocarbons (TPH) were identified in soil between 3 and 15 feet below ground surface (bgs) at concentrations exceeding the MTCA cleanup level of 200 mg/kg used for screening; the specific range(s) of TPH identified by this study was not identified by the laboratory testing.  
  
Tetrachloroethylene (PCE) was identified at 5 micrograms per liter (ug/L) in a grab groundwater sample obtained from the boring (Earth Consultants, 1989). In 1991, Drywell 1 was removed and approximately 120 cubic yards of petroleum contaminated soil was removed for off-site disposal. Soil samples obtained from the limits of the excavation showed benzene, toluene, ethylbenzene, and xylenes (BTEX), TPH, and metals were either not detected or detected below the State cleanup levels; however, the report documenting the remedial action does not include a vertical extent (bottom of excavation) confirmation sample, which would demonstrate that all contaminated soil was successfully removed. The excavation was backfilled and a replacement drywell (Drywell 3) was installed (PLSA, 1991). Drywell 3 remains in place and receives stormwater drainage from the paved areas.
- **1991 to 1993 Discovery, Removal, and Interim Action at Drywell 2.** In February 1991, during installation of the existing drain and oil/water separator system in the west tenant space, an interior catch basin was discovered to discharge directly to soil beneath the floor slab, functioning as a drywell (Drywell 2; Figure 2). Environmental sampling of soil from

Drywell 2 showed total TPH at 13,259 mg/kg, well above the State cleanup level at the time, and BTEX and PCE at concentrations below the State cleanup levels at the time. Note that the detected concentration of PCE (0.265 mg/kg) is above the MTCA Method A cleanup level of 0.05 mg/kg.

Petroleum contaminated soil was excavated for off-site disposal to the maximum extent practicable without undermining the existing building; the reports do not include documentation of the size of the excavation or the amount of soil excavated and removed. The specific volume of soil removed is not documented in the report; however, the report indicates that approximately 250 cubic yards was estimated to remain in place, generally situated northwest of the Drywell 2 location and beneath the northwest portion of the building slab (PLSA, 1991). Ecology later indicated that confirmational sampling was needed at depths below the former Drywell 2 to verify that PCE impacted soil had been successfully removed in 1991. In 1993, PLSA advanced a boring beside the former Drywell 2 location (shown as UB-1 on Figure 2). PCE was not detected in the soil samples from this boring (PLSA, 1993).

- **1995 Investigation, Removal, and Remedial Action at Sump 1 to Sump 3.** In September 1995, three sumps formerly used by the east tenant space to dispose of liquid wastes generated by the auto repair operation(s) were targeted for sampling to evaluate the potential for their contents leaking into underlying soil. Each of the three sumps were removed and adjacent soil excavated to the maximum extent practicable without undermining the existing building, and soil samples were obtained from excavation extents:
  - At Sump 1 and Sump 2 (located inside the building; see Figure 2) excavation occurred to 2 feet below each sump and confirmation sample results showed TPH, lead, and/or cadmium at concentrations above the MTCA Method A cleanup levels at the time. Contaminated soil remains in-place at these locations, below the existing building floor slab.
  - At Sump 3 (just north of the building, see Figure 2) excavation extended to 10 feet bgs, and no constituents were detected in confirmation soil samples above their respective MTCA cleanup levels.

The total amount of soil removed for offsite disposal during the 1995 activities was 33.4 tons, which includes excavated soil from the sump excavations, sludge removed from the interior of the sumps, and drilling cuttings from installation of wells installed outside the building (described in the next bullet below). VOCs (including PCE) were not detected in the sludge material inside the sumps or in underlying soil confirmation samples at any of the three sump excavations. The sumps were replaced with the existing drain system, which pumps collected fluids to the oil/water separator at the west tenant space for treatment prior to discharge to the municipal sewer (Maxim, 1996).

- **1991 and 1995 Up- and Downgradient Well Installation, and 1995 to 1996 Groundwater Monitoring.** In January 1991, two groundwater monitoring wells were installed just west of the property boundary (upgradient) to evaluate quality of groundwater from upgradient sources (MW-3 and MW-4; Figure 2). Groundwater samples obtained from both wells showed no detectable concentrations of volatile organic compounds (VOCs), TPH, or polychlorinated biphenyls (PCBs), and select metals were detected below the State

cleanup levels (PLSA, 1991). Soil samples were obtained from MW-4 at 10 feet bgs, which showed no detections of TPH.

In 1995, two additional groundwater monitoring wells were installed downgradient of the Site boundary to the south and east to evaluate groundwater quality (MW-1 and MW-2; Figure 2). Due to poor soil sample recovery while drilling MW-1 and MW-2, two test pits were excavated at the southeast property corner to characterize soil in the top 15 feet bgs. Six soil samples obtained between 5 and 15 feet bgs were analyzed for VOCs, heavy oil, and metals, with none detected above the State cleanup levels at the time (Huntingdon, 1995).

Six rounds of groundwater monitoring at MW-1 to MW-4 occurred between February 1995 and February 1996. Samples were submitted for analysis of TPH, VOCs, and priority pollutant metals for the first three rounds, and then for VOCs only for the final three rounds. Over the course of the monitoring period, PCE was detected at concentrations ranging from 0.6 to 9.3 ug/L (MTCA Method A cleanup level is 5 ug/L; Maxim, 1996). The most recent investigation report for the Site (Maxi, 1996) recommended an additional 2 years of groundwater monitoring of MW-1 to MW-4 at the Site; there is no record of this recommendation being implemented. Further, the current status of wells MW-1, MW-3, and MW-4 is unknown. As discussed below, MW-2 exists and is being utilized by Ecology for their greater YRRA monitoring program.

- **1999 to Present Annual Groundwater Monitoring for YRRA Site.** Monitoring well MW-2, located south (downgradient) of the Site, is included within the groundwater monitoring well network for the YRRA Site and has been sampled at least once annually since 1999. PCE has been detected at concentrations fluctuating around the MTCA cleanup level of 5 ug/L, with a concentration of 4.2 ug/L in September 2017. This most recent result is below the cleanup level and lower than each of the previous three annual sampling events (Ecology, 2018).

Aspect reviewed the recent and historical PCE detections in groundwater at well MW-2, located just south of the Site boundary, in comparison to the MTCA Method B Groundwater Screening Levels for vapor intrusion. PCE in groundwater beneath the Site has not exceeded the MTCA Screening Level of 24 ug/L in any of the monitoring events at MW-2, indicating that PCE-impacted groundwater does not represent a vapor intrusion risk for the Site building.

Note the monitoring conducted by Ecology has included only one of the four wells historically present at the Site, MW-2. Record of the groundwater monitoring recommended in the 1996 investigation report (Maxim, 1996) was not identified, and the concentration of PCE at the upgradient property boundary is unknown. Further, the potential presence of other contaminants of concern in groundwater (such as, petroleum hydrocarbons), is unknown. The status of the three other wells is unknown (MW-1, MW-3, and MW-4).

Historical exploration locations are shown relative to existing property features on Figure 2. Data tables summarizing the soil and groundwater analytical results are included as Appendix A.

## ***Regulatory Activities and Correspondence History***

Following discovery of PCE at 0.265 mg/kg in soil characterization samples obtained at the former Drywell 2 location in 1991, the Site was identified by Ecology as a potential contributor to the PCE

impacts in groundwater that were being evaluated as part of the YRRA Site and was incorporated into the YRRA Site investigation and monitoring program. The Site owner, Richard F. Hahn, was determined as a Potentially Liable Person (PLP) for the YRRA Site (Ecology, 1993). Enforcement Order No. DE 94TC-C103 dated January 13, 1995, and its Amendment dated June 16, 1995, were established by Ecology's Toxics Cleanup Program (TCP), requiring the PLP to perform a Remedial Investigation and Feasibility Study (RIFS) with the goal of understanding if the Site contributes to the YRRA PCE groundwater impacts.

The sump removals and groundwater monitoring that occurred at the site from 1995 to 1996 (described above) were conducted under the Enforcement Order in support of the Remedial Investigation; however, it does not appear that a formal RIFS was completed for the Site.

Reports documenting the prior environmental investigations and remedial actions described above have been provided to Ecology for their review; however, formal correspondence documenting Ecology's opinion of the current Site conditions are not readily available in Ecology's online files for the Site. Included in the Work Plan section of this document is preparation of a Site Closure Report that will include a discussion of how the investigation and remediation work at the Site results in Site conditions that meet the objectives and requirements of the Enforcement Order.

## **Work Plan for Site Closure**

Aspect discussed the Site, Site data gaps, and action items needed for pursuit of Site closure and an NFA determination with the current Ecology TCP Site Manager, Kyle Parker, on February 6, 2020. Information from the discussion, as well as our understanding of the Site conditions and the intended future use plans for the Site, form the basis for the information presented in this section.

### ***Environmental Data Gaps***

Below are the data gaps identified for the Site based on our review of Site reports, our discussion with Ecology, and our understanding of the requirements of the Enforcement Order for the Site:

- 1. Insufficient Confirmation Sampling at Drywell 1 Excavation.** Bottom soil confirmation samples from the Drywell 1 removal extent and associated contaminated soil excavation were not obtained to demonstrate that the excavation successfully removed all petroleum-contaminated soil at this location. Soil samples from beneath the excavation extent are needed to confirm the soil removal action.
- 2. Residual Contaminated Soil Beneath the Building Near Drywell 2 and Sumps 1 and 2.** Residual contaminated soil remains beyond the extents of the excavations associated with Drywell 2 and Sumps 1 and 2, formerly located beneath the east tenant space. Contaminated soil in these locations could not be removed without undermining the structural integrity of the existing building.
- 3. Lack of Recent Groundwater Monitoring.** The YRRA groundwater monitoring includes MW-2 (downgradient of the Site). Groundwater monitoring at the other Site monitoring wells has not occurred since 1996. The 1995 and 1996 groundwater monitoring did not indicate that the Site was a source of PCE release to groundwater. A monitoring well upgradient of the Site and current groundwater results are necessary to verify that Site uses since 1996 have not resulted in any releases, and that the Site is not contributing to the YRRA groundwater plume.

Further, groundwater sampling for additional contaminants of concern associated with the Site, such as petroleum hydrocarbons, is needed to confirm that the known residual contaminated soil described in Data Gap 3 is not affecting groundwater.

## ***Work Plan Action Items***

This section presents a summary of the action items needed to address the data gaps above with the goal of receiving an NFA Determination from Ecology. These action items are based on our review of the Site conditions, our understanding of the intended future use of the Site, and our discussion with Ecology.

- 1. Data Gaps Investigation** – Conduct a data gaps investigation consisting of the following:
  - a.** Advance one soil boring through, or immediately adjacent to, the Drywell 1/Drywell 3 location and obtain soil samples below the remedial excavation backfill to evaluate soil compliance with cleanup levels. Two soil samples should be obtained from soil situated below the imported backfill placed during replacement of the drywell system in 1991, which is expected to be encountered at approximately 20 feet bgs.  
  
Specifically, one sample should be obtained between 6 inches and 1 foot below the backfill, and one sample should be obtained at 5 feet below the backfill. Soil samples should be analyzed for the contaminants of concern identified at concentrations above the State cleanup levels during the 1989 characterization sampling of Drywell 1 soil prior to removal: gasoline-, diesel-, and oil-range TPH and PCE.
  - b.** Install two groundwater monitoring wells upgradient of the Site property boundary, and conduct four groundwater monitoring events at three monitoring wells for a quarterly frequency to confirm the Site is not contributing to the YRRA groundwater plume. This effort will allow for evaluation of the Site-specific groundwater flow direction, the concentrations of PCE at the upgradient Site property boundary, and the presence/absence and concentrations of other contaminants of concern for the Site in groundwater.
- 2. Record Environmental Covenant** – Apply an institutional control, to be recorded with the Site property deed as a restrictive environmental covenant, to document the nature and extent of the contaminated soil beneath the building and prevent Site uses that might result in contact and/or disturbance of the contaminated soil. If PCE associated with the YRRA groundwater impacts is identified at concentrations above the cleanup level in groundwater beneath the Site during implementation of the Data Gaps Investigation, then the institutional control can also document the presence of the groundwater contamination and establish groundwater use restrictions. This action item can be pursued concurrently with the Data Gaps Investigation action item described above.
- 3. Prepare a Site Closure Report documenting the activities and results of the Data Gaps Investigation and the Environmental Covenant** described above, and presenting an updated summary of Site conditions. The Site Closure Report should include an assessment of current Site conditions and the results of investigation and remedial activities in relation to the requirements and objectives set forth in the Enforcement Order.
- 4. Request Ecology Opinion for Site** – The Site Closure Report should be submitted to Ecology, along with a formal opinion request of Ecology. If the Data Gaps Investigation activity 1a

confirms soil compliance with cleanup requirements, and once activity 2 is completed, an opinion of NFA will be requested for the Site.

5. **Request Ecology Opinion of Site as a Potential Contributor to YRRA Site** – If the results of data gap investigation activity 1b confirm the Site remains a non-contributor to the YRRA groundwater plume and demonstrate that the Enforcement Order requirements have been addressed, Ecology will be requested to remove the Site from consideration as a potential contributor from the YRRA Site.

## References

- Adapt Engineering, 2018, Phase I Environmental Site Assessment, UC Signs, 307 – 309 East Arlington Street, Yakima, WA, July 5, 2018.
- Earth Consultants, Inc. (Earth Consultants), 1989, Preliminary Integrity Assessment of Two Underground Storage Tanks (UST)s and Three Industrial Waste Water Sumps, 1201 South First Street and 207 East Arlington Street, Yakima, Washington, Prepared for Hahn Motor Company, October 25, 1989.
- Huntingdon Engineering & Environmental Inc. (Huntingdon), 1995, Remedial Investigation – Interim Report, Fifth Wheel Truck Repair Facility, 307 East Arlington Avenue, Yakima, Washington, May 25, 1995.
- Maxim Technologies, Inc. (Maxim), 1996, Environmental Investigation and Remediation, Fifth Wheel Truck Repair Facility, 307 East Arlington Street, Yakima, Washington, May 2, 1996.
- PLSA Engineering & Surveying (PLSA), 1991, Engineering Report on Intermediate Cleanup and Site Closure for Fifth Wheel Truck Repair, 307 East Arlington Street, Yakima, Washington, April 1991.
- PLSA Engineering & Surveying (PLSA), 1993, Sampling Report for Fifth Wheel Truck Repair, 307 East Arlington Street, Yakima, Washington, October 22, 1993.
- Washington State Department of Ecology (Ecology), 1993, Letter to Richard F. Hahn, Hahn Motor Company RE: Determination of Potentially Liable Person Status, Yakima Railroad Area, dated April 23, 1993.
- Washington State Department of Ecology (Ecology), 2018, Yakima Railroad Area PCE Contamination, Groundwater Quality Performance Monitoring Data Summary 2017, Publication No. 18-03-027, July 2018.

## Limitations

Work for this project was performed for Northwest Resource Law, PLLC (Client), and this letter was prepared in accordance with generally accepted professional practices for the nature and conditions of work completed in the same or similar localities, at the time the work was performed. This letter does not represent a legal opinion. No other warranty, expressed or implied, is made.

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**Please refer to Appendix B titled "Report Limitations and Guidelines for Use" for additional information governing the use of this report.**

Sincerely,

Aspect consulting, LLC



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March 18, 2020

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Attachments: Figure 1 – Site Location Map  
Figure 2 – Site Plan  
Appendix A – Historical Soil and Groundwater Analytical Data  
Appendix B – Report Limitations and Guidelines for Use

# FIGURES



Selah

YAKIMA RAILROAD AREA (YRRA)

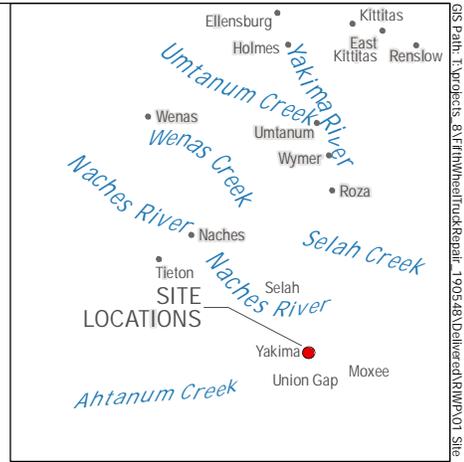
Yakima



FIFTH WHEEL TRUCK REPAIR SITE

Union Gap

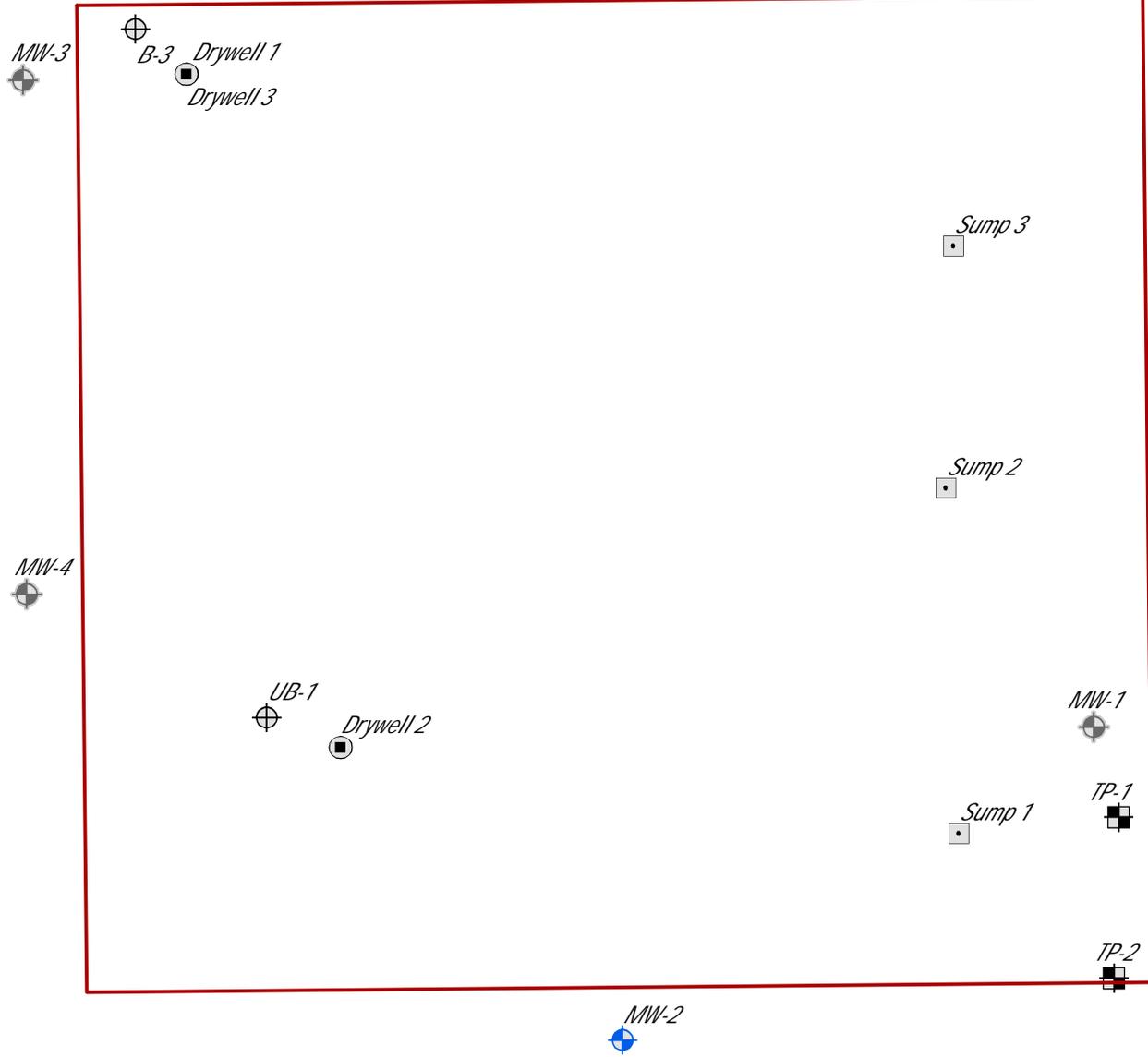
Moxee



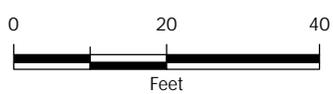
**Site Location Map**  
 Fifth Wheel Truck Repair Site  
 307 to 309 East Arlington Street  
 Yakima, Washington

	FEB-2020	BY: ALC / EAC	FIGURE NO. <b>1</b>
	PROJECT NO. 190548	REVISED BY: ---	

N



E ARLINGTON ST



- Soil Boring
- Existing Monitoring Well
- Prior Monitoring Well
- Test Pit
- Drywell
- Former Sump
- Site Boundary

*Note: Exploration and feature locations from 1995 PLSA Site History Report. All features shown are approximate.*

## Site Plan

Fifth Wheel Truck Repair Site  
307 to 309 East Arlington Street  
Yakima, Washington

	FEB-2020	BY: ALC / EAC	FIGURE NO.  <span style="font-size: 24pt;">2</span>
	PROJECT NO. 190548	REVISED BY: ...	

## **APPENDIX A**

### **Historical Soil and Groundwater Analytical Data**

**TABLE 1  
SOIL ANALYTICAL RESULTS  
FIFTH WHEEL TRUCK REPAIR FACILITY  
YAKIMA, WASHINGTON**

Parameter	Sample ID and Depth (sample date) <sup>1</sup>										MTCA Method A Cleanup Level <sup>2</sup>	MTCA Method B Cleanup Level
	MW-1 @ 10 (2-8-95)	MW-1 @ 15 (2-8-95)	MW-1 @ 20 (2-8-95)	MW-2 @ 20 (2-8-95)	TP-1 @ 5 (4-19-95)	TP-1 @ 10 (4-19-95)	TP-1 @ 18 (4-19-95)	TP-2 @ 5 (4-19-95)	TP-2 @ 10 (4-19-95)	TP-2 @ 18 (4-19-95)		
PCE <sup>3</sup>	ND <sup>8</sup>	ND	0.16	0.05	ND	ND	ND	ND	ND	ND	0.5	0.06 (Method protective of GW)
DCE <sup>4</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
Benzene <sup>5</sup>	ND	ND	0.48	ND	ND	ND	ND	ND	ND	ND	0.5	
Toluene <sup>5</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40.0	
Ethylbenzene <sup>5</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20.0	
Xylenes <sup>5</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20.0	
Heavy Oil <sup>6</sup>	110	108	ND	33	36	54	115	ND	ND	ND	200.0	-
Antimony <sup>7</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	32.0
Arsenic <sup>7</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	20.0	-
Beryllium <sup>7</sup>	ND	0.60	ND	ND	ND	ND	ND	ND	ND	ND	-	0.233
Cadmium <sup>7</sup>	3.8	5.3	4.8	3.4	1.5	ND	ND	ND	ND	ND	2.0	-
Chromium <sup>7</sup>	11.0	8.4	10.0	13.0	14.0	8.8	7.6	12.0	7.9	10.0	100.0	-
Copper <sup>7</sup>	18.0	45.0	21.0	23.0	39.0	15.0	14.0	22.0	13.0	14.0	-	2,960.0
Lead <sup>7</sup>	ND	ND	ND	ND	200.0	26.0	20.0	34.0	7.3	8.0	250.0	-
Nickel <sup>7</sup>	15.0	16.0	14.0	10.0	12.0	7.8	7.0	13.0	7.3	9.3	-	1,600.0
Selenium <sup>7</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	400.0
Silver <sup>7</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	400.0
Thallium <sup>7</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-	5.6
Zinc <sup>7</sup>	55.0	60.0	46.0	42.0	99.0	36.0	38.0	69.0	36.0	38.0	-	24,000.0
Mercury <sup>7</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.0	-

- 1 Sample ID indicates specific monitoring well or test pit location; sample depth given in feet below ground surface.
- 2 Model Toxics control Act (MTCA) Method A and B Cleanup Levels established by the Washington State Department of Ecology, December 1993.
- 3 PCE = Tetrachloroethylene, analyzed according to EPA Methods 8010/8020, and reported in milligrams per kilogram (mg/kg).
- 4 DCE = 1,2 dichloroethene, analyzed according to EPA Methods 8010/8020, and reported in milligrams per kilogram (mg/kg).
- 5 Benzene, toluene, ethylbenzene and xylenes, analyzed according to EPA Methods 8010/8020, and reported in milligrams per kilogram (mg/kg).
- 6 Total Petroleum Hydrocarbons (TPH) analyzed according to WTPH-D Extended, and reported in milligrams per kilogram (mg/kg).
- 7 Total Metals, analyzed according to EPA Methods 6010 and 7416, and reported in milligrams per kilogram (mg/kg).
- 8 ND = Not Detected.

Notes: all concentrations reported in milligrams per kilogram (mg/kg).  
- indicates cleanup level for a specific parameter in soil has not been established.

<b>TABLE 2                      WATER LEVEL DATA                      FIFTH WHEEL REPAIR FACILITY                      YAKIMA, WASHINGTON</b>								
DATE	WELLS							
	MW-1 (1039.95) <sup>1</sup>		MW-2 (1039.22)		MW-3 (1040.29)		MW-4 (1039.88)	
	DTW <sup>2</sup>	GW ELEV <sup>3</sup>	DTW	GW ELEV	DTW	GW ELEV	DTW	GW ELEV
February 9, 1995	21.42	1018.53	18.67	1020.55	18.75	1021.54	17.54	1022.34
April 19, 1995	20.32	1019.63	17.91	1021.31	17.51	1022.78	17.37	1022.51
September 5, 1995	15.50	1024.45	14.21	1025.01	14.33	1025.96	14.33	1025.55
November 27, 1995	19.89	1020.06	17.85	1021.37	17.33	1022.96	17.26	1022.62
February 7, 1996	21.90	1018.05	19.20	1020.02	18.08	1022.21	18.20	1021.68

- 1 Measuring point elevation, relative to mean sea level, measured in feet.
- 2 DTW = depth to water below measuring point, measured in feet.
- 3 GW ELEV = groundwater elevation, measured in feet.

**TABLE 3  
GROUNDWATER ANALYTICAL RESULTS  
FIFTH WHEEL REPAIR FACILITY  
YAKIMA, WASHINGTON**

Well No.	Sampling Date	Parameter			
		PCE <sup>1</sup> (µg/l)	Chloroform <sup>2</sup> (µg/l)	Cu <sup>3</sup> (mg/l)	Zn <sup>4</sup> (mg/l)
MW-1	2-15-95	3.5	ND <sup>5</sup>	0.046	0.11
	4-21-95	1.2	ND	ND	0.04
	8-29-95	NM <sup>x</sup>	NM <sup>x</sup>	ND	ND
	9-05-95	4.1	1.6	NA <sup>6</sup>	NA
	11-27-95	6.7	ND	NA	NA
	2-08-96	3.5	1.4	NA	NA
MW-2	2-15-95	4.3	ND	ND	0.13
	4-21-95	1.0	ND	ND	0.07
	8-29-95	NM <sup>x</sup>	NM <sup>x</sup>	ND	ND
	9-05-95	9.3	2.0	NA	NA
	11-27-95	6.2	ND	NA	NA
	2-08-96	8.4	3.8	NA	NA
MW-3	2-15-95	3.5	ND	ND	0.03
	4-21-95	0.6	ND	ND	0.05
	8-29-95	NM <sup>x</sup>	NM <sup>x</sup>	ND	ND
	9-05-95	3.7	1.8	NA	NA
	11-27-95	6.8	ND	NA	NA
	2-08-96	3.5	1.7	NA	NA
MW-4	2-15-95	4.2	ND	ND	0.07
	4-21-95	1.3	ND	ND	0.03
	8-29-95	NM <sup>x</sup>	NM <sup>x</sup>	ND	ND
	9-05-95	5.8	1.8	NA	NA
	11-27-95	6.2	ND	NA	NA
	2-08-96	6.3	3.1	NA	NA
EPA Drinking Water Standards <sup>7</sup>		5.0	100	1.0	5.0

1 PCE = Tetrachloroethylene, analyzed according to EPA Method 8010/8020, reported in micrograms per liter (µg/l).

2 Chloroform, analyzed according to EPA Method 8010/8020, reported in micrograms per liter (µg/l).

3 Cu = Copper, analyzed according to EPA Method 200.7, reported in milligrams per liter (mg/l).

4 Zn = Zinc, analyzed according to EPA Method 200.7, reported in milligrams per liter (mg/l).

5 ND = Not Detected

6 NA = Not Analyzed NM<sup>x</sup> = invalid data re-sampled 8-5-95

7 Based on Washington MTCA Method A or B cleanup levels, or U.S. EPA Primary and Secondary drinking water standards.

**TABLE 4  
SUMP SLUDGE AND SOIL SAMPLE ANALYTICAL RESULTS  
FIFTH WHEEL TRUCK REPAIR FACILITY  
YAKIMA, WASHINGTON**

Analyte	MTCA Method A Cleanup Level <sup>1</sup> (mg/kg)	Sludge Samples		Confirmation Samples						
		Sump-1 (mg/kg)	Sump-2 (mg/kg)	Sump-1 (mg/kg)	Sump-2 (mg/kg)	Sump-3 South (mg/kg)	Sump-3 West (mg/kg)	Sump-3 Bottom (mg/kg)	Stockpile (mg/kg)	
Organics	PCE <sup>2</sup>	0.5	ND <sup>7</sup>	ND	ND	ND	ND	ND	ND	ND
	DCE <sup>3</sup>	NE <sup>8</sup>	19.7	ND	NA <sup>9</sup>	NA	NA	NA	NA	NA
	Total BTEX <sup>4</sup>	85.5	41.46	ND	0.20	ND	ND	ND	ND	ND
	TPH <sup>5</sup>	200.0	4,140	>25,000	395	73	ND	ND	ND	1040
Metals <sup>6</sup>	Antimony	NE	ND	ND	ND	ND	ND	ND	ND	ND
	Arsenic	20.0	ND	ND	ND	ND	ND	ND	ND	ND
	Beryllium	NE	ND	ND	ND	ND	ND	ND	ND	ND
	Cadmium	2.0	19.0	13.0	8.9	7.7	5.0	3.8	1.4 (at 10 ft BGS Nov. 1995)	46.0
	Chromium	100.00	130.0	150.0	20.0	11.0	10.0	18.0	9.0	14
	Copper	NE	110.0	110.0	46.0	21.0	18.0	14.0	19.0	27
	Lead	250.0	540.0	290.0	440.0	26.0	ND	7.2	23.0	87
	Nickel	NE	65.0	46.0	28.0	14.0	11.0	15.0	14.0	12.0
	Selenium	NE	ND	ND	ND	ND	ND	ND	ND	ND
	Silver	NE	ND	ND	ND	ND	ND	ND	ND	ND
	Thallium	NE	ND	ND	ND	ND	ND	ND	ND	ND
	Zinc	NE	4,000	1,500	450	110	40	35	94	120
Mercury	1.0	0.3	0.2	ND	ND	ND	ND	0.13	ND	

1 Model Toxics Control Act (MTCA) Method A Cleanup Levels, established by the Washington State Department of Ecology Toxics Cleanup Program, Amended December 1992.  
 2 PCE = Tetrachlorethylene, analyzed according to EPA Method 8010, reported in milligrams per kilogram (mg/kg).  
 3 DCE = 1,2 Dichloroethene, analyzed according to EPA Method 8010, reported in milligrams per kilogram (mg/kg).  
 4 BTEX = benzene, toluene, ethylbenzene and xylenes, analyzed according to EPA Method 8020, reported in milligrams per kilogram (mg/kg).  
 5 TPH = Total Petroleum Hydrocarbons (diesel and oil in soil), analyzed according to WTPH-D/D-Extended, reported in milligrams per kilogram (mg/kg).  
 6 Metals analyzed according to EPA Methods 6010 and 7471 (mercury), reported in milligrams per kilogram (mg/kg).  
 7 ND = Not Detected  
 8 NE = Not Established  
 9 NA = Not Analyzed

## **APPENDIX B**

### **Report Limitations and Guidelines for Use**

# REPORT LIMITATIONS AND USE GUIDELINES

## Reliance Conditions for Third Parties

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This report was prepared for the exclusive use of the Client. No other party may rely on this report or the product of our services without the express written consent of Aspect Consulting, LLC (Aspect). This limitation is to provide our firm with reasonable protection against liability claims by third parties with whom there would otherwise be no contractual conditions or limitations and guidelines governing their use of the report. Within the limitations of scope, schedule and budget, our services have been executed in accordance with our Agreement with the Client and recognized standards of professionals in the same locality and involving similar conditions.

## Services for Specific Purposes, Persons and Projects

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Aspect has performed the services in general accordance with the scope and limitations of our Agreement. This report has been prepared for the exclusive use of the Client and their authorized third parties, approved in writing by Aspect. This report is not intended for use by others, and the information contained herein is not applicable to other properties.

This report is not, and should not, be construed as a warranty or guarantee regarding the presence or absence of hazardous substances or petroleum products that may affect the subject property. The report is not intended to make any representation concerning title or ownership to the subject property. If real property records were reviewed, they were reviewed for the sole purpose of determining the subject property's historical uses. All findings, conclusions, and recommendations stated in this report are based on the data and information provided to Aspect, current use of the subject property, and observations and conditions that existed on the date and time of the report.

Aspect structures its services to meet the specific needs of our clients. Because each environmental study is unique, each environmental report is unique, prepared solely for the specific client and subject property. This report should not be applied for any purpose or project except the purpose described in the Agreement.

## This Report Is Project-Specific

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Aspect considered a number of unique, project-specific factors when establishing the Scope of Work for this project and report. You should not rely on this report if it was:

- Not prepared for you
- Not prepared for the specific purpose identified in the Agreement
- Not prepared for the specific real property assessed
- Completed before important changes occurred concerning the subject property, project or governmental regulatory actions

If changes are made to the project or subject property after the date of this report, Aspect should be retained to assess the impact of the changes with respect to the conclusions contained in the report.

## **Geoscience Interpretations**

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The geoscience practices (geotechnical engineering, geology, and environmental science) require interpretation of spatial information that can make them less exact than other engineering and natural science disciplines. It is important to recognize this limitation in evaluating the content of the report. If you are unclear how these "Report Limitations and Use Guidelines" apply to your project or site, you should contact Aspect.

## **Discipline-Specific Reports Are Not Interchangeable**

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The equipment, techniques and personnel used to perform an environmental study differ significantly from those used to perform a geotechnical or geologic study and vice versa. For that reason, a geotechnical engineering or geologic report does not usually address any environmental findings, conclusions or recommendations; e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Similarly, environmental reports are not used to address geotechnical or geologic concerns regarding the subject property.

## **Environmental Regulations Are Not Static**

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Some hazardous substances or petroleum products may be present near the subject property in quantities or under conditions that may have led, or may lead, to contamination of the subject property, but are not included in current local, state or federal regulatory definitions of hazardous substances or petroleum products or do not otherwise present potential liability. Changes may occur in the standards for appropriate inquiry or regulatory definitions of hazardous substance and petroleum products; therefore, this report has a limited useful life.

## **Property Conditions Change Over Time**

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This report is based on conditions that existed at the time the study was performed. The findings and conclusions of this report may be affected by the passage of time (for example, Phase I ESA reports are applicable for 180 days), by events such as a change in property use or occupancy, or by natural events, such as floods, earthquakes, slope failure or groundwater fluctuations. If more than six months have passed since issuance of our report, or if any of the described events may have occurred following the issuance of the report, you should contact Aspect so that we may evaluate whether changed conditions affect the continued reliability or applicability of our conclusions and recommendations.

## **Phase I ESAs – Uncertainty Remains After Completion**

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Aspect has performed the services in general accordance with the scope and limitations of our Agreement and the current version of the “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process”, ASTM E1527, and U.S. Environmental Protection Agency (EPA)'s Federal Standard 40 CFR Part 312 "Innocent Landowners, Standards for Conducting All Appropriate Inquiries".

No ESA can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with subject property. Performance of an ESA study is intended to reduce, but not eliminate, uncertainty regarding the potential for environmental conditions affecting the subject property. There is always a potential that areas with contamination that were not identified during this ESA exist at the subject property or in the study area. Further evaluation of such potential would require additional research, subsurface exploration, sampling and/or testing.

## **Historical Information Provided by Others**

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Aspect has relied upon information provided by others in our description of historical conditions and in our review of regulatory databases and files. The available data does not provide definitive information with regard to all past uses, operations or incidents affecting the subject property or adjacent properties. Aspect makes no warranties or guarantees regarding the accuracy or completeness of information provided or compiled by others.

## **Exclusion of Mold, Fungus, Radon, Lead, and HBM**

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Aspect's services do not include the investigation, detection, prevention or assessment of the presence of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Accordingly, this report does not include any interpretations, recommendations, findings, or conclusions regarding the detection, assessment, prevention or abatement of molds, fungi, spores, bacteria, and viruses, and/or any of their byproducts. Aspect's services also do not include the investigation or assessment of hazardous building materials (HBM) such as asbestos, polychlorinated biphenyls (PCBs) in light ballasts, lead based paint, asbestos-containing building materials, urea-formaldehyde insulation in on-site structures or debris or any other HBMs. Aspect's services do not include an evaluation of radon or lead in drinking water, unless specifically requested.