PHASE II
Limited and Targeted Subsurface Investigation

Performed at:
GEAR JAMMER TRAVEL PLAZA
AM Best Truck Stop
2310 Rudkin Road
Union Gap, Washington 98903

AEROTECH
Environmental Consulting Inc.

September 1, 2016

Anchorage Seattle Portland

Cost-effective environmental solutions
for the western United States and Alaska

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Performed by:
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LIMITED AND TARGETED PHASE II
TARGETED SUBSURFACE INVESTIGATION

performed for:
GEAR JAMMER TRAVEL PLAZA
AM Best Truck Stop
2310 Rudkin Road
Union Gap, Washington 98903

Clients:	**RUDDA CORPORATION** GEARJAMMER TRAVEL PLAZA 2310 Rudkin Road Union Gap, Washington 98903 **UNIBANK** 19315 Highway 99 Lynnwood, Washington 98036 **U.S. SMALL BUSINESS ADMINISTRATION** 2401 Fourth Avenue, Suite 450 Seattle, Washington 98121
Point of Contact:	Mr. Chuck Hinckley / Owner
Property:	**GEARJAMMER TRAVEL PLAZA** **AM Best Truck Stop** 2310 Rudkin Road Union Gap, Washington 98903
County:	Yakima County, Washington
Commercial Activity:	Truck Stop and Shell franchised Gasoline Station
Licensed Geologist:	James G. McDermott (License No. 3063)
Project Number:	216 - 8238
Report Date:	September 1, 2016

EXECUTIVE SUMMARY

On May 8, 2016, after conducting an All Appropriate Inquiry ("AAI") Compliant[1] *Phase I Environmental Site Assessment* for the subject Property, an irregular 11.46-acre Parcel of commercial land located on the west side of Rudkin Road in Union Gap, Washington. Aerotech proposed that a limited and targeted subsurface investigation be conducted to ascertain the current subsurface conditions at the Site.

Adjoining to the east is U.S. Interstate I-82 and two blocks to the south is East Valley Mall Boulevard. The main channel of the Yakima River is 1,700 feet to the east, with side channels and associated ponds within the flood plain 1,200 feet to the east.The Property is developed with two commercial buildings occupied by *Freight Savers Lube and Oil* and the *GearJammer Shell Travel Plaza / AM Best Truck Stop*

The main building is a one-story irregular five-sided structure occupied by the *GearJammer Travel Plaza*. The main entrance is at the southeastern side of the building, followed by a full service restaurant, a Trucker's Lounge with Store, and the Jammers Sports Bar. An attached canopy to the northeast protects four truck diesel fuel dispenser islands, and a smaller southern canopy protects four gasoline fuel dispensers serving cars and small trucks. Southeast of the south canopy is an underground fuel tank pit, housing four 20,000-gallon tanks (three diesel and one gasoline) and one 10,000-gallon gasoline tank. Figures 2 and 2b.

Situated along the northern margin of the Property is a rectangular-shaped building occupied by *Freight Savers Lube and Oil*. To the south is the lube bay with a below grade mechanic's pit; to the north are two bays, one used primarily for tire changing and the other as a truck and semi wash area. Interior zipper drains discharge to an oil-water separator located near the northwestern corner of the building.

The Site was originally developed in 1964. In 1978, the *Gearjammer Truck Stop* installed four 20,000-gallon tanks and two 1,000-gallon tanks. The following year (1979) an underground waste oil tank was installed. In 1998, a 12,000-gallon unleaded gasoline tank was installed at the Site. In 1999, the Site reported a Petroleum Release to the State of Washington Department of Ecology. Subsequent investigations revealed that non-halogenated solvents and petroleum hydrocarbons had impacted both the Site subsurface soils and ground water. The Phase I report made the following recommendations:

> "Prior Petroleum Releases - The subject Property formerly reported a Petroleum Release to the Department of Ecology and entered the Voluntary Cleanup Program ("VCP") in 2009. In 2012, Ecology terminated the VCP enrollment ... The Property should re-enter the VCP Program and obtain a *No Further Action Determination*."
>
> "Oil-Water Separator - Further Action Indicated. An oil-water separator is located along the northern Property boundary ... further investigation is recommended." "An area of visual staining of petroleum was observed around the waste oil storage totes and the oil change pit. Further investigation is indicated."

Limited & Targeted Phase II Subsurface Investigation: Conclusions & Recommendations:

Aerotech Environmental Consulting, Inc. performed a Limited & Targeted Phase II Subsurface Investigation on August 8 to August 11, 2016 in the Areas of Concern identified during a Phase I Investigation. Fourteen soil borings were advanced to a maximum depth of 16.5 feet below ground surface ("bgs"). Groundwater was encountered near 11 to 12 feet bgs. The Limited and Targeted Phase II Subsurface Investigation produced the following results:

- **Truck Wash and Lube Area: No Further Action Recommended**. Diesel, Oil and Gasoline constituents; chlorinated solvents; lead; and cPAH were not detected. Lubricant oils were detected in the former underground tank area west of the building at a depth of 12 feet bgs, at 1,500mg/kg, below the most stringent Model Toxics Control Act ("MTCA") Cleanup Levels for soil. No further action is recommended.

- **UST Area, Gas Fuel Pump Area, and Diesel Fuel Pump Area: Further Action Recommended.** Gasoline constituents were not detected on Site. Diesel fuel was detected in soil at a depth of 12.5 feet, at 3,200 mg/kg, above MTCA Cleanup Levels for soil of 2,000 mg/kg, at location B-34, southwest of the diesel fuel dispenser area, and at 960 mg/kg at location B-20, at the landscaped area to the south. Diesel fuel was not detected in water at MW-3, approximately 40 feet south of location B-20. Further action is recommended.

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INTRODUCTION

Aerotech Environmental Consulting, Inc., performed this Limited and Targeted Phase II Subsurface Investigation[1] of the subject Property located at 2310 Rudkin Road, in Union Gap, Washington. The objective of this Investigation was to evaluate the condition of the subsurface soils and groundwater for the Recognized Environmental Conditions associated with the historic use of the Property as a diesel and gasoline fueling operation, and truck washing and routine truck service operations, in order to determine the presence and extent of petroleum and related compounds in soil or groundwater.

On July 28, 2016, Mr. Brenden Christensen of *Powell-Christensen, Inc*. in Union Gap, Washington, engaged Aerotech Environmental Consulting, Inc. to perform a *Limited and Targeted Phase II Environmental Investigation* of the Site – the Scope of Work of said Investigation was communicated verbally and in the form of a Service Agreement at that time.

SECTION I.
SITE DESCRIPTION

Site Exterior and Interior Description:

The main building is a one-story irregular five-sided structure situated on concrete slab at grade and occupied by the *GearJammer Travel Plaza*. The main entrance is at the southeastern side of the building providing access to a cash register counter and *Subway Sandwich* service counter. Adjoining to the west is a full service restaurant followed by the Trucker's Lounge with a Trucker' Store to the north and the Jammers Sports Bar to the west. Refer to Figures 2, 2b and 3.

Two attached metal-framed canopies extend to the northeast and south. The northeast canopy protects four truck diesel dispensers and lanes between Cat scale lanes on each end. The southern canopy protects four double-side fuel dispensers serving cars and small trucks.

Southeast of the south canopy is an underground fuel tank pit housing four 20,000-gallon tanks (three diesel and one gasoline) and one 10,000-gallon gasoline tank. The larger tanks were installed in 1978, and the smaller tank in 1998. The product supply piping is corrosion resistant double-walled flexible fiberglass piping. The tanks and lines are monitored by a *Incon TS 2001 Tank Sentinel© TLS-350* real time Automatic Line Leak Detection.

Situated along the northern margin of the Property is a rectangular-shaped slab on grade concrete block building occupied by *Freight Savers Lube and Oil*. In the east central portion of the building is the office and parts storage space. Adjoining to the south is the lube bay with a below grade mechanic's pit and roll up doors on both ends. Adjoining the north side of the office are two bays, each with roll up doors on both ends, one used primarily for tire changing and the other as a truck and semi wash area. Interior zipper drains discharge to an oil-water separator located near the northwestern corner of the building.

The western half of the Property is dominated by a semi-truck overnight parking. Access between the Property and Rudkin Road is provided by three driveways along the eastern Property perimeter.

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[1] This Phase II Site Assessment is "targeted" as defined by the ASTM *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, Designation E 1903-97 (Reapproved 2002); "an assessment performed in accordance with the process described in this [E 1903-97] practice, which addresses only certain *releases* or potential *releases*, or certain *target analytes*, at a property as selcted by the *User* but which does not address all *releases*, potential *releases*, and *target analytes*.[E 1903-97, § 3.1.43]"

Site Development Description:

The Site was originally developed in 1964. In 1978, the *Gearjammer Truck Stop* installed four 20,000-gallon tanks and two 1,000-gallon tanks. The following year (1979) an underground waste oil tank was installed. In 1998, a 12,000-gallon unleaded gasoline tank was installed at the Site. In 1999, the Site reported a Petroleum Release to the State of Washington Department of Ecology. Subsequent investigations revealed that non-halogenated solvents and petroleum hydrocarbons had impacted both the Site subsurface soils and ground water.

Previously Recognized Environmental Conditions:

The objective of this Investigation was to evaluate the condition of the subsurface soils and groundwater for the Recognized Environmental Conditions associated with the historic use on the Property of a 1,000-gallon underground gasoline fuel tank, in order to determine whether the Site has been impacted by petroleum compounds or lead.

Previously Identified Contaminants of Concern:

Aerotech Environmental Consulting, Inc. completed a Phase I Environmental Assessment for the Property on May 23, 2016. The Phase I Environmental Assessment prepared by Aerotech identified Petroleum compounds, fuel additive and lead as Contaminants of Concern.

Site Observations and Reported Conditions:

With the exception of the above referenced environmental concern, there were no additional Recognized Environmental Conditions or concerns identified as potential impacts to the Property.

SECTION II.
FIELD WORK

Notifications - "Public" Utilities:

Due to the age and nature of the Site, a "public" utilities notification was performed prior to the start of work. Aerotech Environmental Consulting, Inc.[2] Performed the "public" utilities notification and was issued Ticket Number 161241401 on August 1, 2016 by the Utilities Underground Location Center. An digital version of the original side sewer card was also acquired prior to the start of drilling activities. According to the Utilities Underground Location Center the utilities necessary for notification included:

Washington Ticket#: 16241401 2 FULL BUSINESS DAYS
Transmit Date: 8/01/16 Time: 10:35 AM
County: YAKIMA State: WA
Place: UNION GAP
Address / Street: 2310 RUDKIN RD

Map Twp: 13N Rng: 19E Sect-Qtr: 32
Excavation Coordinates for # Polygons: 1
Poly 1: NW Lat: 46.5705383 Lon: -120.4771589 SE Lat: 46.5670370 Lon: -120.4711994

Members Notified

District	Company	Markings	Customer Service
CNG08	CASCADE NATURAL GAS-YAKIMA	(509)457-8176	(888)522-113
FALCON19	CHARTER COMMUNICATIONS	(800)778-9140	(888)438-2427
LSN02	LIGHTSPEED NETWORKS INC.	(866)366-2638	(503)414-0475
NSI01	NEW SHANNO IRRIGATION CO	(509)930-9001	(509)453-5604
PPL31	PACIFIC POWER	(425)392-6412	(888)221-7070
QLNWA03	CTLQL-CENTURYLINK	(800)778-9140	(800)283-4237
UNION01	CITY OF UNION GAP	(509)248-0434	(509)248-0434
WDOTS02	WSDOT-SCR	(509)577-1961	(509)577-1960
YAKIMA01	CITY OF YAKIMA	(509)575-6154	(509)575-6154
YAKIMA02	YAKIMA SIGNAL DEPARTMENT	(509)576-6425	(509)576-6425
YCPW01	YAKIMA COUNTY PW (509)574-2396	(509)574-2396	(509)574-2396

Private Utilities Location

Additionally, Aerotech engaged personnel of Locate Plus, Inc. of Yakima, Washington to locate building and site utilities on August 8, 2016, prior to the start of the on Site drilling activities. No unanticipated or unexpected situations were discovered or encountered during the "private" locating activities.

Based in part upon pavement markings made by utility location technicians; the location of utility fixtures such as water, electrical, or manholes, and the presence of anomalies detected by induction methodologies, soil boring locations were chosen in order to permit the safe placement of planned soil borings. As an added precaution, the upper 4 to 6 feet at each borehole location was evacuated by means of compressed air driven air-knife and vacuum equipment operated by Standard Environmental Probe of Tacoma, Washington.

A 30-inch sanitary sewer main extends diagonally from Rudkin Road southwestward along

[2] Aerotech Environmental Consulting, Inc., was previously issued a Contractor Identification Number by the non-profit Utilities Underground Location Center (www.callbeforeyoudig.com).

the north wall of the Trucker's lounge and restaurant. City of Union Gap maps indicate an 8-inch water main extending along Rudkin Road. Refer to the attached Borehole Location Map for additional details regarding utility locations.

Magnetometer and Conductible Utilities Investigation:

In order to confirm the locations of buried utilities on the Property, a magnetometer, and a conductible utilities investigation employing an induction method, were performed on August 8, 2016 prior to the initiation of drilling activities, by personnel from Utilities Plus, Inc. of Yakima, Washington. Locations of buried electrical, natural gas and other possible impediments to drilling were marked, with special attention to the planned locations of soil borings.

Ground Penetrating Radar Survey:

A Ground Penetrating Radar Survey conducted by Mountain View Locating Services staff on August 8, 2016, confirmed the presence of a former tank basin situated west of the west wall of the Truck Wash and Lube Building. No underground tanks were indicated in the vicinity of either building on Site, aside from the known active tanks operating near the southern margin of the Property. Utilities Plus staff employed Radar equipment utilizing Dual Frequency Antennae (300 MHz/800 MHz) manufactured by Geophysical Survey Systems.

Site Activities:

The *Limited & Targeted Phase II Subsurface Investigation* was performed between August 8 and August 11, 2016, under contract with Aerotech Environmental Consulting, Inc. All the work was performed during normal business hours No unusual or unforeseen circumstances occurred during the Site activities.

Drilling Activities:

Due to the nature of the Site surfaces and cobble-laden alluvial gravels, drilling operations employing a Truck-mounted Direct Push Drilling Rig or pneumatic jackhammer driven Limited Access Rig, equipped with stainless steel macrocore or microcore tool, were chosen for use on Site.

The subsurface soil borings were performed by equipment owned by and operated by a Licensed Driller from Standard Environmental Probe ("SEP"). Air knife equipment was utilized to safely evacuate soils between the surface and depths of 4 to 6 feet. The on Site drilling equipment was operated by personnel employed by SEP, Mr. Chris Ross (State of Washington Department of Ecology Well Driller's License No. 3018). All subsurface work was overseen by State of Washington Licensed Geologist, Mr. James McDermott (No. 3063). Mr. Nicholas Gerkin was present to supervise the air knife operation and to collect and describe soil samples from the air-knife depth interval by means of stainless steel auger. The laboratory analytical services were performed by a State of Washington Licensed Lab, Advanced Analytical Labs in Redmond, Washington.

Geologic Conditions:

The precise Property location is N 46E 34' 7.07" / W 120E 27' 27.15". as determined by DeLorme mapping data. The Site is located within Universal Tranverse Mercator Zone No.10 The Site elevation is approximately 989 feet above mean sea level ("MSL"). The relevant US Geological Survey topographic sheet is the 2013 7.5-Minute Yakima East Topographic Quadrangle.

The Site lies above the western margin of the Yakima River flood plain, within 1,700 feet of the main channel of the Yakima River, and only a few hundred feet from the westernmost range of a series of ponds, wetlands, and side-channels associated with the broad braided river pattern typical of the Yakima River where it crosses broad valleys. It lies somewhat south of the center of a valley situated between the Ahtanum Ridge, rising over 1,200 feet approximately two miles to the south, and the Yakima Ridge, rising nearly 2,000 feet approximately three miles to the north.

Members of the Columbia River Basalt Group (CRBG), a series of folded horizontally deposited lava flows, underlie the basins and form the ridges and bluffs in the area. This valley, filled with fluvial and alluvial gravels and sands, is one of six geologic basins which lie between tectonically folded basaltic ridges aligned roughly west to east, along the western third of the Columbia River Basin. The site lies above the Ahtanum-Moxee Syncline, at the deep central portion ofthe basin.

The According to the most current geologic map available, the subject property is underlain by the glacial Quaternary-Recent Undifferentiated Sedimentary Deposits ("Qsu"), including cobble- and boulder-laden sands and gravels. These deposits, varying in thickness from a few feet to many hundreds of feet, are characterized as:

> Sedimentary Deposits - Undifferentiated (Qsu): "Recent stream alluvium and Pleistocene glacial and valley-train deposits. Strata are compoed of silt, sand, and gravel, which in places exceed several hundred feet in thickness. Deposits partly fill all the valleys and structural basins and form the principal conduits carrying valley underflow. The porosity of these deposits probably ranges from 10 to 40 percent, and their permeability ranges from very low to very high. They provide a very large proportion of the effective ground-water storage that supplies the ground-water component of streamflow, and also serve a important aquifers."

Geologic Map of the Yakima River Basin, Washington, Water Supply Paper 1595, US Geological Survey, H.B. Kinnison and J.E. Sceva, 1963.

Well Records and Nearby Public Water Supply Wells

Well records on file with the Department of Ecology document subsurface conditions at depth. Selected records are attached in the final Appendix of this report. The nearest Public Water Supply Well to the Site is operated by the City of Union Gap, designated Well 5. Well 5 is an artesian well with 8 pounds per square inch pressure measured at the wellhead. It is located approximately 1,000 feet to the northwest of the northwest corner of the Site. Refer to Figure 5 in this report. Constructed in the year 2000, this 12-inch diameter well (with 20 inch casing above 355 feet bgs) withdraws groundwater from the unconsolidated gravels of the valley fill, situated below a 30-foot thick clay unit, between 385 and 610 feet bgs. It is situated in the upgradient groundwater flow direction, with a 5-year Wellhead Protection Zone indicated (Refer to Figure 5 in this report) extending to a point several hundred feet beyond the perimeter of the subject Property. The documented release at the Site is not expected to present a risk to this well.

Stepped Drawn-down and Pump Tests documentation is attached to the Well 5 record: Constant Rate Pump Test results indicated a transmissivity of 21,000 gpd/ft for the roughly 200 foot

screened interval. This transmissivity is consistent with the the nature of the highly porous boulder- and cobble-laden large gravel and basin hydrogeology. Common hydraulic conductivities in the area range from 75 to 284 ft/day in the valley fill/older alluvium, and are as low as 7 ft/day in the Ellensburg Formation.

Two additional Public Water Supply Wells, Union Gap Wells 2 and 4, constructed in 1947 approximately one mile south of the subject Property, withdraw waters from alluvial sands and gravels between approximately 150 and 200 feet bgs. The 5-year Wellhead Protection Zone associated with these wells are situated nearly one mile from the subject Property, and therefore the release at the subject Property is not expected to be likely to present a risk in either case.

The clays-rich deposits of the Miocene and Pliocene Ellensburg Formation are expected at depth in this portion of the Ahtanum-Moxee Basin, and may be represented by the clays penetrated during drilling for Union Gap Well 5 at 330 to 360 feet bgs, and at 436 to 456 feet bgs, as well as at greater depths:

> *Ellensburg Formation* - "Undifferentiated (Te): "A thick sequence of stream- and lak-deposited silt, sand, and gravel which is composed chiefly of light-colored volcanic ash, pumice, and purple and gray hornblende andesite. The thickness of the Ellensburg Formation exceeds 1,000 feet in some of the structural basins. It has moderate to high porosity, and low to medium permeability, and providea a large amount of effective storage. Permeable strata form important aquifer."

Ibid. WSP 1595

In the vicinity of the Site, the thickness of the valley fill gravels is indicated as approximately 800 feet, where the uppermost bedrock unit is the Saddle Mountain Member of the CRBG.

Hydrogeological Characteristics:

Groundwater at the subject Property was encountered during this investigation at depths between 10 and 12 feet bgs. Three groundwater monitoring wells were constructed on Site by the White Shield company in 1999. Refer to Figure 3 and 4 for locations. Groundwater flow direction has been documented to the south-southeast and also to the south-southwest. The baseline over which these wells are placed is broad, and these calculated flow directions may not accurately reflect the anticipated curvature of flow lines from the eastward flow direction in areas to the west, to flows toward the southeast and then ultimately south as the central Yakima River flood plain is reached.

Limited diesel free product (1/8 inch measured in well) was recovered by means of a 1-liter Keck Product Recovery Canister from the downgradient well, MW-3, during the period between 2000 and May 2002, as documented by a Sage Earth Sciences, Inc. report attached to an Ecology letter dated February 4, 2009. A grab sample was collected by Aerotech staff from this well on August 9, 2016.

The general hydrogeologic character and variability within the several basins formed by the distinctive tectonic folding of the western Columbia River Basin is addressed in US Geological Survey Scientific Investigations Report 2011-5152. In this semi-arid climate, many alternating segments of rivers and creeks may be either losing or gaining water in seasonally dynamic exchange with underlying groundwater systems, all dependent upon localized geologic condition and other factors.

> "[The] net exchange of water for 46 stream section investigated with seepage run ranged from nearly zero to 1,071 ft^3/s for 28 gaining sections, and -3 to -242 ft^3/s for 19 losing sections. Gains are much more vigorous than the losses with 55 percent being larger than 3.0 $(ft^3/s)/mi$, whereas only 6 percent of the negative net exchange were larger than 3.0 $(ft^3/s)/mi$."

Map Showing Generalized Altitude of the Water Table in Six Structural Basins, Spring 2001, Yakima River Basin Aquifer System, Washington, United States Geological Survey Scientific Investigations Report 5152, J.J. Vaccaro, M.A. Jones, et al., 2009.

The segment of the Yakima River approaching the Site to the east is presumed to be a gaining river, with perhaps the exception of the arid summer months. However micro-piezometer measurements conducted bythe U.S. Geological Survey along this segment of the river have indicated slight downward vertical gradients appoaching 0.04 feet per foot. If the river is gaining, groundwater flow would be expected toward the south-southeast, toward the river, and if during the hot arid summers the river is loosing, groundwater flow would be expected to be to the south-southwest. Perhaps consistent with this hypothetical dynamic, groundwater flow at the Site, based upon measurements at three wells, has deviated within this very range. However, available data is very limited. Waters and groundwater from the Yakima sub-basin are effectively funneled to the south through the narrow alluvial sand and gravel 'conduit' located above the CRBG bedrock, lying underneath the topographic gap in the Ahtanum Ridge after which the City of Union Gap has derived its name.

Soil Borings:

The Site is characterized by the predominant presence of:

1) Approximately 4 inches of asphalt pavement underlain by very densely compacted sandy, silty subangular gravel to depth of 1 to 2 feet, followed by;

2) to the south, 2 to 6 feet of fill consisting of fine to very fine sand, with silt (15 to 40 percent silt) and small to large subrounded cobbles. Cobbles range in size from the large gravel range to 8 inches, and were often oblong in shape ("river cobbles"). At location B-29, asphalt fragments were identified at a depth over 8 feet. Fill to the north extended to depths of 8.5 to 9 feet near the southeast corner of the Truck Wash/Lube Building. Fill in this area was commonly distinguished by very fine and clean poorly graded sand. Pea gravel fill was encountered to a depth of 13.8 feet bgs within the backfilled tank basin situated west of the southwest corner of the Truck Wash/Lube Building, underlain by;

3) in-situ small to cobble-laden large gravel (commonly 75 to 90 percent by volume), with a well graded fine to very coarse sand matrix containing traces of silt.

A total of fourteen soil borings were advanced, with a line of five placed along the southern landscaped margin of the subject Parcel (east to west, B-20, B-22,B-23, B-21, and B-25). One borehole was advanced near the southern corner of the diesel fuel dispenser island area (B-34), and one was advanced near the south central perimeter of the automobile/gasoline fuel dispense island area (B-24). Two borings were advanced along the south wall of the Truck Wash/Lube Building, one of which was situated near a disused RV waste disposal tank (B-28 and B-29). One borehole was advanced south of the oil-water separator serving the truck wash areas (B-27), and four were advanced within or around the perimeter of the backfilled tank basin, once housing a former 8,000-gallon oil and 1,100-gallon waste oil tank (B-30, B-31, B-32,and B-33).

Soil and Groundwater Sample Collection:

A total of 53 discrete soil samples and four groundwater grab samples were collected between August 9 and August 11, 2016. at fourteen soil boring locations. Water samples were collected from three temporary wells inserted in open boreholes at locations B-27, B-29, and B-31. A groundwater sample was also collected from existing downgradient well MW-3. Soil samples were collected at depths between 4 and 15 feet below ground surface ("bgs"). Visual or olfactory evidence of petroleum impacted soil was observed at one location during this investigation: B-24 at depths of 11.5 to 15 feet bgs, where a moderate to strong diesel odor was noted, and a PID response of 247 was recorded.

Soils collected from each location were visually inspected for color quality and evidence of discoloration, and physically observed for the purpose of recording composition and noting odor, where distinctive. Samples were placed in sterile four-ounce glass jars and/or 40cc glass vials preserved with 5ml methanol in accordance with procedures specified for USEPA Method 5035A.

Water samples were collected by environmental scientist, Nick Gerkin, utilizing a fresh pair of nitrile gloves, under low flow conditions by means of peristaltic pump and fresh disposable poly-tubing, after approximately 10 minutes, in order to permit suspended silt, where present, to be reduced.

Each sample was given a unique identifier number and placed in an iced cooler for sample preservation. Samples were held in the custody of the project manager, James McDermott, and ice was checked and replenished daily through Thursday morning, and maintained to the time of delivery to the lab, late Thursday afternoon, August 11, 2016. A Chain of Custody was maintained in order to record details associated with the collection and handling of each sample. The remaining soil samples were retained by the laboratory for analysis in the event that the soil samples selected for laboratory analysis revealed elevated levels of constituents. Following the production of the initial Site sample results for soil, no follow-up laboratory analyses were requested for the subject Site, as of the date of this report.

Site Restoration:

Each borehole was completed with bentonite chips, and the final three to four inches finished with concrete or asphalt in each case, where holes were advanced in pavement, near the Truck Wash/Lube Building, and at locations B-24 and B-34, near fuel dispenser islands. Minor landscape restoration was necessary near the southern margin of the subject Parcel.

SUMMARY OF SAMPLE ACQUISITION

A total of 53 discrete soil samples and four groundwater grab samples were collected between August 9 and August 11, 2016. at fourteen soil boring locations. Water samples were collected from three temporary wells inserted in open boreholes at locations B-27, B-29, and B-31. A groundwater sample was also collected from existing downgradient well MW-3. Soil samples were collected at depths between 4 and 15 feet below ground surface ("bgs"). Visual or olfactory evidence of petroleum impacted soil was observed at one location during this investigation: B-24 at depths of 11.5 to 15 feet bgs, where a moderate to strong diesel odor was noted, and a PID response of 247 was recorded. Detailed descriptions of each boring location, observations made during sample acquisition, and laboratory sampling information are documented in soil boring logs and the laboratory analytical documents attached to this report.

SECTION III.
ANALYTICAL RESULTS

Aerotech Environmental Consulting, Inc. performed a Limited & Targeted Phase II Subsurface Investigation during the week of August 8, 2016, in the Areas of Concern identified during a Phase I Investigation completed in May 2016. Refer to Table 1 and Figure 4 for presentations of analytical results

The Limited and Targeted Phase II Subsurface Investigation produced the following results:

VOC, PAH, Fuel Additives, TPH-Gasoline, and Lead in Soil

Chlorinated Volatile Organic Compounds ("VOC"), Total Petroleum Hydrocarbon - Gasoline Range Organics ("TPH-g"), benzene, ethylbenzene, toluene, xylenes, carcinogenic Polynuclear Aromatic Hydrocarbons ("cPAH"), and Fuel Additives (MTBE, EDB and EDC) were not detected in soils or groundwater sampled during this investigation at the appropriate laboratory reporting limits.

Locations selected for testing for VOC and cPAH included areas near the current oil-water separator and also the former 1,100-gallon waste oil tank basin west of the Truck Wash-Lube Building, including locations B-27 and B-30. Locations south of the gasoline fueling island area and selected location near the Truck Wash-Lube Building were chosen for TPH-g, volatile gasoline constintuents and fuel additives analysis. Refer to Table 1.

Diesel and Heavy Oils in Soil

Total Petroleum Hydrocarbon - Diesel Range Organics ("TPH-d"), were detected at two locations in soils collected within the smear zone at or below the water table. Near the south corner of the diesel fueling area on Site, at location B-34 at a depth of 12.5 feet bgs, TPH-d were present at concentrations of 3,200 mg/kg, well above the most stringent Department of Ecology MTCA Method A Cleanup Levels for soil of 2,000 mg/kg. TPH-d were also present approximately 100 feet to the south, within a landscaped strip at location B-20 at a depth of 12 feet bgs, at 960 mg/kg, well below the most stringent Department of Ecology MTCA Method A Cleanup Levels for soil.

Heavy Oils were detected at the base of the backfilled former tank basin at location B-31 at concentrations of 1,500 mg/kg, below the most stringent Department of Ecology MTCA Method A Cleanup Levels for soil of 2,000 mg/kg.

VOC, PAH, Fuel Additives, TPH-Gasoline, TPH-Diesel/Oil, and Lead in Water

None of the Contaminants of Concern were detected in grab groundwater samples collected from three boreholes near the former tank basin adjoining the Truck Wash-Lube Building, nor in the downgradient groundwater monitoring well on Site, MW-3.

APPLICABLE ANALYTICAL METHODOLOGIES AND PARAMETERS

The analysis parameters requested were chosen to provide a comprehensive characterization of the subsurface soils and/or water present at the Site Areas of Concern and to comply with State of Washington recommended analysis parameters.

Soil: **Gasoline Range Organics & Benzene, Ethylbenzene, Toluene, and Xylenes**
State of Washington NWTPH-Gx/8021B

Soil: **Diesel and Lubricant Range Organics**
State of Washington NWTPH-Dx/Dx Extended

Soil: **Chlorinated Volatile Organic Compounds (Fuel Additives MTBE, DCA, DCE)**
USEPA Method 8260**B**

Soil: **Polynuclear Aromatic Hydrocarbons (PAH)**
USEPA Method 8270

Soil: **Total Metals**
USEPA Method 7010/7471

Water: Gasoline Range Organics & Benzene, Ethylbenzene, Toluene, and Xylenes
State of Washington NWTPH-Gx/8021B

Water: Diesel and Lubricant Range Organics
State of Washington NWTPH-Dx/Dx Extended

Water: Chlorinated Volatile Organic Compounds (Fuel Additives MTBE, DCA, DCE)
USEPA Method 8260B

Water: Polynuclear Aromatic Hydrocarbons (PAH)
USEPA Method 8270

Water: Total Metals (Lead)
USEPA Method 7010

Laboratory Analysis:

Laboratory analysis was provided by:

Advanced Analytical Laboratory, LLC
4078 148 Avenue NE
Redmond, WA 98052
425.702.8571 (office)
aachemlab@yahoo.com

STATEMENT OF QUALITY ASSURANCE

I have performed this Phase II Subsurface Investigation in accordance with generally accepted environmental practices, procedures, and regulatory requirements, as of the date of this Report. I have employed the degree of care and skill ordinarily exercised under similar circumstances by reputable environmental professionals practicing in this area.

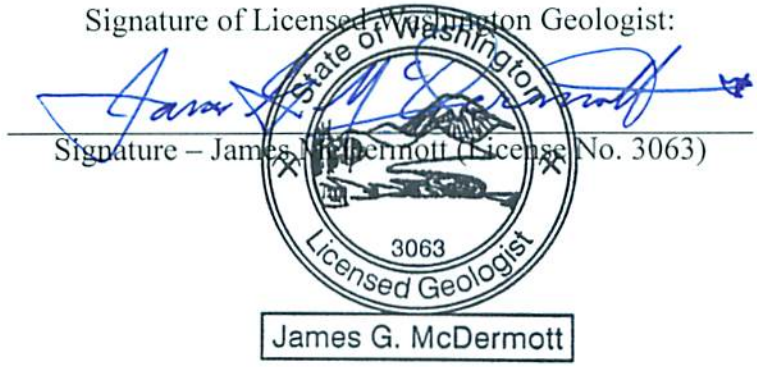
I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in § 312.10 of this part. I have the specific qualifications based upon education, training, and experience necessary to plan and implement subsurface investigations.

STATEMENT OF THE LICENSED GEOLOGIST

As stipulated in the Regulatory Code of the State of Washington Title 18, Chapter 18.220, the undersigned is a licensed Geologist in the State of Washington, and has met the statutory requirements of RCW § 18.220.060 for such licensing including, but not limited to, educational requirements, work and field experience, examination proficiency, and acceptance by the State Licensing Board.

The undersigned Licensed Geologist has supervised the geological work performed as described in attached Report – a majority of said work being performed by employees of the firm which employs undersigned Licensed Geologist – as delineated in RCW Title 18, Chapter 18.220, Paragraph 190.

Signature of Licensed Washington Geologist:



Signature – James McDermott (License No. 3063)

DEFINITIONS SPECIFIC TO LIMITED & TARGETED PHASE II ASSESSMENT

Background Concentration..... the concentration of a target analyte in groundwater, surface water, air, soil gas, sediment, or soil at a referenced location near a release or potential release area under investigation, which is not attributable to the release under investigation. Background samples may contain the target analyte, due to either naturally occurring or manade sources, but not due to the release(s) in question. (See, E 1903-97, § 3.1.3).

Phase II Environmental Site Assessment.... This practice (ASTM E 1903-97, Reapproved 2002) defines a commercially practical process for sound Phase II investigation that includes sampling and chemical testing. Such Phase II investigation is performed, at a minimum, to confirm the actual presence of contamination in environmental media at a property where prior assessment had indicated that contaminants may occur due to releases or potential releases of substances to the environment at the property, or to demonstrate prior to property acquisition that contamination by targeted analytes is absent. (See, E 1903-97, § 1.1.1).

Phase II Environmental Site Assessment Limitations..... "This practice [ASTM E1903-97, Reapproved 2002] recognizes that the *Phase II ESA* process can be applied either to an overall assessment of a property with respect to all releases and potential releases at the property, or to an evaluation targeted to a specific release or potential release. It a property-wide assessment is not necessary to meet the particular *User* objective, then the Phase II investigation process described herein should be applied to generate sound information regarding the specific question of problem to be resolved. If a Phase II investigation does not address all releases and potential releases identified at a property, the report of the assessment must be denoted as a *"Targeted Phase II" Environmental Site Assessment*. [E 1903-97, § 1.1.3]"

Phase II Targeted Environmental Site Assessment.... This Phase II Site Assessment is "targeted" as defined by the ASTM *Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process*, Designation E 1903-97 (Reapproved 2002); "an assessment performed in accordance with the process described in this [E 1903-97] practice, which addresses only certain *releases* or potential *releases*, or certain *target analytes*, at a property as selcted by the *User* but which does not address all *releases*, potential *releases*, and *target analytes*.[E 1903-97, § 3.1.43]"

Prior Knowledge.... "This Standard Practice [ASTM E 1903-97, Reapproved 2002] assumes ... that all reasonably ascertainable information, including but not limited to prior Phase I Environmental Site Assessment Reports, will be considered in conducting a Phase II ESA and interpreting its results. [E 1903-97, § 1.1.2]."

Targeted Analytes.... substances that have been released or potentially have been released to environmental media at the site, and which are of interest in the context of the particular Phase II ESA and its objectives, the presence of which will be sought and concentrations of which will be quantified through field screening or chemical testing. (See, E 1903-97, § 3.1.63).

REPORT ENDNOTES

1. All Appropriate Inquiry as defined in 40 Code of Federal Regulations 40 CFR Part 312.

APPENDIX

- Site Location and Photographs
- Project Contract Documents
- Boring Logs
- Analytical Results
- Chain of Custody

APPENDICES

SITE LOCATION AND PHOTOGRAPHS

Fig 1

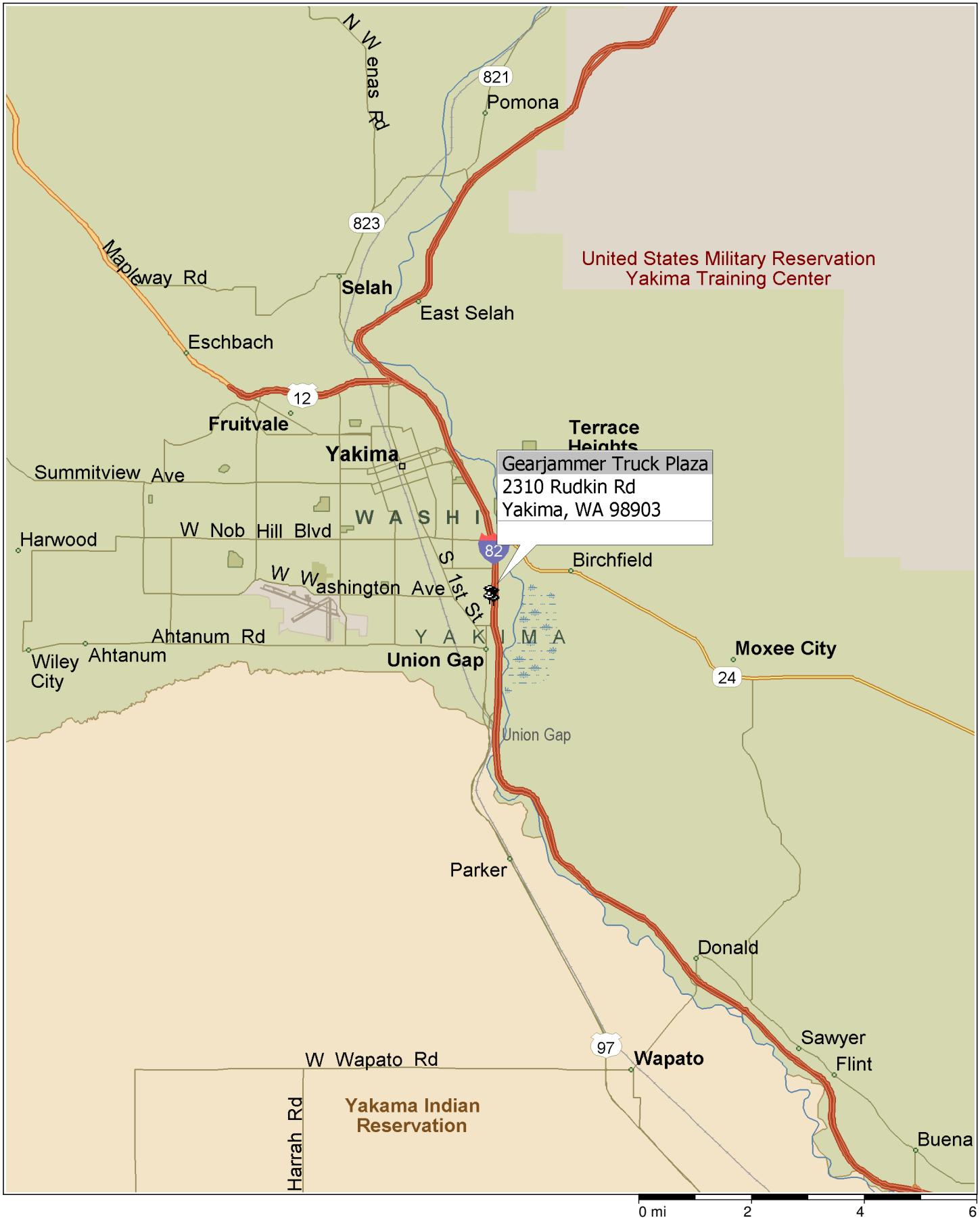
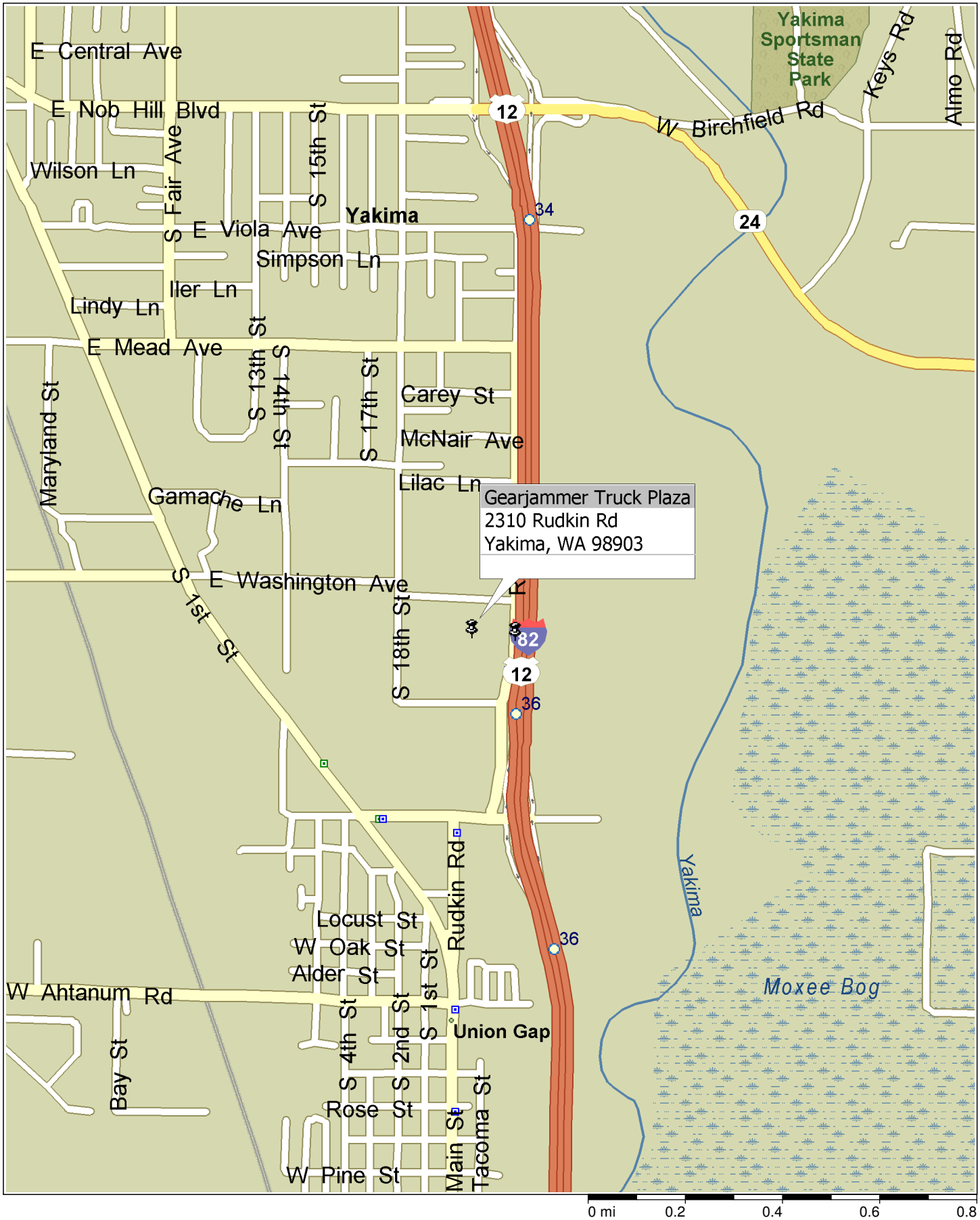


Fig 1b



PAGE 1 - Gearjammer Truck Plaza, 2310 Rudkin Rd, Union Gap, Wa - B-34 (View north) 3,200 mg/kg TPH-d

B-20 (View north)

B-20 Cores

MW-3 (View north)

B-21 (View north)

B-21 Cores

PAGE 2 - Gearjammer Truck Plaza, 2310 Rudkin Rd, Union Gap, Wa B-22 (View north)

B-23 (View north)

B-24 (View NW)

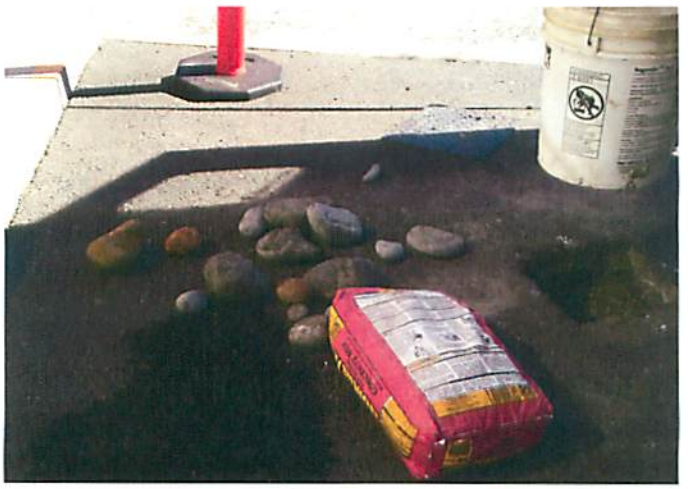
B-24 (View NE)

B-24 Cores

B-25 Cores

PAGE 3 - Gearjammer Truck Plaza, 2310 Rudkin Rd, Union Gap, Wa - B-25 (View north)

B-26 (View NE)



B-34 (View east) Cobbles to 8 inches

South Truck Lube Bay and zipper drain (View east)

B-31 (View S-SW)

Tank basin - Ground Penetrating Radar - north south transect at B-31

PAGE 4 - Gearjammer Truck Plaza, 2310 Rudkin Rd, Union Gap, Wa - B-27 (View west) Wash-Lube Building

B-27 Cores

B-27 (View west)

B-28 Cores

B-28 (View SE)

B-29 Cores

PAGE 5 - Gearjammer Truck Plaza, 2310 Rudkin Rd, Union Gap, Wa - B-30 (View north)

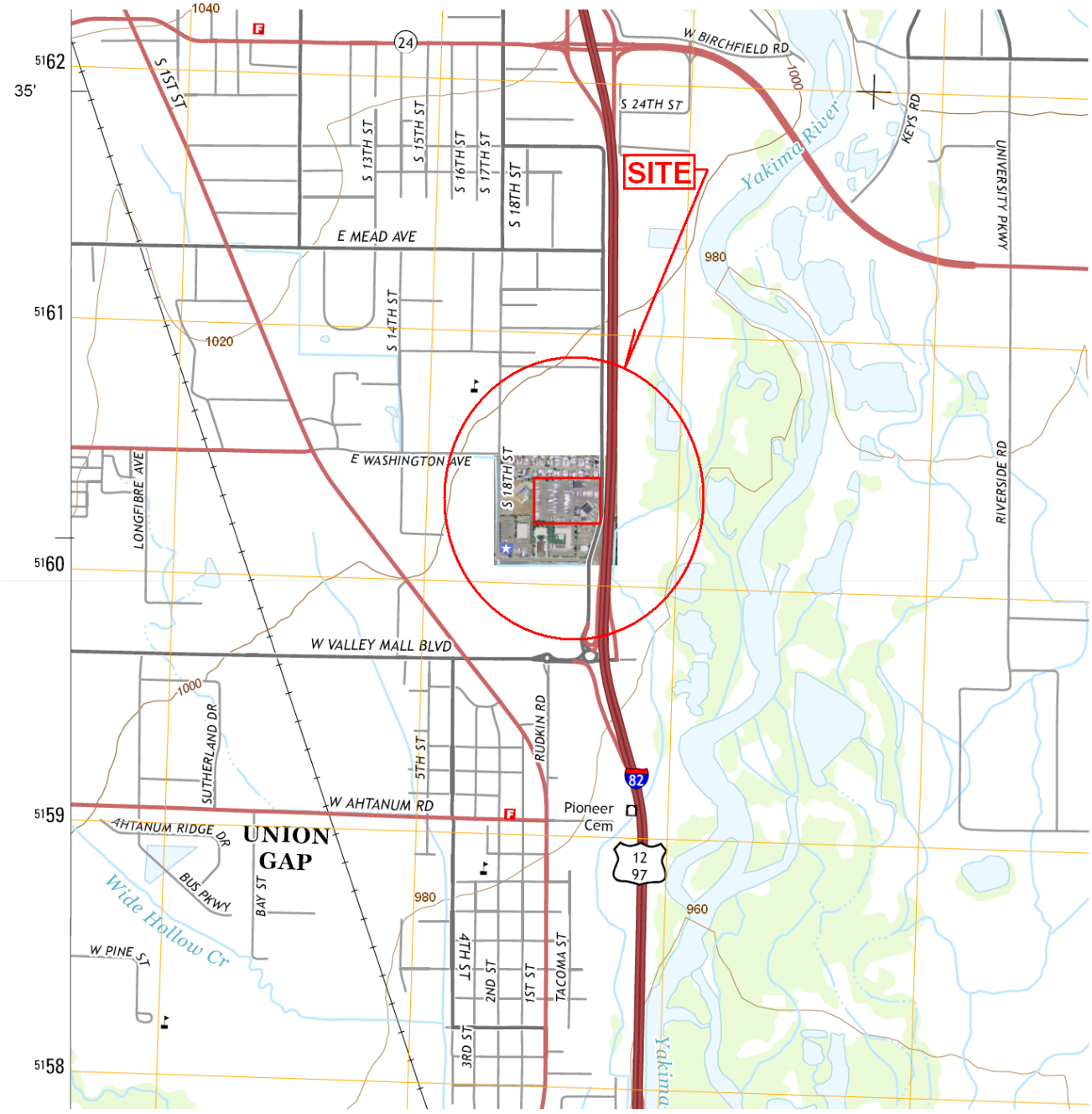
B-30 Cores

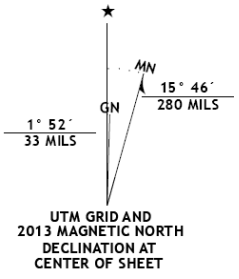
B-31 Cores

B-32 Cores

B-33 Cores

FIGURES





UTM GRID AND
2013 MAGNETIC NORTH
DECLINATION AT
CENTER OF SHEET

1 0.5 0 KILOMETERS 1 2
1000 500 0 METERS 1000 2000
1 0.5 0 1
MILES
1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000
FEET

CONTOUR INTERVAL 20 FEET
NORTH AMERICAN VERTICAL DATUM OF 1988

Aerotech Environmental Consulting, Inc
13925 Interurban Avenue South, Ste. 210
Seattle, Washington
www.AerotechEnvironmental.com

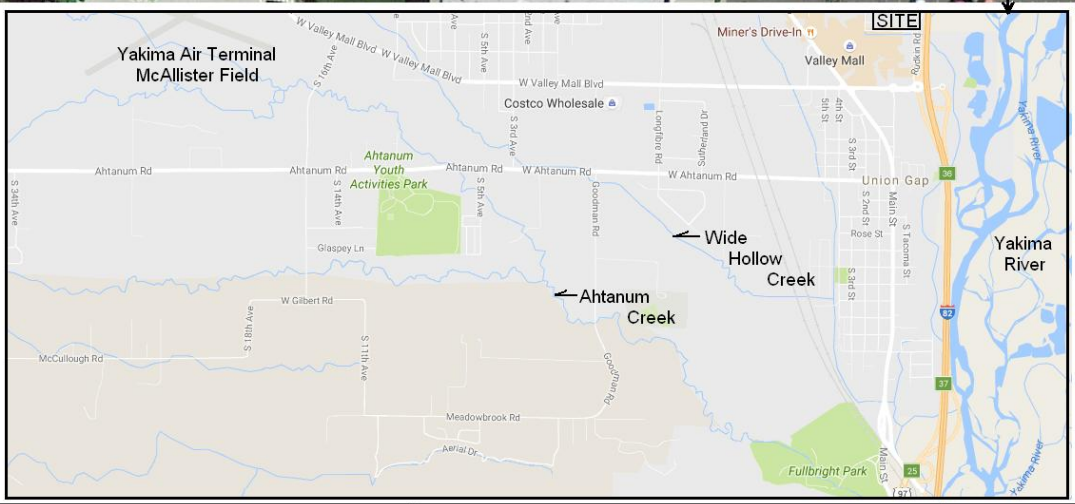
Drawing by McDermott : 24 Aug 2016

FIGURE 2

PHASE 2 INVESTIGATION

U.S. Geological Survey
7.5-Minute Topographic Quadrangle

GEARJAMMER TRUCK PLAZA
2310 Rudkin Road
Union Gap, Washington
VCP Project No.CE0312



N

100 Feet

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Seattle, Washington
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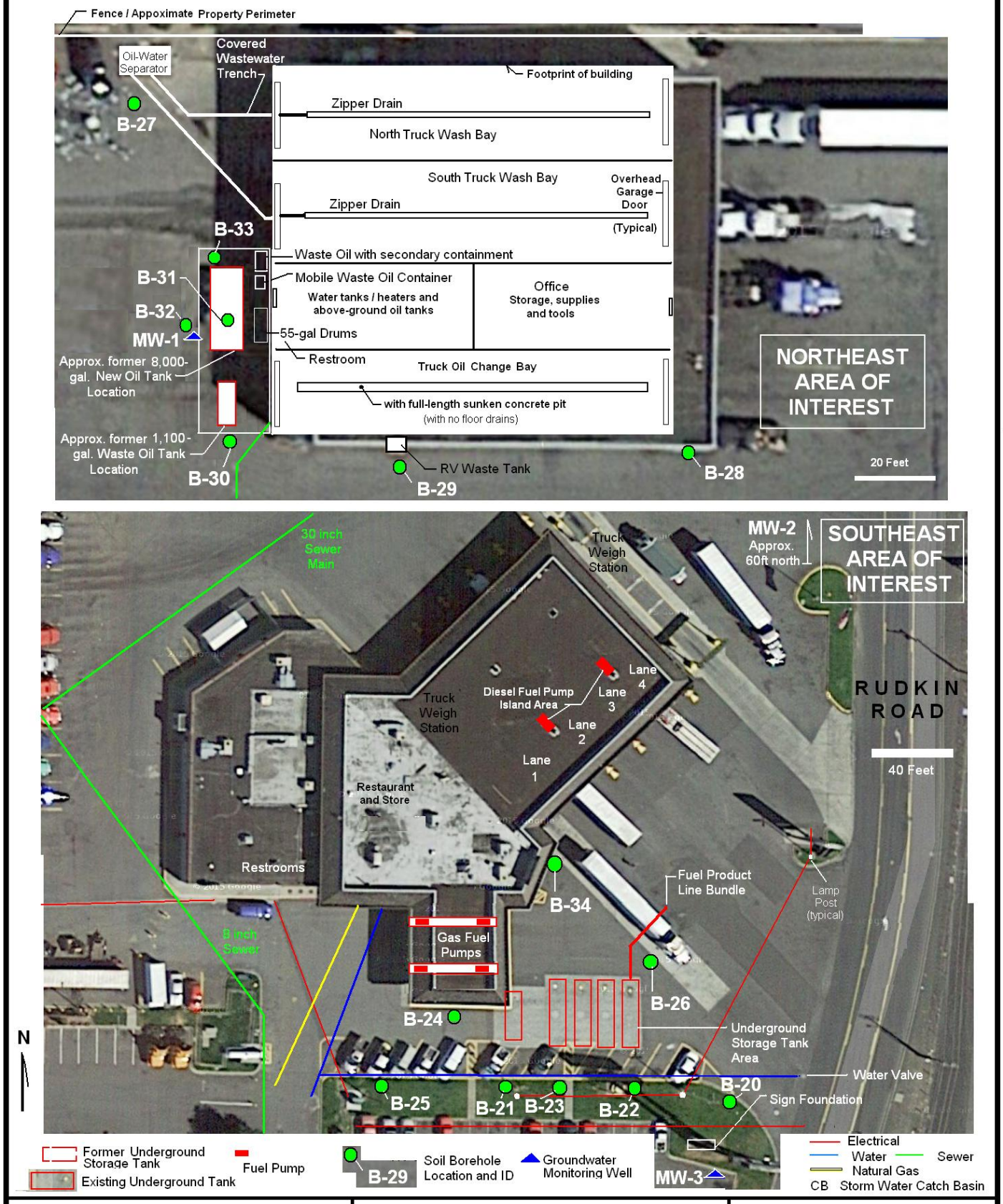
Drawing by McDermott : 24 Aug 2016 **FIGURE 2B**

PHASE 2 INVESTIGATION

Vicinity with Hydrologic Features

GEARJAMMER TRUCK PLAZA
2310 Rudkin Road
Union Gap, Washington
VCP Project No.CE0312

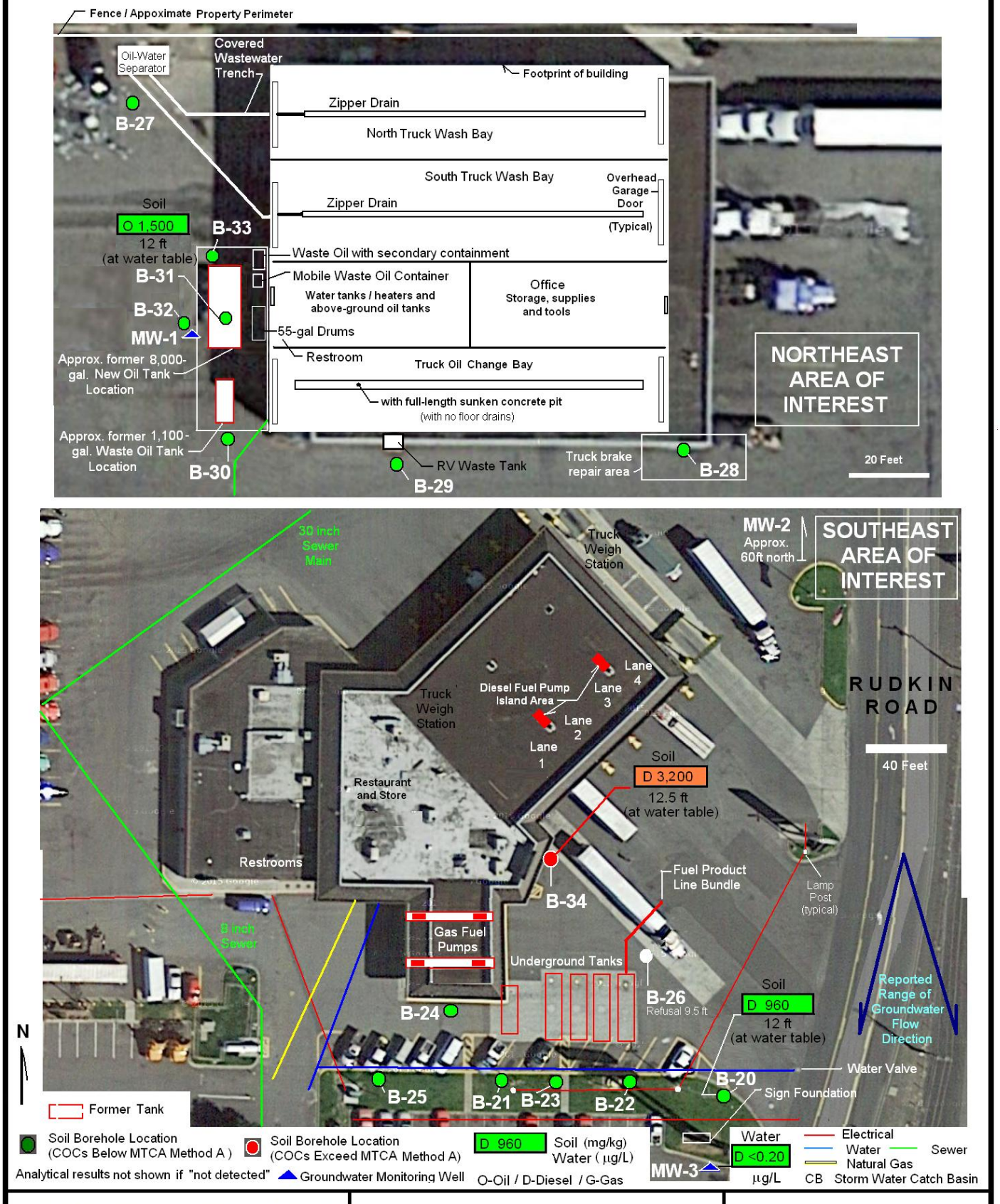


Aerotech Environmental Consulting, Inc
13925 Interurban Avenue South, Ste. 210
Seattle, Washington
www.AerotechEnvironmental.com

Drawing by McDermott : 24 Aug 2016 **FIGURE 3**

PHASE 2 INVESTIGATION BOREHOLE LOCATION MAP

GEARJAMMER TRUCK PLAZA
2310 Rudkin Road
Union Gap, Washington
VCP Project No.CE0312



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13925 Interurban Avenue South, Ste. 210
Seattle, Washington
www.AerotechEnvironmental.com

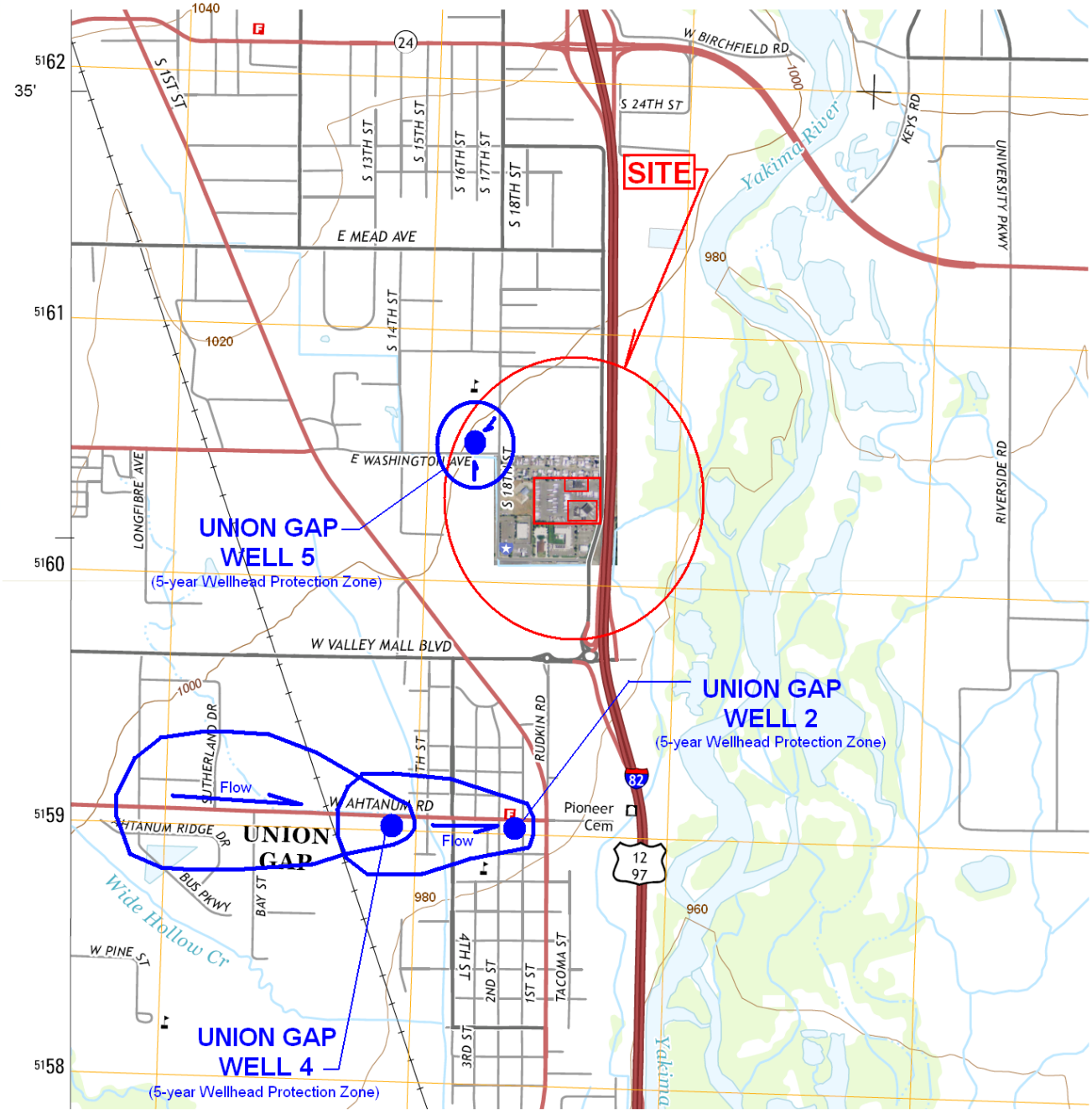
Drawing by McDermott : 24 Aug 2016

FIGURE 4

PHASE 2 INVESTIGATION

ANALYTICAL RESULTS

GEARJAMMER TRUCK PLAZA
2310 Rudkin Road
Union Gap, Washington
VCP Project No.CE0312



15° 46′ 280 MILS
MN
GN
1° 52′ 33 MILS

UTM GRID AND 2013 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

1 0.5 0 KILOMETERS 1 2

1000 500 0 METERS 1000 2000

1 0.5 0 1

MILES

1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

FEET

CONTOUR INTERVAL 20 FEET

NORTH AMERICAN VERTICAL DATUM OF 1988

Aerotech Environmental Consulting, Inc
13925 Interurban Avenue South, Ste. 210
Seattle, Washington
www.AerotechEnvironmental.com

Drawing by McDermott : 24 Aug 2016

FIGURE 5

NEARBY WELLHEAD PROTECTION ZONES

U.S. Geological Survey
7.5-Minute Topographic Quadrangle

GEARJAMMER TRUCK PLAZA
2310 Rudkin Road
Union Gap, Washington
VCP Project No.CE0312

TABLES

LABORATORY ANALYTICAL RESULTS

Gearjammer Travel Plaza, 2310 Rudkin Road, Union Gap, Washington
Phase II - Limited & Targeted Phase II Subsurface Investigation (August 2016)

Aerotech Environmental Consulting, Inc
13925 Interubran Avenue South, Ste 210, Seattle, Washington

GASOLINE RANGE ORGANICS in SOIL August 2016 - Phase II Investigation

2,100 Above MTCA Method A 5.6 Below MTCA Method A

Analytical Results		Underground Tank, Gasoline and Diesel Fueling Areas								Truck Wash and Lube Building Area						
NWTPH-Gx / BTEX		**B-21 (8')**	**B-21 (12.5')**	**B-23 (12.5')**	**B-24 (4')**	**B-24 (13.5')**	**B-25 (8')**	**B-25 (12')**	**B-25 (14')**	**B-27 (12')**	**B-29 (14')**	**B-30 (12')**	**B-30 (14')**	**B-31 (12')**		**MTCA METHOD A CLEANUP LEVELS (SOIL)**
Matrix - Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil		
Date collected	Reporting Limits	08/09/16	08/09/16	08/09/16	08/09/16	08/09/16	08/09/16	08/09/16	08/09/16	08/09/16	08/09/16	08/09/16	08/09/16	08/09/16		
NWTPH-Gx, mg/kg	mg/kg															**mg/kg**
Mineral spirits/Stoddard	5.0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	NW-TPH-mineral spirits	30
Gasoline	5.0	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	<5	NW-TPH-Gasoline	30
BTEX 8021B, µg/kg	**mg/kg**	Underground Tank, Gasoline and Diesel Fueling Areas								Truck Wash and Lube Building Area						**mg/kg**
Benzene	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	Benzene	0.03
Toluene	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	Toluene	7
Ethylbenzene	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	Ethylbenzene	6
Xylenes	0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	Xylenes	9
MTBE	0.100		<0.100			<0.100		<0.100	<0.100	<0.100			<0.100		MTBE	0.1
EDB	0.005		< 0.005			< 0.005		< 0.005	< 0.005	< 0.005			< 0.005		EDB	0.005
EDC	0.020		< 0.020			< 0.020		< 0.020	< 0.020	< 0.020			< 0.020		EDC	----
Chlorinated VOCs	Variable									ND	ND		ND		Chlorinated VOCs	Varies
PCB	Variable													ND	PCBs	Varies
PAH	Variable									ND			ND		PAH (total carcinogenic)	0.1
Lead	1.0		<1.0			<1.0			<1.0						Lead	250

DIESEL AND LUBRICANT RANGE ORGANICS in SOIL August 2016 - Phase II - Limited and Targeted Subsurface Investigation

Analytical Results		Underground Tank, Gasoline and Diesel Fueling Areas							Truck Wash and Lube Building Area												
NWTPH-Gx / BTEX		**B-20 (12')**	**B-20 (15')**	**B-22 (10')**	**B-23 (12.5')**	**B-23 (14')**	**B- 26 (3')**	**B-26 (8.5')**	**B- 27 (12')**	**B-28 (4')**	**B-28 (12')**	**B-29 (14')**	**B-30 (12')**	**B-30 (14')**	**B-31 (12')**	**B-31 (14')**	**B-34 (4')**	**B-34 (10')**	**B-34 (12.5')**	**B-34 (15')**	**MTCA Method A Cleanup Levels SOIL**
Matrix - Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	
	Reporting Limits																				
Date collected		08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/10/16	08/11/16	08/11/16	08/11/16	08/11/16	
NWTPH-Dx, mg/kg																					
Matrix - Soil	**mg/kg**	Underground Tank, Gasoline and Diesel Fueling Areas							Truck Wash and Lube Building Area												**mg/kg**
Kerosene/Jet fuel	20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	2,000
Diesel/Fuel oil	20	960	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	3,200	< 50	2,000
Heavy oil	50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	1,500	< 50	< 50	< 50	< 50	2,000

GASOLINE, DIESEL AND LUBRICANT RANGE ORGANICS in WATER Aug 2016 - Phase II Limited and Targeted Subsurface Investigation

Analytical Results		Truck Wash and Lube Building Area				
NWTPH-Dx, mg/L		**W-B-27**	**W-B-29**	**W-B-31**	**MW-3**	← Truck Wash and Lube Building Area
Matrix Water	Water	Water	Water	Water	Water	
	Reporting Limits					
Date collected		8/10/2016	08/10/16	08/10/16	08/09/16	
	mg/L					
Kerosene/Jet fuel	0.20	< 0.20	< 0.20	< 0.20	< 0.20	
Diesel/Fuel oil	0.20	< 0.50	< 0.50	< 0.50	< 0.50	
Heavy oil	0.50	< 0.50	< 0.50	< 0.50	< 0.50	
NWTPH-Gx, mg/L		**W-B-27**	**W-B-29**	**W-B-31**	**MW-3**	
Mineral spirits/Stoddard	0.100			< 0.100		
Gasoline	0.100			< 0.100		
BTEX 8021B, mg/L	**mg/L***					
Benzene	0.001			< 0.001		
Toluene	0.001			< 0.001		
Ethylbenzene	0.001			< 0.001		
Xylenes	0.001			< 0.001		
VOCs	Varies	ND		ND		

		MTCA Method A Cleanup Levels WATER
		mg/L
Kerosene/Jet fuel		0.500
Diesel/Fuel oil		0.500
Heavy Oil		0.500
		mg/L
Mineral spirits/Stoddard		0.800
Gasoline		0.800
		mg/L
Benzene		0.005
Toluene		1,000
Ethylbenzene		0.700
Xylenes		1,000
Chlorinated VOCs		Varies

* NOTE: BTEX compounds are presented here as mg/kg rather than ug/kg.

Bold Red denotes samples exhibiting concentrations exceeding State of Washington MTCA Method A Cleanup Levels
Sample Depth is indicated in Sample ID in units of feet below ground surface (bgs), within parentheses; Example: "B-21 (14')" = B-21 at 14 ft bgs
* State or Oregon RBCs (Risk-Based Concentrations) ND= No listed compound detected at or above Lab RLs

RED SHADING:	Above MTCA Method A Cleanup Level
GREEN SHADING:	Below MTCA Method A Cleanup Level
NO SHADING	Constituent was not detected at or above the indicated lab reporting limit
GRAY SHADING	Not analyzed

mg/kg - milligrams per kilogram (ppm) mg/L- miligrams per liter (ppm)
Reference: *Guidance for Remediation of Petroleum Contaminated Sites* , State of Washington Department of Ecology, Revised 2016

PROJECT CONTRACT DOCUMENTS

ENVIRONMENTAL CONTRACTOR'S CERTIFICATION

Washington Tractor, Inc.
20096 Viking Avenue Northwest
Poulsbo, Washington 98370

1. Contractor's Name: Aerotech Environmental Consulting, Inc.

2. Contractor's Address: 13925 Interurban Avenue South, Suite 210, Seattle, Washington 98168

3. Name and title of person completing this certification: Alan T. Blotch / President

4. Answer the following questions about each employee that contractor will have perform the assessment or prepare the report showing the results of the inspection:

   a. Name and Title of Employee: Alan T. Blotch – Environmental Professional
   b. Length of experience doing environmental assessments: 31 years
   c. Education degrees received: Masters of Business Administration
      Juris Doctor – Environmental Law
   d. Relevant training received: ASTM E50 Environmental Assessment Committee Meetings

5. Identify any certifications and approvals issued to contractor pursuant to an official Federal, State of local program or policy to conduct environmental assessments: Registered Environmental Assessor
   Issued by State of California

6. Describe the generally recognized standards which the contractor will use to perform the assessment.
   Standard Practice for Environmental Site Assessments: Phase II Environmental Site Assessment Process (ASTM E 1903)

7. Disclose the nature of any previous environmental inspections contractor has ever performed for the Owner of the property: Phase I Environmental Site Assessment

8. Disclose the nature of any affiliation or association contractor now has, or ever had, with the above referenced seller of the property, of the above referenced buyer of the property: N/A

9. Describe the liability insurance carried by contractor to cover claims in the event that ir fails to discover adverse environmental conditions during an environmental inspection.
   Professional Errors & Omissions Coverage $1,000,000 / claim and $1,000,000 aggregate liability

THE UNDERSIGNED HEREBY CERTIFIES, UNDER PENALTY OF THE CRIMINAL AND/OR CIVIL PENALTIES IN 18 U.S.C. § 1001 FOR FALSE STATEMENTS TO THE UNITED STATES GOVERNMENT, THAT THE ABOVE INFORMATION IS TRUE AND CORRECT.

Signature

09-01-16

Date

CURRICULUM VITAE

James McDermott

State of Washington Licensed Professional Geologist No. 3063

Mr. McDermott has 15 years experience in small business, and 9 years experience in environmental consulting with increasing scope, responsibility, innovation and effective results involving commercial and industrial properties spanning the country from the upper Midwestern states within glacial, alluvial or coastal geologic/hydrogeologic settings to complex bedrock, volcanic and glacial/fluvial settings in the northern Rocky Mountain states, the Pacific Northwest and Alaska. He has conducted field work and mapping in mountainous terrain in northern Wyoming and in central Utah where he has published: Utah Geologic Survey Geologic Quadrangle (Chriss Canyon 7.5 min.). These projects included extensive sampling of soils, rock, surface waters, groundwater, limited submarine sampling, soil borings, monitoring well installations, soil vapor extraction wells and systems, and dual-phase extraction and incineration. He is proficient in the application of aerial photographs, satellite imagery and on-line tools, and has limited surveying experience. His work has included compliance activities involving Superfund Sites, and waste remediation sites, as well as Phase I Environmental Site Assessments, Phase II Subsurface Investigations, hydrogeologic studies, pump tests, remediation system design, and groundwater monitoring. His work has required a familiarity with ASTM Phase I and Phase II Protocols, and other relevant ASTM Protocols as well as USEPA, CERCLA, RCRA regulations. He is familiar with Washington State MTCA regulations (hazardous assessments and independent remedial actions), as well as State of Oregon Risk Based Standards. His academic background has included work in organic chemistry and chemical engineering as well as an undergraduate engineering physics and calculus sequence.

Education	University of Illinois - Urbana, IL – BSci Geology – 1984 (Field Mapping: Sheridan, WY) Northern Illinois University - DeKalb, IL – Graduate research/Published USGS Map, Utah).
Publications	Chriss Canyon 7.5-Min. Geologic Quadrangle, Utah, Coauthor, UGS Map 185, 2003
Professional History	Aerotech Environmental Consulting, Inc. Hydrogeologist/Environmental Professional (2011-Present) James McDermott Consulting, Proprietor, Web Design-IT (1995-2010) (Including work with Bank One, Xerox, and IGO Cars) Earthscience Consulting, Proprietor, Hydrogeologist (1993-1994) ATEC Environmental Associates, Inc., Hydrogeologist (1991-1993) EIS Environmental, Inc., Staff Geoscientist (1989-1991)
Certifications	OSHA 40-hr Hazwoper, 8hr Refresher (2013) Participation Certificate: Chlorinated Solvent Remediation - Sequential In-Situ Chemical Oxidation and Enhanced Anaerobic Biodegredation.
Organizations & Memberships	Geological Society of America – Cordilleran Section, Rocky Mountain Section, Environmental and Engineering Geology Division, Hydrogeology Division, Structural Geology and Tectonics Division.
Expertise	Mr. McDermott has performed over 150 Phase I and Phase II investigations including property transfers and LUST closures, conducted site reconnaissance, and prepared Phase I and Phase II Site Assessment reports. Phase II investigations included groundwater monitoring well design, installation and monitoring. He has participated in the design and monitoring of several remediation systems installed at selected Phase II project sites, contributed to RCRA landfill compliance monitoring projects and often the associated subsurface investigation and planning. He managed and planned a large number of these projects, implemented the investigations,

created both preliminary and final reports, and defined and implemented the additional investigation where required.

USGS GEOLOGIC MAPPING PROGRAM (Utah Geological Survey): He has contributed to the study and mapping of geologic units as a part of the related US Geological Survey program to complete national coverage of geologic maps at the 1:24,000 scale. He has mapped intrusive and volcanic bodies, faults, landslide hazards, mineral deposits, hydrothermal alteration, and springs. He has integrated data such as petroleum exploration well logs (gamma/SP), aerial and satellite imagery.

SUPERFUND SITE INVESTIGATIONS : He has performed subsurface characterization and hydrogeological assessments including the assembly and interpretation of soil boring and laboratory data, monitoring well design, well installation and groundwater monitoring well sampling plans.

RCRA COMPLIANCE : He has participated in the subsurface characterization and hydrogeological assessments on RCRA sites and has contributed to research and evaluation of previous investigations as well as pertinent public records.

UST SITE CHARACTERIZATION & REMEDIATION: He has performed Phase I, Phase II investigation, and planned and participated in successful Phase III remediation projects, including the management and on-site supervision of the removal of tanks at a 40-unit, 25,000 gallon pre-WWII aircraft engine tank farm site. Contaminants included fuels, solvents and lubricants, DNAPLs. He has performed numerous subsurface characterization and hydrogeological assessments including soil borings, split spoon, cores, monitoring well design and installation, remediation sampling, monitoring, pump testing, modeling /analysis.

REAL ESTATE TRANSFERS: He has performed Phase II Subsurface investigation / preliminary hydrogeological evaluations for the purpose of property transfers for lenders, property owners and prospective buyers.

GEOPHYSICAL SURVEYS: He has participated in the performance of a groundwater investigation for the Illinois Geological Survey designed to locate and define gravel channel aquifers in buried bedrock valleys.

BIOREMEDIATION APPLICATIONS: He has participated in a seminar devoted to groundwater bioremediation with particular attention to chlorinated solvents and the use of in-situ chemical oxidation and enhanced anaerobic biodegradation. This technique is being applied to contaminated industrial properties in Washington state.

Notable Projects and Innovations

His subsurface investigation experience has also included field studies and reports on projects such a Superfund property in an industrial park, several RCRA landfill compliance projects, a large underground tank farm (over 40 25,000-gal. tanks and a great variety of fuels, solvents and lubricants) at the location of a former WWII-era aircraft engine plant, a contaminant incineration remediation project at a major LUST site located within a sensitive urban area, the mapping and excavation of over 20,000 cubic yards of contaminated fluvial and alluvial sands in an aging 19th – 20th century riverside industrial complex, landslide mapping, risk assessment and an aquifer mapping project for a State Geological Survey.

Innovations and improvements he has introduced during his environmental consulting career

have included the composition and refinement of numerous Standard Operating Procedures including those related to monitoring well design and encompassing equipment maintenance, calibration and operation. An innovation at the time and place, he initiated the routine incorporation of documentation and analysis of utility and transportation conduits (sewer, storm water and tunnel plans) in considering groundwater and contaminant flow dynamics, and their potential as primary or secondary conduits for the transport of contaminants in groundwater or in surface runoff for Phase I, Phase II and other investigations. For example, in one case in the central Chicago business district where flammable vapors were reported in the basement of a landmark building, he utilized both sewer design plans and subway depth measurements to trace probable vapor pathways and successfully divert the unproven assignment of primary responsibility from his client. In another case he devised and implemented a simple incinerator design change which greatly reduced time and cost associated with automated emergency systems shutdowns. In routinely evaluating previous studies prior to incorporation into his reports, he occasionally discovered and corrected errors in groundwater flow calculations or elevation data. He discovered forged soil boring logs, accepting no external material without some verification where the economic and legal concerns of a client might be jeopardized.

Small Business Experience

He has fifteen years experience operating a web design and computer consulting business as a sole proprietor with several staff, meeting the unique needs and budgets of the small business and mid-sized business community, employing web design and marketing to increase the profits a of one small business by over 1000 percent.

SOIL BORING LOGS

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MONITORING WELL ID: **BORING LOG #: B-20** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: 4 ft East of 50 ft sign + 2 ft south of curb

Borehole Area (AOC): South of Tank Area- landscapred are north of 50 ft + sign

Logged by: J. McDermott: Boring Depth:15.5 feet

GW Encountered: ᴎ YES Static GW Level: 12 ft

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation:985 ft MSL
Airknifeto 6 ft 0750-
Start Date: 08-09-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Lawn / limited topsoil.	
1							SM		
								FILL- SAND, very fine, with 25-40 percent silt, moist, soft, grayish brown. At 2 ft: 1 ft layer of 2 to 6 inch subrounded cobbles/gravel. Large cobble or boulder at 4.5 ft - cannot remove. No foul odor.()	
2					Air Knife		GP		
3								Air knife to 4.5 ft - sample collected by auger at 3-4 ft interval	
4		LAB					SM		
		0.0							
5							GP	Large cobble(s) Air knife 'refusal' 0850	
								FILL - SAND - fine to very fine, poorly graded, some silt (15-20 percent), little small to large subrounded gravel, medium brown, slightly moist, soft. No foul odor.	
6									
		0.0							
7							GW	GRAVEL (75 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, gray, dry. No foul odor.	
8									
								Slough - pushed cobbles	
9									
10									
							GW	GRAVEL (80 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, gray, dry.Wet at 12 ft No foul odor.	
11									
		0.0							
12		LAB							
		17							
13									
14							GW	Same as above. Wet. Slight petrol odor at 12.5 -13.5	
15		1.1							
16									
17									
18								Bottom of borehole at feet	
19								Groundwater encountered at feet. No well installed.	
								Borehole completed with bentonite chips.	
20									

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MONITORING WELL ID: **BORING LOG #: B-1** **Page 2 of**

Project Name:

Project Number:

Drilling Information

Drilling Contractor:

Logged by:

Start Date: End Date:

Depth (ft)	Groundwater		Visual or Olfactory Evidence	Blow Counts	Recovery		**USCS** Classification	Soil Classification/ Description **UNIFIED SOIL CLASSIFICATION SYSTEM EXPLANATION**	Well Construction		
							GW	**GRAVELS**, well-graded* OR Gravel+Sand mix, little-no fines			
							GP	**GRAVELS**, poorly-graded* OR Gravel+Sand mix, little-no fines			
							GM	**GRAVELS**, silty OR Gravel-sand-silt mix			
							GC	**GRAVELS**, clayey OR Gravel-sand-clay mix			
							SW	**SAND**, well-graded OR **Gravelly Sands**, little-no fines			
							SP	**SAND**, poorly-graded OR **Gravelly Sands**, little-no fines			
							SM	**SAND**, silty OR Sand-silt mix			
							SC	**SAND**, clayey OR Sand-clay mix			
							ML	**SILT**, inorganic (very fine sands, rock flour, silty or clayey fine			
								sands) OR Clayey silts with slight plasticity			
							CL	**CLAY**, inorganic, low-med plasticity (gravelly, sandy, silty, lean)			
							OL	**SILT**, organic, AND **SILT-CLAY**, organic, low plasticity			
							MH	**SILT**, inorganic (micaceous or diatomaceous fn sndy/silty soils)			
								OR SILTY SOILS, elastic SILTS			
							CH	**CLAY**, inorganic, high plasticity, fat clays			
							OH	**CLAY**, organic, med-high plasticity OR Organic SILTS			
							PT	**PEAT** and other highly organic SOILS			
								Glacial Till - High density, USCS/color indicates grain size			
								* **Terminology clarification**: The term "**Well graded**" is a synonym for "**Poorly sorted**," both meaning that a wide range of particle sizes are present. The former term is employed in geotechnical descriptions, while the latter is preferred by the USDA in characterizing topsoils and subsoils.			

CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)

UNIFIED SOIL CLASSIFICATION SYSTEM

UNIFIED SOIL CLASSIFICATION AND SYMBOL CHART

COARSE-GRAINED SOILS (more than 50% of material is larger than No. 200 sieve size.)			
GRAVELS More than 50% of coarse fraction larger than No. 4 sieve size	Clean Gravels (Less than 5% fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
	Gravels with fines (More than 12% fines)	GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
SANDS 50% or more of coarse fraction smaller than No. 4 sieve size	Clean Sands (Less than 5% fines)	SW	Well-graded sands, gravelly sands, little or no fines
		SP	Poorly graded sands, gravelly sands, little or no fines
	Sands with fines (More than 12% fines)	SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures
FINE-GRAINED SOILS (50% or more of material is smaller than No. 200 sieve size.)			
SILTS AND CLAYS Liquid limit less than 50%		ML	Inorganic silts and very fine sands, rock flour, silty of clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silty clays of low plasticity
SILTS AND CLAYS Liquid limit 50% or greater		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS		PT	Peat and other highly organic soils

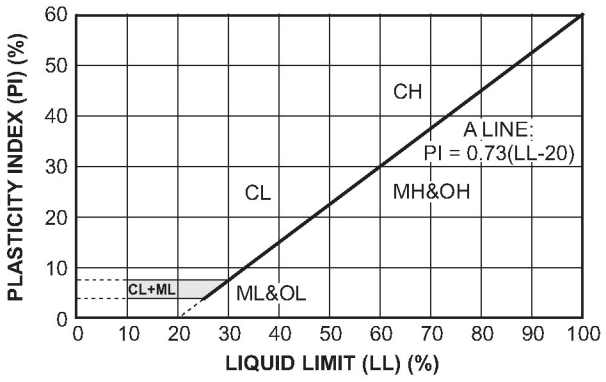
LABORATORY CLASSIFICATION CRITERIA

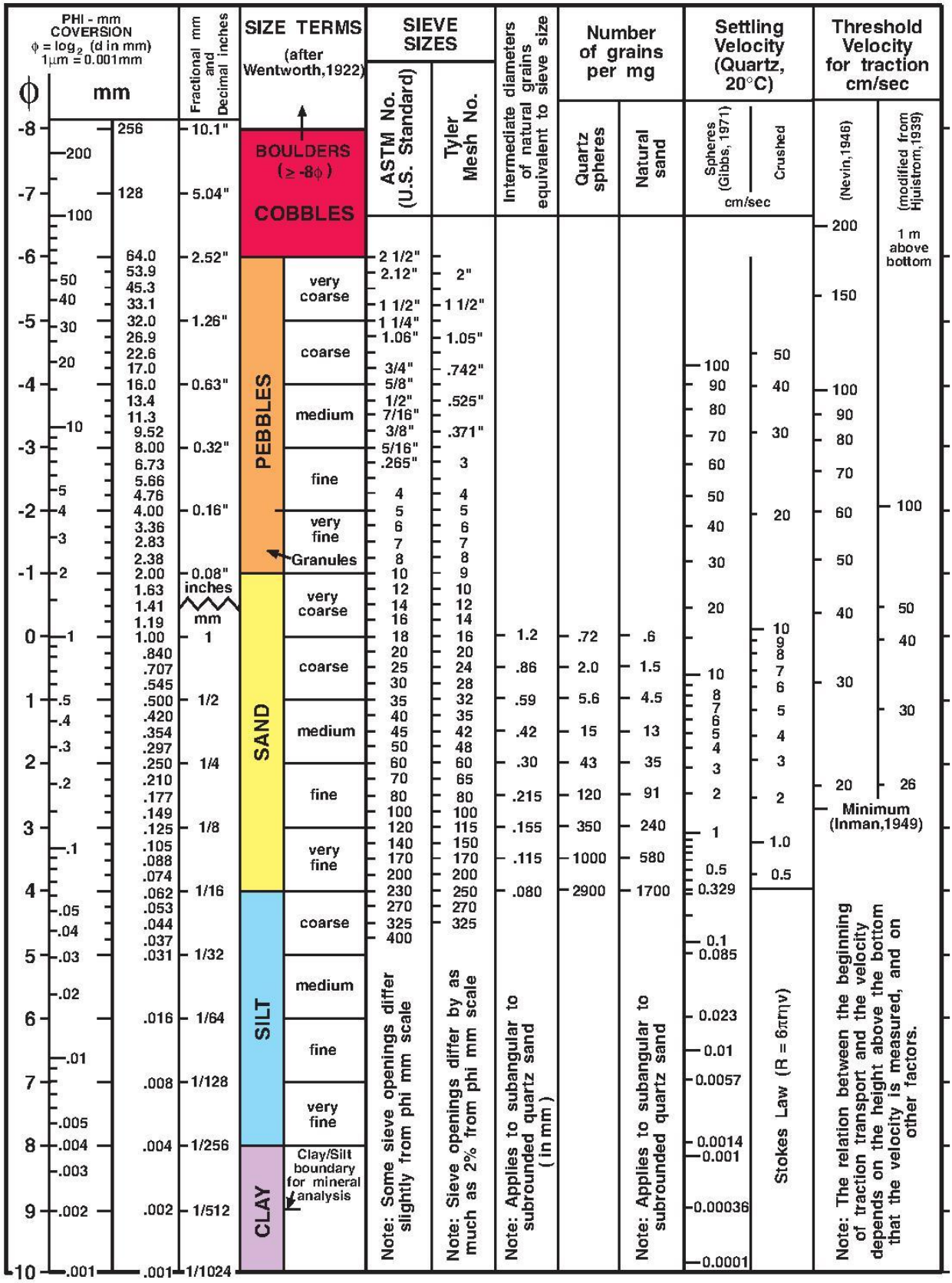
GW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3	
GP	Not meeting all gradation requirements for GW	
GM	Atterberg limits below "A" line or P.I. less than 4	Above "A" line with P.I. between 4 and 7 are borderline cases requiring use of dual symbols
GC	Atterberg limits above "A" line with P.I. greater than 7	
SW	$C_u = \frac{D_{60}}{D_{10}}$ greater than 4; $C_c = \frac{D_{30}}{D_{10} \times D_{60}}$ between 1 and 3	
SP	Not meeting all gradation requirements for GW	
SM	Atterberg limits below "A" line or P.I. less than 4	Limits plotting in shaded zone with P.I. between 4 and 7 are borderline cases requiring use of dual symbols.
SC	Atterberg limits above "A" line with P.I. greater than 7	

Determine percentages of sand and gravel from grain-size curve. Depending on percentage of fines (fraction smaller than No. 200 sieve size), coarse-grained soils are classified as follows:

Less than 5 percent ..... GW, GP, SW, SP
More than 12 percent ..... GM, GC, SM, SC
5 to 12 percent ..... Borderline cases requiring dual symbols

PLASTICITY CHART





US Geological Survey

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MONITORING WELL ID: **BORING LOG #: B-21** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: Borehole Location: 107 ft West of 50 ft sign + 2 ft south of curb

Borehole Area (AOC): South of south pump island are - SSE of SE Pump No. 6 on lawn

Logged by: J. McDermott: Boring Depth: 16 feet

GW Encountered: ☒ YES Static GW Level: 12 ft

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Approx. Surface Elevation:985 ft MSL

Start Date: 08-09-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Landscaped lawn area	
1									
							SP		
2							SM	FILL - SAND - fine to very fine, poorly graded, some silt (15-20 percent), little small to large subrounded gravel, medium brown, slightly moist, soft. No foul odor.	
3		LAB							
		0.4							
4									
		0.0					SP	FILL - SAND, fine to med, mod grading, trace silt and coarse to very coarse sand, little small to large subrounded gravel, dry. No foul odor.	
5									
6								Cobble/gravel driven to 7 ft - no recovery	
								Offset 1.5 ft south- sample recovered 6-8 ft	
7		LAB							
		0.0					GW	GRAVEL (75 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, brown, dry. No foul odor.	
8									
							GW		
9								GRAVEL (50 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, medium brown, brown dry. No foul odor.	
10							GW		
11		0.5						Same as above. Wet at 12.2 ft	
		LAB					GW		
12									
13									
14								GRAVEL (80 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, medium to dark brown, dry. No foul odor.	
							GW		
15		LAB							
		0.0							
16									
17									
18								Bottom of borehole at feet	
								Groundwater encountered at feet. No well installed.	
19								Borehole completed with bentonite chips.	
20									

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MONITORING WELL ID: **BORING LOG #: B-22** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: Borehole Location: 43 ft West of 50 ft sign + 2 ft south of curb

Borehole Area (AOC): South of Tank Area

Logged by: J. McDermott: Boring Depth: Refusal at 11 feet

GW Encountered: NO Static GW Level:

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation:985 ft MSL

Start Date: 08-09-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Lawn	
1							SM		
								FILL- SAND, very fine, with 25-40 percent silt, moist, soft, grayish brown. At 2 ft: 1 ft layer of 2 to 6 inch subrounded cobbles/gravel. Large cobble or boulder at 4.5 ft - cannot remove. No foul odor.()	
2		2.9			Air Knife		GP		
3								Air knife to 5.5 ft - sample collected by auger at 3-4 ft interval	
								Black organic seam at 2 ft - approx 4 inch thickness	
4		LAB					SM		
5									
6									
								GRAVEL (85 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, brown, dry. No foul odor.	
7		0.0					GW		
8									
9		LAB					GW	Same as above. Dry. No foul odor.	
10		0.0							
11		0.0					GW	Same as above. Medium to dark brown, dry. No foul odor.	
		LAB							
12								Refusal atop large cobble at 11.0 ft	
13									
14									
15									
16									
17									
18								Bottom of borehole at feet	
19								Groundwater encountered at feet. No well installed.	
								Borehole completed with bentonite chips.	
20									

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MONITORING WELL ID: **BORING LOG #: B-23** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: Borehole Location: 80 ft West of 50 ft sign + 2 ft south of curb

Borehole Area (AOC): South of Tank Area

Logged by: J. McDermott: Boring Depth:16.5 feet

GW Encountered: YES Static GW Level:12

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation:985 ft MSL

Start Date: 08-09-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Lawn / topsoil	
1									
2					Air Knife			FILL - SAND, very fine, trace med-coarse, with silt (25 percent), dark brown, subrounded gravel (cobbles to 6 inch at 2 ft), slighly moist. No foul odor.	
3									
4									
5									
6								GRAVEL (85 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, brown, dry. No foul odor.	
7		LAB					GW		
8		0.0							
9							GW	Same as above. Dry. No foul odor.	
10		0.4							
11		0.3						Same as above. Dry, slightly moist at tip. No foul odor.	
12									
13		LAB					GW	Same as above. Wet below 12 ft. No foul odor.	
14		0.1 LAB							
15							GW	Same as above. Medium to dark brown. Wet. No foul odor.	
16		0.0							
17									
18								Bottom of borehole at feet	
19								Groundwater encountered at feet. No well installed. Borehole completed with bentonite chips.	
20									

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MONITORING WELL ID: **BORING LOG #: B-24** **Page 1 of**

Project Name: Gearjammer Truck Stop

Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

1ft southof concrete pad, midway between pumps no 6 and no 8

Borehole Location: 27 ft east and 4 ft south of SE corner of South Pump Island Canopy

Borehole Area (AOC): South of vehicular fuel pump island area

Logged by: J. McDermott: Boring Depth: 13.5 feet

GW Encountered: YES Static GW Level: 12 ft

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation:985 ft MSL

Start Date: 08-09-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		**USCS** Classification	Soil Classification/ Description	Well Construction
								Lawn / topsoil	
1									
					Air Knife	SP		FILL - SAND, very fine, with silt (30 percent), dark brown, subrounded gravel (cobbles to 6 inch at 2 ft), slighly moist. No foul odor.	
2									
3		LAB							
4									
5								GRAVEL (85 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, brown, dry. No foul odor.	
6		0.0				GW		GRAVEL (75 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, gray, dry. No foul odor.	
7		LAB							
8		0.0							
9						GW		Same as above. Brown with gray. Dry.No foul odor.	
10		0.0							
11									
12		0.0							
		LAB				GW		Same as above. Brown with trace gray. Wet. No foul odor.	
13		0.0							
14		LAB							
15									
16									
17									
18								Bottom of borehole at feet	
19								Groundwater encountered at feet. No well installed.	
								Borehole completed with bentonite chips.	
20									

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MONITORING WELL ID: **BORING LOG #: B-25** **Page 1 of**

Project Name: Gearjammer Truck Stop

Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: Borehole Location: 170 ft West of 50 ft sign + 2 ft south of curb

Borehole Area (AOC): South of Tank Area

Logged by: J. McDermott: Boring Depth: 14 feet

GW Encountered: ᴎ YES Static GW Level: 12

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation:985 ft MSL

Start Date: 08-10-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Sod/Topsoil - 6 inches	
1		0.0							
2									
3					Air Knife		SP	FILL - SAND, with cobbles and silt, very fine to medium, moderately graded, (cobbles are subrounded), damp, dark brown, No foul odor.	
4		0.0		LAB					
5									
6									
7		LAB					GW	GRAVEL (85 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, brown and gray, dry. No foul odor.	
8		0.0							
9									
10									
11							GW	Same as above. brown and gray. Dry, very moist to wet below 11.9 ft. No	
12		LAB							
13		0.0					GW	Same as above. brown and gray. Dry, very moist to wet below 11.9 ft. No	
14		LAB							
		0.0							
15									
16									
17									
18								Bottom of borehole at feet	
19								Groundwater encountered at feet. No well installed.	
20								Borehole completed with bentonite chips.	

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MONITORING WELL ID: **BORING LOG #: B-26** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: 68ft SE of Restaurant sidewalk and 3 ft SW truck lane concrete pad

Borehole Area (AOC): Southwest of AMBest(easternmot)truck scale / concrete pad

Logged by: J. McDermott: Boring Depth: REFUSAL at 9.5 feet

GW Encountered: NO Static GW Level:

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation:985 ft MSL

Start Date: 08-09-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Asphalt Pavement atop densely compacted angular sandy gravel.	
1									
2					Air Knife		SP	FILL -SAND, very fine, with silt (30 percent), dark brown, subrounded gravel (cobbles to 6 inch at 2 ft), slighly moist. No foul odor.	
3		LAB							
								FILL-GRAVEL, subrounded, with sand, very densely compacted,gray, dry. No foul odor.	
4									
								Pushing cobble/gravel - no recovery4.5 to 6	
5									
6								GRAVEL (90 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, gray, dry. No foul odor.	
7	0.0								
8	0.0							Same as above.Dry No foul odor.	
		LAB							
9	0.0							Same as above.Gray, dry, slightly moist at 9.1 ft. No foul odor.	
10								Refual at 9.5 ft	
11									
12									
13									
14									
15									
16									
17									
18									
19								Bottom of borehole at feet Groundwater encountered at feet. No well installed.	
20								Borehole completed with bentonite chips.	

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MONITORING WELL ID: **BORING LOG #: B-27** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: 34 ft west and 11 ft south of SW Corner of Wash-Lube Bldg - S of Separator

Borehole Area (AOC): West of Truck Wash-Oil Change Area - 850 sq ft Concrete Oil-Water Separator

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Logged by: J. McDermott: Boring Depth: 14 feet

GW Encountered: YES Static GW Level:10.5 ft

Notes:

Approx. Surface Elevation:

Start Date: 08-10-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Asphalt pavement - 6 inch	
1		0.0					GP	FILL - Gravel, with silt and sand, medium, subangular, poorly graded, (sand is fine-grained), dry, dark brown, No foul odor.	
2									
3					Air Knife				
4		0.0		LAB			SP	FILL - SAND, with cobbles and silt, very fine, moderately graded, (cobbles are subrounded), dry, dark brown, No foul odor.	
5									
6									
7									
8		0.0							
9							GW	GRAVEL (90 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, brown, dry slightly moist at 10 ft. No foul odor.	
10		0.1							
11		LAB							
12		0.0					GW	Same as above, wet. No foul odor.	
13									
14		LAB 0.0							
15									
16									
17									
18								Bottom of borehole at feet	
19								Groundwater encountered at feet. No well installed. Borehole completed with bentonite chips.	
20									

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MONITORING WELL ID: **BORING LOG #: B-28** **Page 1 of**

Project Name: Gearjammer Truck Stop

Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location:6 ft east and 6 ft south of SE corner of wash lube bldg

Borehole Area (AOC): South of Tank Area

Logged by: J. McDermott: Boring Depth: 14 feet

GW Encountered: ᴎ YES Static GW Level: 11.5

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation: 989 ft MSL

Start Date: 08-09-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Asphalt pavement - 4 inch	
1		0.0					GP	FILL - Gravel, with silt and sand, medium, subangular, poorly graded, (sand is fine-grained), dry, dark brown, highly compacted, No foul odor.	
2					Air Knife				
3									
4		0.0		LAB			SP	FILL - SAND, with cobbles and silt, very fine, moderately graded, (cobbles are subrounded), dry, dark brown, No foul odor.	
5									
6		LAB							
7		0.0					SP	FILL - SAND, very fine to fine, with medium, medium brown dry. No foul odor.	
8									
9		0.0						GRAVEL (75 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, brown, dry. No foul odor.	
10		LAB					GW		
11		LAB							
12		0.0					GW	Same as above (gravel=85 percent). Wet. No foul odor.	
13									
14		LAB							
		0.0							
15									
16									
17									
18								Bottom of borehole at feet	
19								Groundwater encountered at feet. No well installed.	
								Borehole completed with bentonite chips.	
20									

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MONITORING WELL ID: **BORING LOG #: B-29** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903
3 ft south of 16 sq ft disused RV waste sump location
Borehole Location:34 ft east and 7 feet south of SW corner of Wash/Lube Service Bldg
Borehole Area (AOC): Southeast of former 8,000-gal tank basin / south of disused RV waste sump

Logged by: J. McDermott: Boring Depth: 14 feet

GW Encountered: ᴎ YES Static GW Level: 11.5

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation: 989 ft MSL

Start Date: 08-10-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Asphalt pavement - 4 inch	
1		0.0					GP	FILL - Gravel, with silt and sand, medium, subangular, poorly graded, (sand is fine-grained), dry, dark brown, No foul odor.	
2									
3					Air				
4		0.0		LAB	Knife		SP	FILL - SAND, with cobbles and silt, very fine, moderately graded, (cobbles are subrounded), dry, dark brown, No foul odor.	
5									
6									
7							SP	FILL - SAND, very fine to fine, with medium, medium brown dry. Trace asphalt fragments. No foul odor.	
		LAB							
8		0.0							
9							GW	GRAVEL (85 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, brown and gray, dry. No foul odor.	
10		0.0							
11		LAB							
12		0.0							
13		LAB					QW	Same as above. Wet. No foul odor.	
		0.0							
14									
15									
16									
17									
18									
19								Bottom of borehole at feet	
								Groundwater encountered at feet. No well installed.	
20								Borehole completed with bentonite chips.	

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MONITORING WELL ID: **BORING LOG #: B-30** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: 2 ft north and 10 ft west of SW corner of wash/lube bldg

Borehole Area (AOC): East of Truck Wash-Oil Change Area - Former 8,000-gal UST Loc

Logged by: J. McDermott: Boring Depth: 14 feet

GW Encountered: YES Static GW Level: 14 ft

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation: 989 ft MSL

Start Date: 08-10-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Asphalt pavement - 4 inch	
1		0.0					GP	FILL - Gravel, with silt and sand, medium, subangular, poorly graded, (sand is fine-grained), dry, dark brown, No foul odor.	
2									
3									
4		0.0		LAB	Air Knife		SP	FILL - SAND, with cobbles and silt, very fine, moderately graded, (cobbles are subrounded), dry, dark brown, No foul odor.	
5									
6									
7								No recovery at 6 to 9 - pushing a cobble/gravel	
8	LAB								
9		0.0					GW	GRAVEL (90 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, gray and brown, dry slightly moist at 11 ft. No foul odor.	
10									
11		0.1							
12	LAB							Same as above. Slightly moist to moist at 14 ft	
13							GW		
14	LAB								
15									
16									
17									
18								Bottom of borehole at feet	
19								Groundwater encountered at feet. No well installed.	
20								Borehole completed with bentonite chips.	

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MONITORING WELL ID: **BORING LOG #: B31** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: 25 ft north and 10 ft west of SW corner of wash/lube bldg

Borehole Area (AOC): East of Truck Wash-Oil Change Area - Former 8,000-gal UST Loc

Logged by: J. McDermott: Boring Depth: 14 feet

GW Encountered: ↳ YES Static GW Level: 11.5

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Approx. Surface Elevation:989 ft MSL

Start Date: 08-09-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Asphalt Pavement - atop compact angular gravel base.	
1									
2							GP	FILL - PEA GRAVEL, subounded to subangular, trace to little fine to coarse sand, trace silt. Dry. No foul odor.	
3									
4		0.0							
5									
6									
7							GP	FILL - PEA GRAVEL, Same as above. Gray, dry. No foul odor.	
8		0.0							
9									
10		LAB 0.0							
11							GP	FILL - PEA GRAVEL,Same as above. Gray, dry, wet below 11.5 ft. SEAM: Pea gravel matrix between 9 and11 ft is mix of fine sand,silt and clay, Trace medium to large angular gravel, moist. No foul odor, except narrow 1/2 inch zone at approx 11.9 - hint of petrol	
12		LAB 0.0							
13								FILL - PEA GRAVEL. SEAM: Pea gravel matrix between 13 and14 ft is mix of fine sand,silt and clay, Trace medium to large angular gravel, wet. (SEAM at13.5 ft: 2 in sandy silt atop 2 inch fine sand) Disturbed brown and gray mix in this interval. No foul odor.	
14		LAB 0.0.					GP SW		
15								Refusal at 14 ft. - Base - 2 inches - possibly mix of fill and	
16								disturbed in-situ sandy gravel.	
17									
18									
19								Bottom of borehole at feet Groundwater encountered at feet. No well installed.	
20								Borehole completed with bentonite chips.	

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MONITORING WELL ID: **BORING LOG #: B-32** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: 27 ft north and 20 ft west of SW corner of wash/lube bldg

Borehole Area (AOC): East of Truck Wash-Oil Change Area - Former 8,000-gal UST Loc

Logged by: J. McDermott: Boring Depth: 13 feet

GW Encountered: YES Static GW Level:10.5

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation: 989 ft MSL

Start Date: 08-11-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Asphalt pavement - 4 inch	
1		0.0					GP	FILL - Gravel, with silt and sand, medium, subangular, poorly graded, (sand is fine-grained), dry, dark brown, No foul odor.	
2									
3									
4		0.0		LAB			SP	FILL - SAND, with cobbles and silt, very fine, moderately graded, (cobbles are subrounded), dry, dark brown, No foul odor.	
5									
6									
7									
8		0.0	LAB						
9							GW	GRAVEL (90 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, gray and brown, dry, slightly moist at 10 ft. No foul odor.	
10		0.0							
11		0.0	LAB						
12							GW	Same as above. Wet. No foul odor.	
13		0.0	LAB						
14									
15									
16									
17									
18								Bottom of borehole at feet	
19								Groundwater encountered at feet. No well installed.	
								Borehole completed with bentonite chips.	
20									

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MONITORING WELL ID: **BORING LOG #: B-33** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: 43 ft north and 17 ft west of SW corner of wash/lube bldg

Borehole Area (AOC): East of Truck Wash-Oil Change Area - Former 8,000-gal UST Loc

Logged by: J. McDermott: Boring Depth:14 feet

GW Encountered: YES Static GW Level:12

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation: 989 ft MSL

Start Date: 08-11-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Asphalt pavement - 4 inch	
1		0.0					GP	FILL - Gravel, with silt and sand, medium, subangular, poorly graded, (sand is fine-grained), dry, dark brown, No foul odor.	
2									
3									
4		0.0		LAB			SP	FILL - SAND, with cobbles and silt, very fine, moderately graded, (cobbles are subrounded), dry, dark brown, No foul odor.	
5									
6									
7									
8									
9									
10							GW	GRAVEL (80 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, gray with some brown, dry, slightly moist at 10 ft. No foul odor.	
11									
12		0.0							
		LAB							
13							GW	Same as above. Wet. No foul odor.	
14		0.0							
		LAB							
15									
16									
17									
18								Bottom of borehole at feet	
19								Groundwater encountered at feet. No well installed.	
								Borehole completed with bentonite chips.	
20									

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MONITORING WELL ID: **BORING LOG #: B-34** **Page 1 of**

Project Name: Gearjammer Truck Stop
Project Number: 216-

Site Location: 2310 Rudkin Road, Union Gap, WA 98903

Borehole Location: 6 ft west of concrete east truck lane and 5ft south /perpendicular of concr walk.

Borehole Area (AOC): South of SE corner of Diesel fuel pump area

Logged by: J. McDermott: Boring Depth: 15 feet

GW Encountered: YES Static GW Level:13 ft

Notes:

Drilling Information

Drilling Contractor:	SEP, Tumwater, Wa
Drilling Method:	Direct Push
Borehole Diameter:	2"
Sampler Type:	Core sampler + virgin poly-sleeve

Shallow: Air knife / Hand auger samples

Approx. Surface Elevation: 985 ft MSL

Start Date: 08-10-16 End Date: Same

Depth (ft)	Groundwater	PID	Visual or Olfactory Evidence	Blow Counts	Recovery		USCS Classification	Soil Classification/ Description	Well Construction
								Asphalt pavement - 4 inch	
1		0.0					GP	FILL - Gravel, with silt and sand, medium, subangular, poorly graded, (sand is fine-grained), dry, dark brown, No foul odor.	
2									
								FILL - SAND, with cobbles and silt, very fine, moderately graded, (cobbles are subrounded), dry, dark brown, No foul odor.	
3									
4		0.0		LAB				As above, dark gray	
							SP		
5									
6									
7							GW	GRAVEL (80 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, gray with trace brown, dry. No foul odor.	
8		0.1							
9							GW	Same as above.	
10		LAB							
11									
12		LAB							
		247						GRAVEL (80 percent), small to large/cobbles, sand matrix is fine to very coarse, well graded, trace silt, gray and brown, black at 12 to 13 ft, dry to moist. Strong diesel odor at 12 to 13 ft.	
13							GW		
14		12.8						Same as above, brown, wet. Moderate diesel odor.	
15		7.3	LAB						
16									
17									
18								Bottom of borehole at feet	
19								Groundwater encountered at feet. No well installed.	
								Borehole completed with bentonite chips.	
20									

LABORATORY ANALYTICAL RESULTS

ADVANCED ANALYTICAL

Environmental Testing Laboratory

August 26, 2016

James McDermott
Aerotech Environmental, Inc.
13925 Interurban Avenue South, Suite 210
Seattle, WA 98168

Dear Mr. McDermott:

Please find enclosed the analytical data report for the *Gearjammer Truck Plaza* ***(C60811-3)*** Project.

Samples were received on *August 11, 2016.* The results of the analyses are presented in the attached tables. Applicable reporting limits, QA/QC data and data qualifiers are included. A copy of the chain-of-custody and an invoice for the work is also enclosed.

ADVANCED ANALYTICAL LABORATORY appreciates the opportunity to provide analytical services for this project. Should there be any questions regarding this report, please contact me at (425) 702-8571.

It was a pleasure working with you, and we are looking forward to the next opportunity to work together.

Sincerely,

V. Ivanov

Val G. Ivanov, Ph.D.
Laboratory Manager

4078 148 Ave NE■ Redmond, WA 98052
425.702-8571
E-mail: aachemlab@yahoo.com

Advanced Analytical Laboratory
(425) 702-8571

AAL Job Number:	C60811-3
Client:	Aerotech Environmental
Project Manager:	James McDermott
Client Project Name:	Gearjammer Truck Plaza
Client Project Number:	na
Date received:	08/11/16

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

8260B, µg/kg		MTH BLK	LCS	B-21 (12.5')	B-25 (14')	B-24 (13.5')
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16
Date analyzed	Limits	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16
MTBE	100	nd		nd	nd	nd
Dichlorodifluoromethane	50	nd				
Chloromethane	50	nd				
Vinyl chloride	50	nd				
Bromomethane	50	nd				
Chloroethane	50	nd				
Trichlorofluoromethane	50	nd				
1,1-Dichloroethene	50	nd				
Methylene chloride	20	nd				
1,1-Dichloroethane	50	nd				
cis-1,2-Dichloroethene	50	nd				
Chloroform	50	nd				
1,1,1-Trichloroethane	50	nd				
Carbontetrachloride	50	nd				
1,1-Dichloropropene	50	nd				
1,2-Dichloroethane(EDC)	20	nd		nd	nd	nd
Trichloroethene	20	nd	120%			
1,2-Dichloropropane	50	nd				
Dibromomethane	50	nd				
Bromodichloromethane	50	nd				
cis-1,3-Dichloropropene	50	nd				
trans-1,3-Dichloropropene	50	nd				
1,1,2-Trichloroethane	50	nd				
Tetrachloroethene	50	nd				
1,3-Dichloropropane	50	nd				
Dibromochloromethane	20	nd				
1,2-Dibromoethane (EDB)*	5	nd		nd	nd	nd
Chlorobenzene	50	nd	107%			
1,1,1,2-Tetrachloroethane	50	nd				
1,2,3-Trichloropropane	50	nd				
1,1,2,2-Tetrachloroethane	50	nd				
2-Chlorotoluene	50	nd				
4-Chlorotoluene	50	nd				
1,3-Dichlorobenzene	50	nd				
1,4-Dichlorobenzene	50	nd				
1,2-Dichlorobenzene	50	nd				
1,2-Dibromo-3-Chloropropane	50	nd				
1,2,4-Trichlorobenzene	50	nd				
1,2,3-Trichlorobenzene	50	nd				

*-instrument detection limits

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

8260B, µg/kg		MTH BLK	LCS	B-21 (12.5')	B-25 (14')	B-24 (13.5')
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16
Date analyzed	Limits	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16
Surrogate recoveries						
Dibromofluoromethane		100%	99%	99%	103%	98%
1,2-Dichloroethane-d4		87%	81%	82%	85%	83%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
C - coelution with sample peaks
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environ
Project Manager: James McDermot
Client Project Name: Gearjammer Truc
Client Project Number: na
Date received: 08/11/16

Analytical Results

8260B, µg/kg		B-29 (14')	B-30 (14')	B-27 (12')	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16
Date analyzed	Limits	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16
MTBE	100	nd	nd	nd			
Dichlorodifluoromethane	50	nd	nd	nd			
Chloromethane	50	nd	nd	nd			
Vinyl chloride	50	nd	nd	nd			
Bromomethane	50	nd	nd	nd			
Chloroethane	50	nd	nd	nd			
Trichlorofluoromethane	50	nd	nd	nd			
1,1-Dichloroethene	50	nd	nd	nd			
Methylene chloride	20	nd	nd	nd			
1,1-Dichloroethane	50	nd	nd	nd			
cis-1,2-Dichloroethene	50	nd	nd	nd			
Chloroform	50	nd	nd	nd			
1,1,1-Trichloroethane	50	nd	nd	nd			
Carbontetrachloride	50	nd	nd	nd			
1,1-Dichloropropene	50	nd	nd	nd			
1,2-Dichloroethane(EDC)	20	nd	nd	nd			
Trichloroethene	20	nd	nd	nd	105%	115%	9%
1,2-Dichloropropane	50	nd	nd	nd			
Dibromomethane	50	nd	nd	nd			
Bromodichloromethane	50	nd	nd	nd			
cis-1,3-Dichloropropene	50	nd	nd	nd			
trans-1,3-Dichloropropene	50	nd	nd	nd			
1,1,2-Trichloroethane	50	nd	nd	nd			
Tetrachloroethene	50	nd	nd	nd			
1,3-Dichloropropane	50	nd	nd	nd			
Dibromochloromethane	20	nd	nd	nd			
1,2-Dibromoethane (EDB)*	5	nd	nd	nd			
Chlorobenzene	50	nd	nd	nd	92%	101%	10%
1,1,1,2-Tetrachloroethane	50	nd	nd	nd			
1,2,3-Trichloropropane	50	nd	nd	nd			
1,1,2,2-Tetrachloroethane	50	nd	nd	nd			
2-Chlorotoluene	50	nd	nd	nd			
4-Chlorotoluene	50	nd	nd	nd			
1,3-Dichlorobenzene	50	nd	nd	nd			
1,4-Dichlorobenzene	50	nd	nd	nd			
1,2-Dichlorobenzene	50	nd	nd	nd			
1,2-Dibromo-3-Chloropropane	50	nd	nd	nd			
1,2,4-Trichlorobenzene	50	nd	nd	nd			
1,2,3-Trichlorobenzene	50	nd	nd	nd			

*-instrument detection limits

AAL Job Number:	C60811-3
Client:	Aerotech Environ
Project Manager:	James McDermot
Client Project Name:	Gearjammer Truc
Client Project Number:	na
Date received:	08/11/16

Analytical Results

8260B, µg/kg		B-29 (14')	B-30 (14')	B-27 (12')	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16
Date analyzed	Limits	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16	08/15/16
Surrogate recoveries							
Dibromofluoromethane		104%	104%	98%	105%	106%	
1,2-Dichloroethane-d4		89%	91%	89%	86%	86%	

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
M-matrix interference
C - coelution with sample peaks
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

8260B, µg/L		MTH BLK	LCS	W-B-27	W-B-31	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16
MTBE	5.0	nd		nd	nd			
Chloromethane	1.0	nd		nd	nd			
Vinyl chloride(*)	0.2	nd		nd	nd			
Bromomethane	1.0	nd		nd	nd			
Chloroethane	1.0	nd		nd	nd			
Trichlorofluoromethane	1.0	nd		nd	nd			
1,1-Dichloroethene	1.0	nd		nd	nd			
Methylene chloride	1.0	nd		nd	nd			
trans-1,2-Dichloroethene	1.0	nd		nd	nd			
1,1-Dichloroethane	1.0	nd		nd	nd			
cis-1,2-Dichloroethene	1.0	nd		nd	nd			
1,1,1-Trichloroethane	1.0	nd		nd	nd			
Carbontetrachloride	1.0	nd		nd	nd			
1,1-Dichloropropene	1.0	nd		nd	nd			
1,2-Dichloroethane (EDC)	1.0	nd		nd	nd			
Trichloroethene	1.0	nd	115%	nd	nd	114%	116%	1%
1,2-Dichloropropane	1.0	nd		nd	nd			
Dibromomethane	1.0	nd		nd	nd			
Bromodichloromethane	1.0	nd		nd	nd			
cis-1,3-Dichloropropene	1.0	nd		nd	nd			
trans-1,3-Dichloropropene	1.0	nd		nd	nd			
1,1,2-Trichloroethane	1.0	nd		nd	nd			
Tetrachloroethene	1.0	nd		nd	nd			
1,3-Dichloropropane	1.0	nd		nd	nd			
Dibromochloromethane	1.0	nd		nd	nd			
1,2-Dibromoethane (EDB)*	0.01	nd		nd	nd			
Chlorobenzene	1.0	nd	96%	nd	nd	106%	109%	3%
1,1,1,2-Tetrachloroethane	1.0	nd		nd	nd			
Bromoform	1.0	nd		nd	nd			
1,2,3-Trichloropropane	1.0	nd		nd	nd			
Bromobenzene	1.0	nd		nd	nd			
1,1,2,2-Tetrachloroethane	1.0	nd		nd	nd			
2-Chlorotoluene	1.0	nd		nd	nd			
4-Chlorotoluene	1.0	nd		nd	nd			
1,3,5-Trimethylbenzene	1.0	nd		nd	nd			
1,2,4-Trimethylbenzene	1.0	nd		nd	nd			
1,3-Dichlorobenzene	1.0	nd		nd	nd			
1,4-Dichlorobenzene	1.0	nd		nd	nd			
1,2-Dichlorobenzene	1.0	nd		nd	nd			
1,2-Dibromo-3-Chloropropane	1.0	nd		nd	nd			
1,2,4-Trichlorobenzene	1.0	nd		nd	nd			
1,2,3-Trichlorobenzene	1.0	nd		nd	nd			

*-instrument detection limits

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

8260B, µg/L		MTH BLK	LCS	W-B-27	W-B-31	MS	MSD	RPD
Matrix	Water	Water	Water	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16

Surrogate recoveries							
Dibromofluoromethane		111%	108%	105%	103%	107%	103%
1,2-Dichloroethane-d4		89%	80%	81%	85%	87%	85%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

NWTPH-Gx / BTEX		MTH BLK	LCS	B-21 (12.5')	B-25 (12')	B-25 (14')	B-24 (4')
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16
Date analyzed	Limits	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16
NWTPH-Gx, mg/kg							
Mineral spirits/Stoddard	5.0	nd		nd	nd	nd	nd
Gasoline	5.0	nd		nd	nd	nd	nd
BTEX 8021B, µg/kg							
Benzene	20	nd	88%	nd	nd	nd	nd
Toluene	50	nd	91%	nd	nd	nd	nd
Ethylbenzene	50	nd		nd	nd	nd	nd
Xylenes	50	nd		nd	nd	nd	nd
Surrogate recoveries:							
Trifluorotoluene		104%	123%	110%	97%	104%	98%
Bromofluorobenzene		77%	77%	81%	78%	81%	73%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M - matrix interference
Results reported on dry-weight basis
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

NWTPH-Gx / BTEX		B-24 (12')	B-24 (13.5')	B-30 (12')	B-31 (12')	B-27 (12')
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16
Date analyzed	Limits	08/16/16	08/16/16	08/16/16	08/16/16	08/16/16
NWTPH-Gx, mg/kg						
Mineral spirits/Stoddard	5.0	nd	nd	nd	nd	nd
Gasoline	5.0	nd	nd	nd	nd	nd
BTEX 8021B, µg/kg						
Benzene	20	nd	nd	nd	nd	nd
Toluene	50	nd	nd	nd	nd	nd
Ethylbenzene	50	nd	nd	nd	nd	nd
Xylenes	50	nd	nd	nd	nd	nd
Surrogate recoveries:						
Trifluorotoluene		104%	97%	106%	103%	115%
Bromofluorobenzene		84%	83%	89%	85%	88%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M - matrix interference
Results reported on dry-weight basis
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

NWTPH-Gx / BTEX		MS	MSD	RPD	MTH BLK	LCS	B-21 (8')
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/16/16	08/16/16	08/16/16	08/17/16	08/17/16	08/17/16
Date analyzed	Limits	08/16/16	08/16/16	08/16/16	08/17/16	08/17/16	08/17/16
NWTPH-Gx, mg/kg							
Mineral spirits/Stoddard	5.0				nd		nd
Gasoline	5.0				nd		nd
BTEX 8021B, µg/kg							
Benzene	20	92%	92%	1%	nd	79%	nd
Toluene	50	109%	108%	0%	nd	82%	nd
Ethylbenzene	50				nd		nd
Xylenes	50				nd		nd
Surrogate recoveries:							
Trifluorotoluene		126%	125%		112%	118%	98%
Bromofluorobenzene		103%	99%		82%	77%	84%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M - matrix interference
Results reported on dry-weight basis
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

NWTPH-Gx / BTEX		B-23 (12.5')	B-25 (8')
Matrix	Soil	Soil	Soil
Date extracted	Reporting	08/17/16	08/17/16
Date analyzed	Limits	08/17/16	08/17/16
NWTPH-Gx, mg/kg			
Mineral spirits/Stoddard	5.0	nd	nd
Gasoline	5.0	nd	nd
BTEX 8021B, µg/kg			
Benzene	20	nd	nd
Toluene	50	nd	nd
Ethylbenzene	50	nd	nd
Xylenes	50	nd	nd
Surrogate recoveries:			
Trifluorotoluene		110%	114%
Bromofluorobenzene		85%	81%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M - matrix interference
Results reported on dry-weight basis
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

NWTPH-Gx		MTH BLK	LCS	W-B31	W-B31 Dupl
Matrix	Water	Water	Water	Water	Water
Date analyzed	Reporting Limits	08/17/16	08/17/16	08/17/16	08/17/16
NWTPH-Gx, ug/L					
Mineral spirits/Stoddard	100	nd		nd	nd
Gasoline	100	nd		nd	nd
BTEX 8021B, µg/L					
Benzene	1.0	nd	79%	nd	nd
Toluene	1.0	nd	82%	nd	nd
Ethylbenzene	1.0	nd		nd	nd
Xylenes	1.0	nd		nd	nd
Surrogate recoveries:					
Trifluorotoluene		112%	118%	112%	109%
Bromofluorobenzene		82%	77%	81%	77%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

NWTPH-Dx, mg/kg		MTH BLK	B-20 (12')	B-20 (15')	B-22 (10')	B-23 (12.5')
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16
Date analyzed	Limits	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	960	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd
Surrogate recoveries:						
Fluorobiphenyl		118%	120%	115%	116%	114%
o-Terphenyl		117%	126%	122%	125%	129%

Data Qualifiers and Analytical Comments
na - not analyzed
Results reported on dry-weight basis
M - matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

NWTPH-Dx, mg/kg		B-23 (14')	B-26 (3')	B-26 (8.5')	B-34 (4')	B-34 (10')
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16
Date analyzed	Limits	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd
Surrogate recoveries:						
Fluorobiphenyl		115%	117%	114%	115%	115%
o-Terphenyl		123%	125%	120%	126%	124%

Data Qualifiers and Analytical Comments
na - not analyzed
Results reported on dry-weight basis
M - matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

NWTPH-Dx, mg/kg		B-34 (12.5')	B-34 (15')	B-29 (14')	B-30 (12')	B-30 (14')
Matrix	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16
Date analyzed	Limits	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	3,200	nd	nd	nd	nd
Heavy oil	50	nd	nd	nd	nd	nd
Surrogate recoveries:						
Fluorobiphenyl		102%	117%	120%	116%	115%
o-Terphenyl		105%	125%	122%	122%	124%

Data Qualifiers and Analytical Comments
na - not analyzed
Results reported on dry-weight basis
M - matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

NWTPH-Dx, mg/kg		B-31 (12')	B-31 (14')	B-27 (12')	B-28 (4')	B-28 (12')	Dupl B-28 (12')
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16
Date analyzed	Limits	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16
Kerosene/Jet fuel	20	nd	nd	nd	nd	nd	nd
Diesel/Fuel oil	20	nd	nd	nd	nd	nd	nd
Heavy oil	50	1,500	nd	nd	nd	nd	nd
Surrogate recoveries:							
Fluorobiphenyl		116%	116%	115%	117%	116%	119%
o-Terphenyl		125%	127%	124%	125%	125%	125%

Data Qualifiers and Analytical Comments
na - not analyzed
Results reported on dry-weight basis
M - matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

NWTPH-Dx, mg/L		MTH BLK	W-B-27	W-B-29	W-B-31	MW-3
Matrix	Water	Water	Water	Water	Water	Water
Date extracted	Reporting	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16
Date analyzed	Limits	08/12/16	08/12/16	08/12/16	08/12/16	08/12/16
Kerosene/Jet fuel	0.20	nd	nd	nd	nd	nd
Diesel/Fuel oil	0.20	nd	nd	nd	nd	nd
Heavy oil	0.50	nd	nd	nd	nd	nd
Surrogate recoveries:						
Fluorobiphenyl		122%	116%	113%	115%	120%
o-Terphenyl		123%	121%	129%	120%	130%

Data Qualifiers and Analytical Comments
na - not analyzed
C - coelution with sample peaks
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

Metals (7010), mg/kg		MTH BLK	LCS	B-21 (12.5')	B-24 (13.5')	B-25 (14')	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/18/16	08/18/16	08/18/16	08/18/16	08/18/16	08/18/16	08/18/16	08/18/16
Date analyzed	Limits	08/18/16	08/18/16	08/18/16	08/18/16	08/18/16	08/18/16	08/18/16	08/18/16
Lead (Pb)	1.0	nd	93%	nd	nd	nd	105%	96%	8%

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M- matrix interference
Results reported on dry-weight basis
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

PAH (8270 sim), mg/kg		MTH BLK	LCS	B-30 (14')	B-27 (12')	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16
Date analyzed	Limits	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16
1-Methylnaphthalene	0.10	nd		nd	nd			
2-Methylnaphthalene	0.10	nd		nd	nd			
Naphthalene	0.10	nd		nd	nd			
Acenaphthylene	0.10	nd		nd	nd			
Acenaphthene	0.10	nd	98%	nd	nd	99%	98%	1%
Fluorene	0.10	nd		nd	nd			
Phenanthrene	0.10	nd		nd	nd			
Anthracene	0.10	nd		nd	nd			
Fluoranthene	0.10	nd		nd	nd			
Pyrene	0.10	nd	98%	nd	nd	95%	99%	4%
Benzo(a)anthracene	0.10	nd		nd	nd			
Chrysene	0.10	nd		nd	nd			
Benzo(b)fluoranthene	0.10	nd		nd	nd			
Benzo(k)fluoranthene	0.10	nd		nd	nd			
Benzo(a)pyrene	0.10	nd		nd	nd			
Indeno(1,2,3-cd)pyrene	0.10	nd		nd	nd			
Dibenzo(ah)anthracene	0.10	nd		nd	nd			
Benzo(ghi)perylene	0.10	nd		nd	nd			

Surrogate recoveries:							
2-Fluorobyphenyl	103%	104%	97%	96%	102%	101%	
o-Terphenyl	103%	104%	99%	103%	102%	105%	

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M - matrix interference
Results reported on dry-weight basis
Acceptable Recovery limits: 50% TO 150%
Acceptable RPD limit: 50%

AAL Job Number: C60811-3
Client: Aerotech Environmental
Project Manager: James McDermott
Client Project Name: Gearjammer Truck Plaza
Client Project Number: na
Date received: 08/11/16

Analytical Results

8082 (PCBs), mg/kg		MTH BLK	LCS	B-31 (12')	MS	MSD	RPD
Matrix	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Date extracted	Reporting	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16
Date analyzed	Limits	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16	08/17/16
A1221	0.2	nd		nd			
A1232	0.2	nd		nd			
A1242 (A1016)	0.2	nd		nd			
A1248	0.2	nd		nd			
A1254	0.2	nd		nd			
A1260	0.2	nd	129%	nd	90%	94%	4%
Surrogate recoveries:							
Tetrachloro-m-xylene		116%	107%	93%	80%	89%	
Decachlorobiphenyl		122%	129%	129%	127%	93%	

Data Qualifiers and Analytical Comments
nd - not detected at listed reporting limits
na - not analyzed
M - matrix interference
Acceptable Recovery limits: 70% TO 130%
Acceptable RPD limit: 30%

ADVANCED ANALYTICAL

Chain of Custody Record

Laboratory Job #:

2821 152 Avenue NE
Redmond, WA 98052
(425) 497-0110 fax: (425) 497-8089
aachemlab@yahoo.com

Client: Aerotech Env. Consulting
Project Manager: J McDermott
Address: 13925 [illegible] Ave S, [illegible] WA
Phone: 425-686-0032
Fax:

Project Name: GEARJAMMER TRUCK PLAZA
Project Number: 2315 Rudkin Rd, Union Gap WA
Collector: J McDermott / [illegible]
Date of collection: 9 AUG 2016

#	Sample ID	Time	Matrix	Container type	8260 Volatiles	8021B Volatiles	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx/Dx	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides	RCRA 8 Metals	Lead	Fuel Additives (MTBE EDB EDC)			Notes, comments	# of containers
1	B-20 (4')	0815	SOIL	[illegible]																	[illegible] 9 AUG	2
2	B-21 (4')	1025																			" "	2
3	B-21 (8')	1056						⊗		X											[illegible]	2
4	B-21 (12.5')	1140		↓				⊗		X							X	X			"	2
5	B-22 (4') ~~250~~ 10'	1120		[illegible]																	[illegible] 9 AUG	3
6	B-20 (12.5')	1308								X											[illegible]	3
7	B-20 (15')	1313								X											↓	3
8	B-23 (4')	1300		[illegible]																	[illegible] 9 AUG	2
9	B-23 (8')	1421																			[illegible]	2
10	B-24 (4')	1430						X		~~X~~ cancelled												2
11	B-23 (12.5')	1440						X		X												2
12	B-23 (14')	1450								X												2
13	B-22 (10')	1140	↓	↓						X												2

Relinquished by:	Date/Time	Received by:	Date/Time
[signature]	[illegible]	[signature]	08/10/16 [illegible]
Relinquished by:	Date/Time	Received by:	Date/Time

Sample receipt info:
Total # of containers:
Condition (temp, °C)
Seals (intact?, Y/N)
Comments:

Turnaround time:
Same day ○
24 hr ○
48 hr ○
Standard ⊘

ADVANCED ANALYTICAL

Chain of Custody Record

Laboratory Job #: 2315 Rudkin Rd, Union Gap

2821 152 Avenue NE
Redmond, WA 98052
(425) 497-0110 fax: (425) 497-8089
aachemlab@yahoo.com

Client: Aecotam Env.

Project Manager: J McDermott

Address:

Phone: Fax:

Project Name: GEARJAMMER TRUCK PLAZA

Project Number: 2315 Rudkin Rd, Union Gap WA

Collector: J McDermott / Nick

Date of collection: 8.9.15

#	Sample ID	Time	Matrix	Container type	8260 Volatiles	8021B Volatiles	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx / Dx	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides	RCRA 8 Metals	Lead	FVEL ADDITIVES 8BA / 8DA			Notes, comments	# of containers
1	B-24 (8')	1554	SOIL	[illegible]																	Union Gap WA	2
2	B-24 (12')	1605	↓	↓				X		⊗												2
3	B-24 (13.5')	1614						X									X	X				2
4	B-22 (10')	1710								X												2
5	B-26 (3')	1600								X												2
6	B-25 (4')	1750																				2
7	B-26 (8.5)	1925	↓	↓						X												2
8																						
9																						
10																						
11																						
12																						

Relinquished by:	Date/Time	Received by:	Date/Time
[signature]	8/10/15 3pm	[signature]	8/10/15 3pm
Relinquished by:	Date/Time	Received by:	Date/Time

Sample receipt info:

Total # of containers:

Condition (temp. °C)

Seals (intact?, Y/N)

Comments:

Turnaround time:

Same day ○

24 hr ○

48 hr ○

Standard ⊗

ADVANCED ANALYTICAL

Chain of Custody Record

Page 3 of 5

Laboratory Job #:

2821 152 Avenue NE
Redmond, WA 98052
(425) 497-0110 fax: (425) 497-8089
aachemlab@yahoo.com

Client: AERotech Environ. Consult.

Project Name: GEARJAMMER TANK FARM

Project Manager: J. McDermott

Project Number: 2315 Rudkin Rd, Union Gap, WA

Address:

Collector: J. McDERMOTT

Phone: 425-681-0032 Fax:

Date of collection: 8.10.16

	Sample ID	Time	Matrix	Container type	8260 Volatiles	8021B Volatiles	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx /lx	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides	RCRA 8 Metals	Lead	FUEL ADDITIVES MTBE EDB/EDC	Notes, comments	# of containers
1	B-25 (8')	0748	soil	1 jar 1 bag				X												2
2	B-25 (12')	0805						X												2
3	B-25 (14')	0825						X								X	X			2
4	B-31 (10')	0915		2 jar 1 bag																3
5	B-31 (12')	0930						X	X				X							3
6	B-31 (14')	1005							X											3
7	B-28 (9.5')	1114																		3
8	B-28 (12')	1120							X											3
9	B-28 (14)	1125																		3
10	B-28 (7')	1126																		3
11	B-29 (8')	1315																		3
12	B-29 (12')	1320	↓	↓																3

Relinquished by:	Date/Time	Received by:	Date/Time
[illegible]	8/11 3pm	F. Evans	08/11/16 3pm
Relinquished by:	Date/Time	Received by:	Date/Time

Sample receipt info:

Total # of containers:

Condition (temp, °C)

Seals (intact?, Y/N)

Comments:

Turnaround time:

Same day O

24 hr O

48 hr O

Standard X

ADVANCED ANALYTICAL

Chain of Custody Record

Page 4 of 5

Laboratory Job #:

2821 152 Avenue NE
Redmond, WA 98052
(425) 497-0110 fax: (425) 497-8089
aachemlab@yahoo.com

Client: AEROTECH ENVIRON. CONSULT.

Project Name: GEARHAMMER PLAZA

Project Manager: J. McDermott

Project Number: 2315 Rudkin Rd Union Gap, WA

Address:

Collector: J McDermott

Phone: Fax:

Date of collection: Aug 10 - 11, 2016

	Sample ID	Time	Matrix	Container type	8260 Volatiles	8021B Volatiles	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx / Dx	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides	RCRA 8 Metals	Lead	Notes, comments	# of containers
9	1 B-29 (14')	1330	SOIL		X				X										3
	2 B-30 (9')	1440																	3
30	3 B-30 (12')	1445					X		X										3
	4 B-30 (14')	1510			X				X			X							3
11 Aug	5 B-[redacted] (12')	1623			X		X		X			X							2
10	6 B-[redacted] (14')	1632																	2
Aug	7 B-32 (8')	0836																	2
11	8 B-32 (11')	0844																	2
32	9 B-32 (13')	0848																	2
	10 B-33 (12')	0925																	2
33	11 B-33 (14')	0935																	2
	12 B-34 (10')	1032							X										2
34	13 B-34 (12.5')	1057							X										2
Aug	14 B-34 (15')	1115							X										2

Relinquished by:	Date/Time	Received by:	Date/Time
[signature]	8/11/16 3p	[signature]	8/11/16 3p
Relinquished by:	Date/Time	Received by:	Date/Time

Sample receipt info:

Total # of containers:

Condition (temp, °C)

Seals (intact?, Y/N)

Comments:

Turnaround time:

Same day O

24 hr O

48 hr O

Standard

ADVANCED ANALYTICAL

Chain of Custody Record

Laboratory Job #: C6C1113

2821 152 Avenue NE
Redmond, WA 98052
(425) 497-0110 fax (425) 497-8089
aachemlab@yahoo.com

Client: Aerotech Environmental Consulting Inc.

Project Manager: S. McDermott

Address: 13925 Interurban Ave S, Tukwila, WA

Phone: 425-686-0032 Fax:

Project Name: Gearjammer Truck Plaza

Project Number: 2315 Rudkin Rd, Union Gap, WA

Collector: Nick Gerkin

Date of collection: 8/10/16 + 8/11/16

	Sample ID	Time	Matrix	Container type	8260 Volatiles	8021B Volatiles	BTEX	BTEX/NWTPH-Gx	NWTPH-Gx	NWTPH-Dx / Dx	NWTPH-HCID	8270 Semivolatiles	8270 PAH	8082 PCBs	8081 Pesticides	RCRA 8 Metals	Lead	Notes, comments	# of containers
1	B-27 (4')	0800	SOIL	1 jar BTXE															3
2	B-28 (4')	0915							X										1
3	B-29 (4')	1040																	1
4	B-30 (4')	1145																	1
5	B-32 (4')	1330		1 jar BTXE															2
6	B-33 (4')	1535																	2
7	W-B31	0945	Water	1 AMB 3 VOA	X		X		X				cancelled						4
8	W-B29	1345							X										1
9	W-B27	1650			X				X										1
8/11/16 10	B-34 (4')	Aug 11 0840	SOIL	1 AMB 2 VOA					X										
8/11/16 11	MW-3	1225	Water	1					X										
12																			

Relinquished by:	Date/Time	Received by	Date/Time
[signature] for NICK GERKIN	8/11/16 3pm	[signature]	8/11/16 3pm
Relinquished by:	Date/Time	Received by	Date/Time

Sample receipt info:

Total # of containers:

Condition (temp °C)

Seals (intact?, Y/N)

Turnaround time:

Same day ○

24 hr ○

48 hr ○

Standard ○

SUPPORTING DOCUMENTS

Well Records

State of Washington Department of Ecology

UNION GAP
WELL NO 5

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. W07389
UNIQUE WELL I.D. # AAS 165
Water Right Permit No. G4-32214 / G4-32215

(1) OWNER: Name City of Union Gap Address P.O. Box 3008 Union Gap, WA 98903

(2) LOCATION OF WELL: County Yakima . SE 1/4 NW 1/4 Sec 32 T. 13 N, R 19F W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) E. Washington Ave @ Cahalan Park in Union Gap

(3) PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) #5
Abandoned ☐ New well ☒ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 20x12 inches.
Drilled 616 feet. Depth of completed well 610 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 20 " Diam. from +2 ft. to 400 ft.
Welded ☒ Liner installed ☒ Threaded ☐ 12 " Diam. from 355 ft. to 610 ft.
except at screens-has plate bottom & MNPT top
Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☒ No ☐
Manufacturer's Name Houston
Type V shape wire wrap Model No. 304 SS
Diam. 12 Slot size .040 from * ft. to * ft.
Diam. Slot size from ft. to ft.

Filter ~~Gravel~~ packed: Yes ☒ No ☐ Size of ~~gravel~~ pack CSSI 8x12
Filter ~~Gravel~~ placed from 355 ft. to 616 ft.

Surface seal: Yes ☒ No ☐ To what depth? 400 ft.
Material used in seal Cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level approx 1000' ft.
Static level ft. below top of well Date
Artesian pressure 8 lbs. per square inch Date 4/10/00
Artesian water is controlled by flange & valve (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? SEI
Yield: gal./min. with ft. drawdown after hrs.
" see attached" graphs " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
see attached graph					

Date of test 3/29/00-4/1/00
Bailer test gal./min. with ft. drawdown after hrs.
Airtest gal./min. with stem set at ft. for hrs.
Artesian flow approx 300+ g.p.m. Date 3/28/00
Temperature of water 61° F Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
see attached log		
* Screen locations:	385	390
	400	410
	465	505
	513	590
	590	610

Work Started 1/19/00 19. Completed 4/10/00 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Schneider Equipment Inc (PERSON, FIRM OR CORPORATION) (TYPE OR PRINT)
Address 21881 River Rd. NE St. Paul, OR 97137
(Signed) (WELL DRILLER) Vice President License No. 0643
Contractor's Registration No. SCHNEI*226LG Date 5/3 19 2000

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

WO 7389

City of Union Gap Well #5

by Schneider Drilling Co.

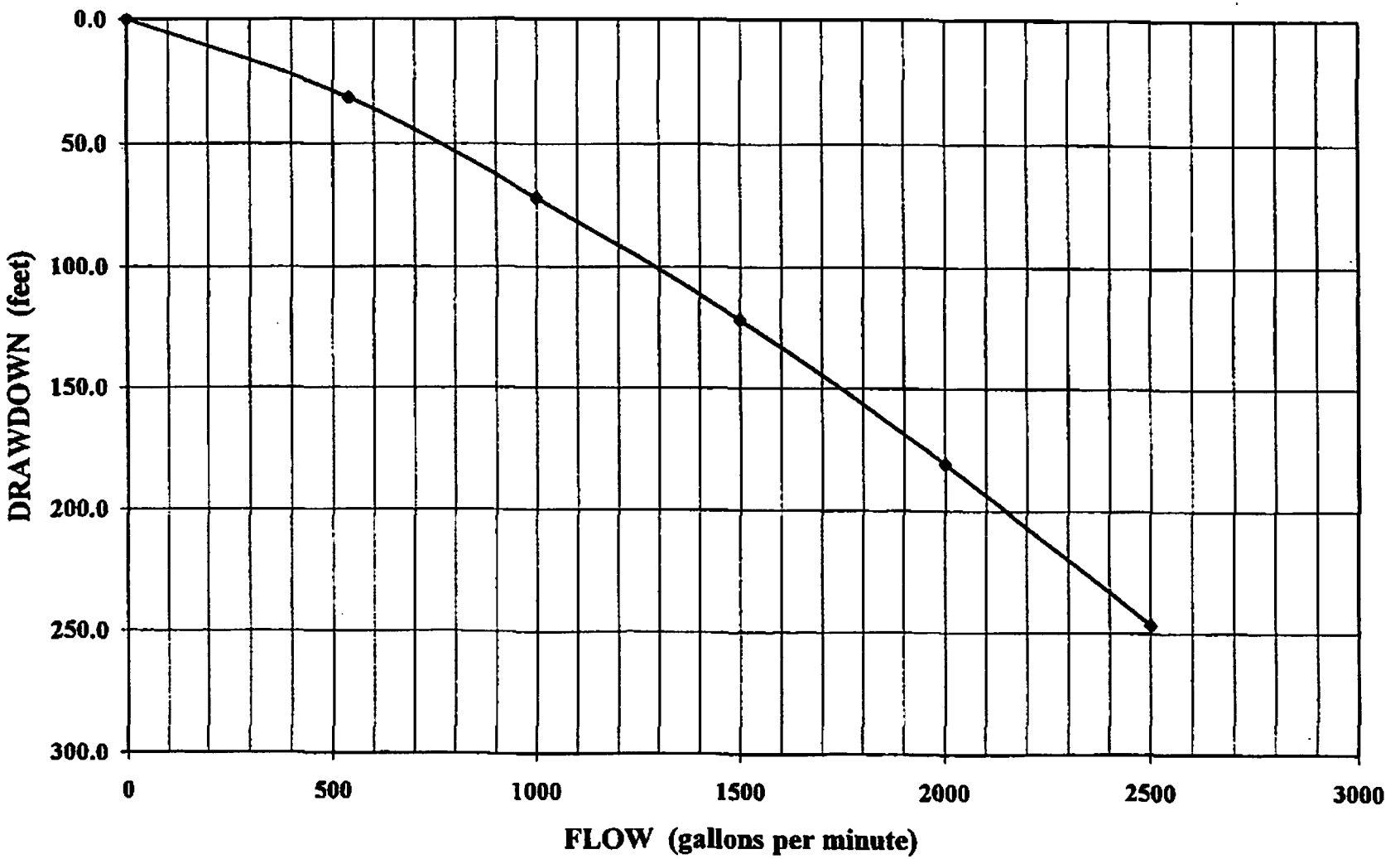
Start Card #W07389 **Label #AAS165**

FM	TO	DESCRIPTION
0	2	Topsoil
2	5	Gravel, 3"- and clay, brown
5	16	Gravel, cobbles/boulders and sand
16	24	Gravel, sand and cobbles, multi-colored
24	27	Gravel, slightly cemented and sand
27	133	Gravel, cemented, multicolored, and cobbles/boulders
133	141	Gravel, cemented, multicolored, some shale, tan
141	181	Gravel, cemented, some cobbles, multicolored
181	186	Gravel, cemented, multicolored, some clay, tan, hard
186	216	Gravel, cemented, multicolored, some sand, red, cemented
216	282	Gravel & sand, cemented, multicolored, w/grey clay @ top
282	330	Gravel & sand, cemented, multicolored, w/clay, tan, sandy
330	341	Clay, tan, sandy, fairly dry, silty, soft
341	347	Clay, tan, med-hd, w/some gravel
347	360	Clay, tan, silty/sandy & cemented sand, tan w/some red
360	370	Gravel, slightly cemented, multicolored
370	371	Clay, tan, sandy/silty w/some gravel
371	378	Gravel, blue/green, medium
378	400	Gravel, blue/green, & green w/slight clay binder
400	405	Gravel, red & green
405	410	Gravel, cemented, red and green

W07384

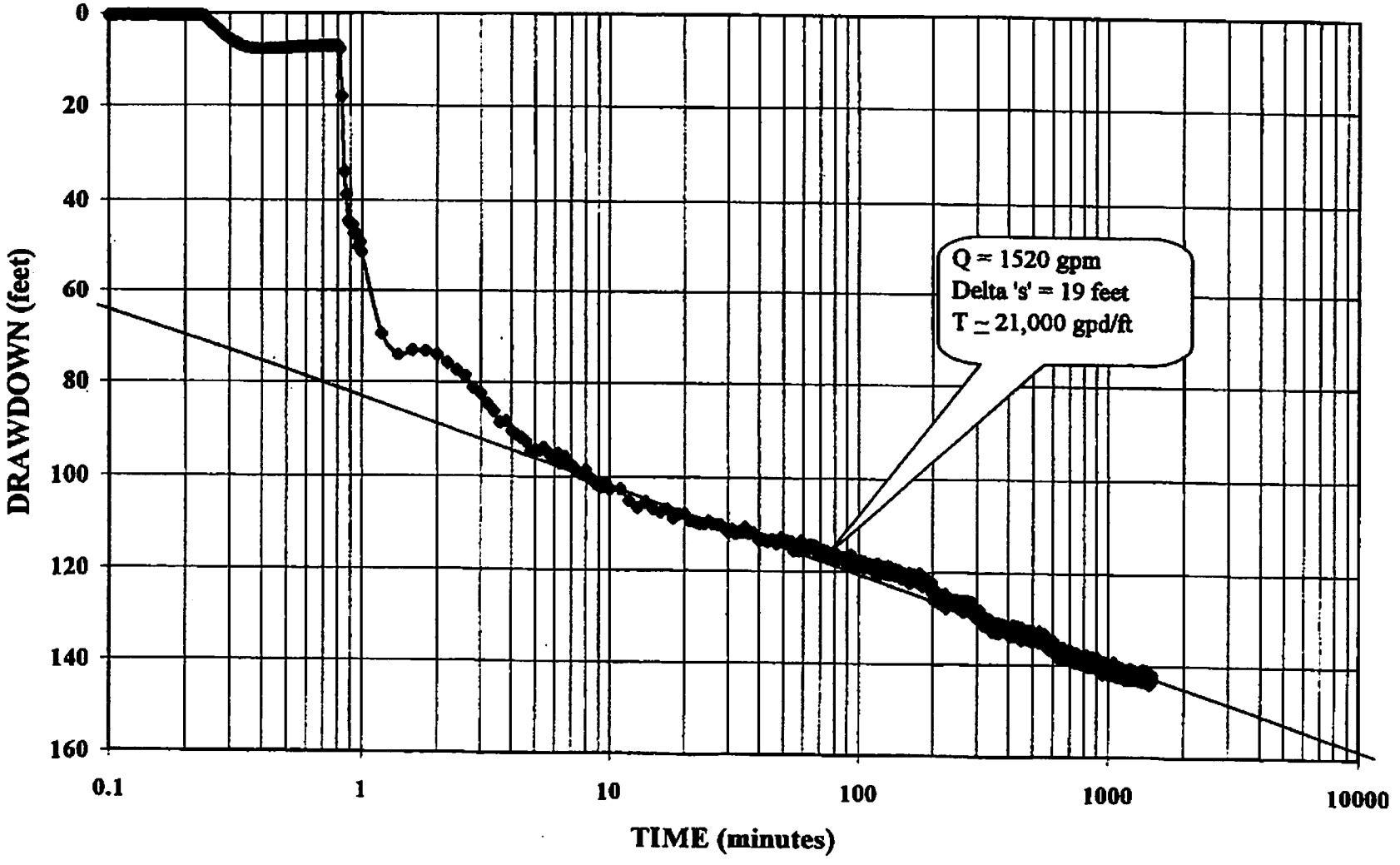
410	436	Gravel, cemented, red, green and clay, green and grey
436	441	Clay, blue/grey, silty w/cemented sand layers
441	446	Clay, blue grey, hard
446	451	Clay, blue grey, med & hard
451	454	Clay, blue grey and sand, grey, cemented
454	456	Clay, hard & med, grey & green
456	461	Gravel, red, green, black and clay, hard, grey & green
461	466	Gravel, multicolored and clay, green, hard
466	476	Gravel, multicolored and clay, green, hard & quartz, white
476	491	Gravel, multicolored & quartz white
491	496	Gravel, multicolored and sand, green, cemented
496	506	Gravel, mostly dark grey and clay, grey, green, hard and sand, red, cemented
506	511	Gravel, mostly dark grey and clay, green, hard & med, some crumbly
511	514	Gravel, mostly dark grey and clay, light grey, hard and sand, red, cemented
514	516	Gravel, multicolored and clay, brown, green, hard and sand, red, cemented
516	531	Gravel, multicolored red, rusty brown & clay, light green, brown, hard
531	546	Gravel, cemented, multicolored, red & clay, brown, hard
546	559	Gravel, cemented, multicolored & sand, red, cemented & clay, blue/grey
559	591	Gravel, cemented, multicolored, darker and sand, red, cemented
591	601	Gravel, darker and clay, brown, hard and clay, blue/grey, med
601	606	Sand, dark brown, cemented and clay, grey
606	616	Clay, green, silty, fairly sticky

CITY OF UNION GAP WELL #5
3/29/00 Step Test Drawdown after 2 Hours / Step



W0738

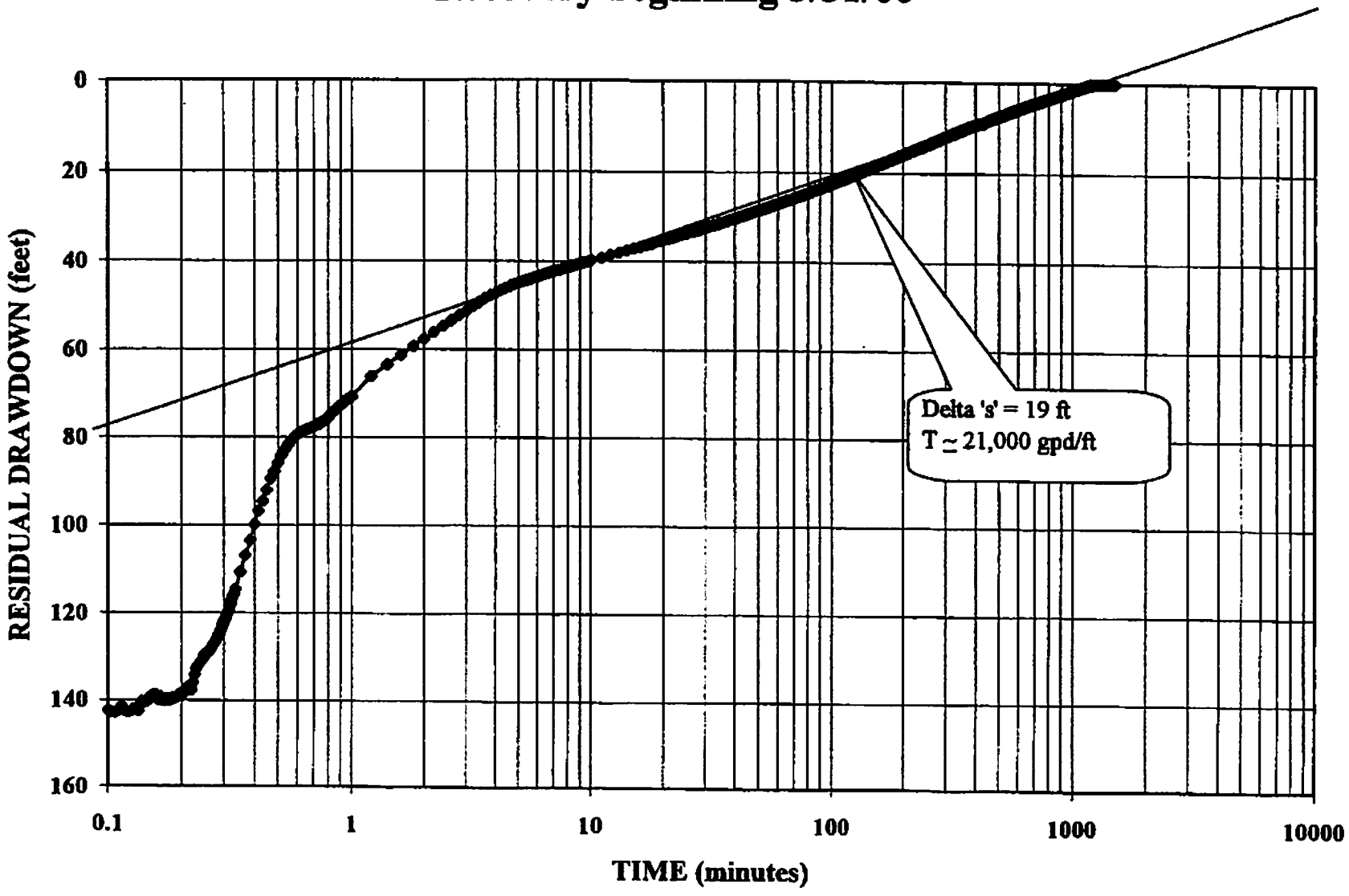
CITY OF UNION GAP WELL #5
3/30/00 Constant Rate Pump Test



well #5 test data & graphs 3-30 CR pump graph

Schneider Drilling Co.

CITY OF UNION GAP WELL #5
Recovery beginning 3/31/00



well #5 test data & graphs 3-30 rec graph

Schneider Drilling Co.

W0 73 89

WELL LOG CHANGE FORM

Instructions: Record any change made to the well log record on this form Append this form to the well log image File with the original

WCL Log ID (Required) 28543 Well Log ID 254732

Regional Office ☒CRO ☐ERO ☐NWRO ☐SWRO

Type of Well ☒ Water ☐ Resource

Notice of Intent W007389 Ecology Well ID Tag No AKJ-700

Property (Well) Owner's Name City of Union Gap
Well Street Address E. Washington Ave. @ Canalan Park in Union Gap
City Union Gap County Yakima Zip Code 98903

Location SE 1/4-1/4 NW 1/4 Sec 32 Twn 13 R 19 (E) or W (Circle One)

Lat /Long (Required) Lat Deg _____ Lat Min/Sec _____
Long Deg _____ Long Min/Sec _____
Horizontal Collection Method Code _____

Tax Parcel No 191332 24015

Type of Work ☒ New Well ☐ Reconditioned ☐ Deepened
Well Log Received Date 5/22/2000
Well Diameter 20 (in inches) Well Depth 610 (in feet) Well Completed Date 4/10/2000

Driller's Ecology License No 0643
Trainee's Ecology License No _____

Reason/Source of Change (Required)
WELL ID TAG WAS LOST OR DESTROYED AND A NEW TAG WAS ISSUED 01-08-2004

Signature of Well Log Tracker (Required) G. Heroniemus Date 1/29/04

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. W07389

UNIQUE WELL I.D. ~~AHS 165~~ AKJ-700

Water Right Permit No. G4-32214 / G4 32215

(1) OWNER Name City of Union Gap Address P.O Box 3008 Union Gap, WA 98903

(2) LOCATION OF WELL County Yakima SE 1/4 NW 1/4 Sec 32 T 13 N R 19E WM

(2a) STREET ADDRESS OF WELL (or nearest address) E Washington Ave @ Cahalan Park in Union Gap

(3) PROPOSED USE ☐ Domestic ☐ Industrial ☐ Municipal ☒ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ Dewater

(4) TYPE OF WORK Owner's number of well (if more than one) #5
Abandoned ☐ New well ☒ Method Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS Diameter of well 20x12 inches. Drilled 616 feet. Depth of completed well 610 ft.

(6) CONSTRUCTION DETAILS
Casing installed 20 Diam from +2 ft to 400 ft.
Welded ☒
Liner installed ☒ 12 Diam from 355 ft to 610 ft.
Threaded ☐
except at screens-has plate bottom & MNPT top
Perforations. Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens Yes ☒ No ☐
Manufacturer's Name Houston
Type V shape wire wrap Model No 304 SS
Diam 12 Slot size .040 from * ft. to ** ft.
Diam. Slot size from ft. to ft.

Filter Gravel packed Yes ☒ No ☐ Size of gravel pack CSSI 8x12
Filter Gravel placed from 355 ft. to 616 ft.

Surface seal Yes ☒ No ☐ To what depth? 400 ft.
Material used in seal Cement
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP Manufacturer's Name
Type H.P

(8) WATER LEVELS Land-surface elevation above mean sea level approx 1000' ft
Static level ft below top of well Date
Artesian pressure 8 lbs. per square inch Date 4/10/00
Artesian water is controlled by flange & valve (Cap, valve, etc)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☒ No ☐ If yes, by whom? SEI
Yield gal./min with ft. drawdown after hrs.
" see attached "graphs " "
" " "
Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
see attached graph.					

Date of test 3/29/00-4/1/00
Bailer test gal./min with ft. drawdown after hrs.
Airtest gal./min with stem set at ft. for hrs.
Artesian flow approx 300+ g.p.m. Date 3/28/00
Temperature of water 61° F Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
see attached log		
* Screen locations.	385	390
	400	410
	465	505
	513	590
	590	610

Work Started 1/19/00 19 Completed 4/10/00 19

WELL CONSTRUCTOR CERTIFICATION

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Schneider Equipment, Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address 21881 River Rd. NE St. Paul, OR 97137
(Signed) (WELL DRILLER) Vice President License No 0643
Contractor's Registration No SCHNEI*226LG Date 5/3 19 2000

(USE ADDITIONAL SHEETS IF NECESSARY)

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File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No ______
Permit No. 64-23040P

(1) OWNER: Name City of Yakima Parks & Recreation Address 129 N. 2nd Street

(2) LOCATION OF WELL. County Yakima SE ¼ NW ¼ Sec 32 T.13 N., R.19E W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☐ Industrial ☐ Municipal ☐ Irrigation ☒ Test Well ☐ Other ☐

(4) TYPE OF WORK. Owner's number of well (if more than one) ______
New well ☐ Deepened ☐ Reconditioned ☐
Method: Dug ☒ Cable ☐ Rotary ☐ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS. Diameter of well 48 inches.
Drilled ___ ft. Depth of completed well 18 ft.

(6) CONSTRUCTION DETAILS. Well Casing

Casing installed: ___ Diam. from 4 ft. to ___ ft.
Threaded ☐ ___" Diam. from ___ ft. to ___ ft.
Welded ☐ ___" Diam. from ___ ft. to ___ ft.

Perforations: Yes ☒ No ☐
Type of perforator used made in casing
SIZE of perforations 1 in. by ___ in.
___ perforations from ___ ft. to ___ ft.
___ perforations from ___ ft. to ___ ft.
___ perforations from ___ ft. to ___ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ___
Type ___ Model No. ___
Diam. ___ Slot size ___ from ___ ft. to ___ ft.
Diam. ___ Slot size ___ from ___ ft. to ___ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel ___
Gravel placed from ___ ft. to ___ ft.

Surface seal: Yes ☐ No ☒ To what depth? ___ ft.
Material used in seal ___
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ___ Depth of strata ___
Method of sealing strata off ___

(7) PUMP: Manufacturer's Name ___
Type Centrifugal H.P. 10

(8) WATER LEVELS Land-surface elevation above mean sea level ___ ft.
Static level 3 ft. below top of well Date June
Artesian pressure ___ lbs. per square inch Date ___
Artesian water is controlled by ___ (Cap, valve, etc.)

(9) WELL TESTS Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ___
Yield ___ gal./min. with ___ ft. drawdown after ___ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ___
Bailer test ___ gal./min. with ___ ft. drawdown after ___ hrs.
Artesian flow ___ g.p.m. Date ___
Temperature of water ___ Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
The Company that put the well in no longer are in business and there were no records on our file on the well		

Work started ___, 19__ Completed ___, 19__

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME ___ (Person, firm, or corporation) (Type or print)
Address ___
(Signed) ___ (Well Driller)
License No ___ Date ___, 19__

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-30

? Union Gap Well No 2

STATE OF WASHINGTO.
DEPARTMENT OF CONSERVATION AND DEVELOPMENT

WELL LOG

No. Decl a. #526
Cert. #518-D

Date 1936, 19__
Record by Don E. Gray
Source G. W. Decla. Claim

Location: State of WASHINGTON
County Yakima
~~xxx~~ Lot 12, Block 2 of
~~xx~~ Union Gap, original
~~SW NW~~ ¼ sec. 5 T 12 N., R. 19 E. W.
~~xxxxxx~~ townsite
Address

DIAGRAM OF SECTION

Method of Drilling drilled Date Jul. 22 19 47
Owner Town of Union Gap
Address Union Gap, Wash.
Land surface, datum ft. above / below

Correlation	Material	Thickness (feet)	Depth (feet)
	(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)		
	Loose gravel & topsoil	15	15
	Cemented gravel	85	100
	Boulders	5	105
	Streaks of cemented gravel, loose gravel & boulders	70	175
	River & cemented gravel	17	192
	Sand & gravel	23	215
Pump	Test:		
	Dim: 215' x 12" x 10"		
	SWL: 10'		
	Dd: 56'		
	Yield: 450 g.p.m.		
	Casing: 12" dia. from 0' to 90'; 10" dia. from 87' to 215'.		
	Perforations: 10" casing perfor. for		

159 - 214 ft 'screen'

Turn up (Over) Sheet ___ of ___ sheets

WELL LOG.—Continued No. D.A. 526

CORRELATION	Town of Union Gap MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Depth forward	——	
	55' from 159' to 214'.		
	Pump: 450 g.p.m.		
	Motor: 30 hp		

? Union Cap
Well No 4

STATE OF WASHINGTON
DEPARTMENT OF CONSERVATION AND DEVELOPMENT

WELL LOG

No. Decla/. 527
Cert. 519-D

Date June 30, 19 36
Record by Don E. Gray
Source G. W. Decla. Claim

Location: State of WASHINGTON
County Yakima
~~Area~~ Lot 12, Block 2 of
~~Map~~ original town site
SW ¼ NW ¼ sec. 5 T. 12 N., R. 19 E.

Diagram of Section

Drilling Co.
Address
Method of Drilling drilled Date July 22, 19 47
Owner Town of Union Gap
Address Union Gap, Washington
Land surface, datum ft. above / below

Correlation	Material	Thickness (feet)	Depth (feet)
	(Transcribe driller's terminology literally but paraphrase as necessary, in parentheses. If material water-bearing, so state and record static level if reported. Give depths in feet below land-surface datum unless otherwise indicated. Correlate with stratigraphic column, if feasible. Following log of materials, list all casings, perforations, screens, etc.)		
	Top soil	4	4
	Cemented gravel	46	50
	Boulders & gravel	13	63
	Clay	5	68
	Cemented gravel caving	42	110
	Cemented gravel & boulders	40	150
	Washed gravel caving	9	159
	Cemented gravel	31	190
	Cemented gravel caving	14	204
	Cemented gravel	13	217
Pump test:			
	Dim: 217' x 12" x 10"		
	SWL: 10'		
	Dd: 60'		
	Yield: 450 g.p.m.		
	Casing: 12" dia. from 0' to 83'		

142 - 197 ft
'screened'

Turn up

Sheet ..... of ..... sheets

WELL LOG.—Continued No. D-527

CORRELATION	MATERIAL	THICKNESS (feet)	DEPTH (feet)
	Town of Union Gap Depth forward	———	
	10" dia. from 80' to 198'.		
	Perforations: 10" perfor. casing for		
	55' from 142' to 197'		
	Pump: 450 g.p.m.		
	Motor: 30 h.p.		

S. F. No. 7419—12-54—3M. 40108.

SITE
R12920

PROJECT NAME: J.L. Smith Co.
WELL IDENTIFICATION NO.: MW-1
DRILLING METHOD: Percussion Hammer Reverse Air
DRILLER: Richard Simcox
FIRM: Layne Environmental Services, Inc.
SIGNATURE:
CONSULTING FIRM: Geraghty & Miller
REPRESENTATIVE: Gary Stoyka

COUNTY: Yakima County
LOCATION: NW 1/4 SE 1/4 Sec 32 Twn 13 R 19E WM
STREET ADDRESS OF WELL: Council E Washington Ave & S 18th St. Union Gap Washington
WATER LEVEL ELEVATION: 7' bgs.
GROUND SURFACE ELEVATION:
INSTALLED: 8-24-95
DEVELOPED: 8-24-95

K

AS-BUILT

WELL DATA

- Flush Mounted Monument
- Expansion plug with lock
- Concrete Surface Seal 0 to 1' ft
- Well csg 0 to 3' ft
  2" SCH 40 TFJ PVC
- Annular Sealant 1' to 2' ft
  Hole Plug 3/8"
- Seal — to — ft
- Filter Pack 2 to 18' ft
  CSSF - 10-20
- Screened Interval 3' to 18' ft
  2" SCH 40 TFJ PVC
  .02" Factory Slotted

Total Depth 18 ft
Hole Diameter 10 in

FORMATION DESCRIPTION

0-4' silt w/ Trace Cobbles
4'-18' silty & sandy gravel w/ Cobbles

SEP 5 1995

Layne Environmental Services, Inc.

SITE

PROJECT NAME: J.L. Smith Co.
WELL IDENTIFICATION NO.: MW-2
DRILLING METHOD: Percussion Hammer - Reverse Air
DRILLER: Richard Simenet
FIRM: Layne Environmental Services, Inc.
SIGNATURE:
CONSULTING FIRM: Geraghty + Miller
REPRESENTATIVE: Gary Stoyka

COUNTY: Yakima County R 12420
LOCATION: NW¼ SE¼ Sec 32 Twn 13 R 19 E WM
STREET ADDRESS OF WELL: Corner - E Washington Ave & S 18th/st. Union Gap Washington
WATER LEVEL ELEVATION: 6.7' bgs
GROUND SURFACE ELEVATION:
INSTALLED: 8-24-95
DEVELOPED: 8-24-95

K

AS-BUILT

WELL DATA

- Flush Mounted Monument
- Expansion plug with lock
- Concrete Surface Seal ⌀ to 1' ft
- Well csg ⌀ to 2' ft
  2" SCH 40 TFJ PVC
- Annular Sealant 1' to 1.5' ft
  Hole Plug 3/8"
- Seal — to — ft
- Filter Pack 1.5' to 18' ft
  CSSF 10-20
- Screened Interval 2.5' to 17.5' ft
  2" SCH 40 TFJ PVC
  .020 Factory Slotted

Total Depth 18 ft
Hole Diameter 10 in

FORMATION DESCRIPTION

0-6' silt w/clay & trace cobbles
6'-18' sandy gravel

SEP

Layne Environmental Services, Inc.

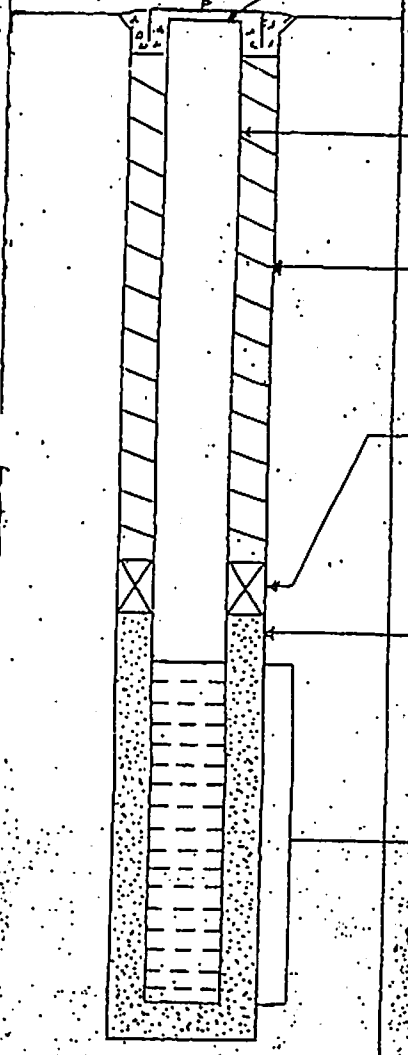
SITE

PROJECT NAME: J.L. Smith Co.
WELL IDENTIFICATION NO. MW-3
DRILLING METHOD: Percussion Hammer Reverse Air
DRILLER: Richard Simenz
FIRM: Layne Environmental Services, Inc.
SIGNATURE:
CONSULTING FIRM: Geraghty + Miller
REPRESENTATIVE: Gary Stoyka

COUNTY: Yakima County R2920
LOCATION: NW ¼ SE ¼ Sec 32 Twn 13 R 19 E WM
STREET ADDRESS OF WELL: Corner - E. Washington Ave & S 18th / St. Union Gap Washington
WATER LEVEL ELEVATION: 10' bgs
GROUND SURFACE ELEVATION:
INSTALLED: 8-24-95
DEVELOPED: 8-24-95

K

AS-BUILT | WELL DATA | FORMATION DESCRIPTION



WELL DATA:
- Flush Mounted Monument
- Expansion plug with lock
- Concrete Surface Seal: Ø to 1' ft
- Well csg Ø to 25' ft
  2" SCH 40 TPJ PVC
- Annular Sealant: 1' to 2' ft
  Holeplug 3/8"
- Seal: — to — ft
- Filter Pack: 2' to 18' ft
  CSSF 10-20
- Screened Interval: 25' to 17.5 ft
  2" SCH 40 TPJ PVC
  .020 Factory Slotted

Total Depth 18 ft
Hole Diameter 10 in

FORMATION DESCRIPTION:
Ø-3.5 Silt
3.5-18' Sandy Gravel

SEP 5 1995

Layne Environmental Services, Inc.

Please print, sign and return by mail to Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. AE26373

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *(select one)*

☐ Construction CRO

☑ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* SE51120

Consulting Firm GN NORTHERN

Unique Ecology Well ID
Tag No. B-1

Type of Well *(select one)*

☐ Resource Protection

☑ Geotech Soil Boring

DEPT OF ECOLOGY Received APR 2 9 2014 CENTRAL REGIONAL OFFICE

Property Owner YAKIMA 911

Site Address 2403 S 18TH STREET

City UNION GAP County YAKIMA

Location NW 1/4-1/4 SE 1/4 Sec 32 Twn 13 R 19 Select One ☒ EWM ☐ WWM

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☑ Driller ☐ Engineer ☐ Trainee Name (Print) FRANKLIN LUNDIN

Driller/Engineer /Trainee Signature

Driller or Trainee License No. 2953

If trainee, licensed driller's Signature and License No. 2953

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

Cased or Uncased Diameter 5" Static Level 13'

Work/Decommission Start Date 4/15/14

Work/Decommission Completed Date 4/15/14

Construction/Design	Well Data	Formation Description
5' 0' 15'  5"	BACKFILLED WITH BENT CHIPS 0-30'	A/C 0-3" GRAVEL 3"-1' SILT 1-7' DENSE GRAVEL 7-30' TERMINATED AT 30'

SCALE: 1"= _____ PAGE _____ OF _____

ECY 050-12 (Rev. 2/03)

Ecology is an Equal Opportunity Employer.

Please print, sign and return by mail to Department of Ecology

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *(select one)*

☑ Construction CRO

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Consulting Firm GN NORTHERN

Unique Ecology Well ID
Tag No. B-1

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☑ Driller ☐ Engineer ☐ Trainee Name (Print) FRANKLIN LUNDIN

Driller/Engineer /Trainee Signature _____

Driller or Trainee License No. 2953

If trainee, licensed driller's Signature and License No. 2953

CURRENT Notice of Intent No. SE51128

DEPT OF ECOLOGY Received APR 29 2014 CENTRAL REGIONAL OFFICE

Type of Well *(select one)*
☐ Resource Protection
☑ Geotech Soil Boring

Property Owner YAKIMA 911

Site Address 2403 S 18TH STREET

City UNION GAP County YAKIMA

Location NW1/4-1/4 SE 1/4 Sec 32 Twn 13 R 19 Select One ☒ EWM ☐ WWM

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

Cased or Uncased Diameter 5" Static Level 13'

Work/Decommission Start Date 4/15/14

Work/Decommission Completed Date 4/15/14

Construction/Design	Well Data	Formation Description
5' 0' 15' 	BACKFILLED WITH BENT CHIPS 0-30'	A/C 0-3" GRAVEL 3"-1' SILT 1-7' DENSE GRAVEL 7-30' TERMINATED AT 30'

SCALE: 1"= _____ PAGE _____ OF _____

ECY 050-12 (Rev. 2/03)

Ecology is an Equal Opportunity Employer.

NW 3

File Original and First Copy with
Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. .....

Permit No. .....

(1) OWNER: Name H. P. Carlson Address 1801 Lilac Lane, Yakima Wn.

(2) LOCATION OF WELL: County Yakima ¼ ¼ Sec 32 T. 13 N., R. 19 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☑ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☒
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 2 inches.
Drilled ..... ft. Depth of completed well 22 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 2 " Diam. from Surface ft. to 22 ft.
Threaded ☐ ..... " Diam. from ..... ft. to ..... ft.
Welded ☐ ..... " Diam. from ..... ft. to ..... ft.

Perforations: Yes ☐ No ☒ Blasted (dynamite)
Type of perforator used .....
SIZE of perforations ..... in. by ..... in.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.
..... perforations from ..... ft. to ..... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name .....
Type ..... Model No. .....
Diam. ..... Slot size ..... from ..... ft. to ..... ft.
Diam. ..... Slot size ..... from ..... ft. to ..... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: .....
Gravel placed from ..... ft. to ..... ft.

Surface seal: Yes ☐ No ☒ To what depth? ..... ft.
Material used in seal .....
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? ..... Depth of strata .....
Method of sealing strata off Dropped Thru Rockpen

(7) PUMP: Manufacturer's Name Rebuilt
Type: ..... H.P. ½

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level ..... ft. below top of well Date .....
Artesian pressure ..... lbs. per square inch Date .....
Artesian water is controlled by ..... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? .....
Yield: ..... gal./min. with ..... ft. drawdown after ..... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test .....
Bailer test ..... gal./min. with ..... ft. drawdown after ..... hrs.
Artesian flow ..... g.p.m. Date .....
Temperature of water ..... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO

Work started ....., 19..... Completed ....., 19.....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME .....
(Person, firm, or corporation) (Type or print)

Address .....

[Signed] .....
(Well Driller)

License No. ..... Date ....., 19.....

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

4/30/74

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON WRC 37713

Application No. ....
Permit No. ....

(1) OWNER: Name Raymond R Rasmussen Address 724 So. 30 Ave Yakima

(2) LOCATION OF WELL: County Yakima — ¼ ¼ Sec 32 T. 13 N., R. 19 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☒
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 2 inches.
Drilled ....ft. Depth of completed well 31 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 2" Diam. from 0 ft. to 30 ft.
Threaded ☒ 2" Diam. from ... ft. to ... ft.
Welded ☒ ..." Diam. from ... ft. to ... ft.

Perforations: Yes ☐ No ☒
Type of perforator used ....
SIZE of perforations .... in. by .... in.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ....
Type .... Model No. ....
Diam. .... Slot size .... from .... ft. to .... ft.
Diam. .... Slot size .... from .... ft. to .... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ....
Gravel placed from .... ft. to .... ft.

Surface seal: Yes ☐ No ☒ To what depth? .... ft.
Material used in seal ....
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? Good Depth of strata ....
Method of sealing strata off ....

(7) PUMP: Manufacturer's Name Sears Roebuck
Type: Jet HP ....

(8) WATER LEVELS: Land-surface elevation above mean sea level 1066 ft.
Static level 15 ft. below top of well Date Jan
Artesian pressure .... lbs. per square inch Date ....
Artesian water is controlled by .... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ....
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ....
Bailer test .... gal./min. with .... ft. drawdown after .... hrs.
Artesian flow .... g.p.m. Date ....
Temperature of water .... Was a chemical analysis made? Yes ☒ No ☐

Water O.K. by Health Dept 11/19/73

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
~~This well was put in at least~~		
~~10 years agoand maybe longer.~~		
The written portion of this log.		
was done by Mr. Rasmussen.		

RECEIVED
DEPT. ...

Work started .... 19.... Completed .... 19....

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Jensens Well Drilling & Driving (Person, firm, or corporation) (Type or print)

Address 1603 South 10th Avenue

[Signed] Florence M. Jensen (Well Driller)

License No. 0218 Date 12 / 11 1973

(USE ADDITIONAL SHEETS IF NECESSARY)

S. F. No. 7356—OS—(Rev. 4-71).

4/29/74

NW

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No.

Permit No.

(1) OWNER: Name Carl H. [illegible] 1701 [illegible]

(2) LOCATION OF WELL: County [illegible] ¼ Sec. [illegible] T. [illegible] N., R. [illegible] W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☒ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one)

New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☒
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 2 inches.
Drilled .... ft. Depth of completed well [illegible] ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 2" Diam. from [illegible] ft. to [illegible] ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☐ No ☒ To what depth? ft.
Material used in seal
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off [illegible]

(7) PUMP: Manufacturer's Name [illegible]
Type:

(8) WATER LEVELS: Land-surface elevation above mean sea level ft.
Static level [illegible] ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

(Person, firm, or corporation) (Type or print)

SW

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Start Card No. A30502
UNIQUE WELL I.D. # NA
Water Right [redacted] Decom th A30502

(1) OWNER: Name Luis & Sonia Perez Address 1407 Simpson Ln.

(2) LOCATION OF WELL: County Yakima Wa. 98901 SE SW 1/4 SW 1/4 Sec 32 T. 13 N, R 19 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 1407 Simpson Ln P

(3) PROPOSED USE: ☒ Domestic ☐ Industrial ☐ Municipal ☐ ☐ Irrigation ☐ Test Well ☐ Other ☐ ☐ DeWater

(4) TYPE OF WORK: Owner's number of well (if more than one) _____
Abandoned ☒ New well ☐ Method: Dug ☐ Bored ☐ Deepened ☐ Cable ☐ Driven ☐ Reconditioned ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 2" inches. Or [redacted] feet. Depth of completed well 15 ft.

(6) CONSTRUCTION DETAILS:
Casing Installed: 2 " Diam. from 4½ ft. to 15 ft.
Welded ☐ Liner installed ☐ Threaded ☒ _____ " Diam. from _____ ft. to _____ ft.
_____ " Diam. from _____ ft. to _____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used _____
SIZE of perforations _____ in. by _____ in.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.
_____ perforations from _____ ft. to _____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name _____
Type _____ Model No. _____
Diam. ____ Slot size _____ from _____ ft. to _____ ft.
Diam. ____ Slot size _____ from _____ ft. to _____ ft.

Gravel packed: Yes ☐ No ☐ Size of gravel _____
Gravel placed from _____ ft. to _____ ft.

Surface seal: Yes ☐ No ☐ To what depth? _____ ft.
Material used in seal Hole plug Bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? _____ Depth of strata _____
Method of sealing strata off _____

(7) PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

(8) WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 4½ ft. below top of well Date 10/17/97
Artesian pressure _____ lbs. per square inch Date _____
Artesian water is controlled by _____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? _____
Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Pull 15 ft ¾ Riser		
PVC pipe.		
¾ hole plug To ground		
Level.		

RECEIVED
OCT 20 1997
DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

Work Started 10/17/97 19. Completed 10/17/97 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Rite Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address P.O Box 10866 Yakima 98901
(Signed) Jack Rite (WELL DRILLER) License No. 0422
Contractor's Registration No. RITEWI32KI Date 10/17/97 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

A30501

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Start Card No. [illegible]

UNIQUE WELL I.D. # NA

Water Right [illegible] Application No. A30501

(1) OWNER: Name Pete Patison Address 1609 S. 14th St.

(2) LOCATION OF WELL: County Yakima Lic. SE SE 1/4 SW 1/4 Sec 32 T. 13 N. R 19 W.M.

(2a) STREET ADDRESS OF WELL (or nearest address) 1609 S. 14th St

(3) PROPOSED USE: ☒ Domestic ☐ Irrigation ☐ DeWater ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) [illegible]
Abandoned ☒ New well ☐ Deepened ☐ Reconditioned ☐ Method: Dug ☐ Cable ☐ Rotary ☐ Bored ☐ Driven ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 20 inches. Drilled 20 feet. Depth of completed well [illegible] ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 3" Diam. from +1 ft. to 20 ft.
Welded ☐ Liner installed ☐ Threaded ☐ ____" Diam. from ____ ft. to ____ ft.

Perforations: Yes ☐ No ☒
Type of perforator used ____
SIZE of perforations ____ in. by ____ in.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.
____ perforations from ____ ft. to ____ ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ____
Type ____ Model No. ____
Diam. ____ Slot size ____ from ____ ft. to ____ ft.
Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel packed: Yes ☐ No ☒ Size of gravel ____
Gravel placed from ____ ft. to ____ ft.

Surface seal: Yes ☐ No ☐ To what depth? 20 ft.
Material used in seal Hole plug
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ____ Depth of strata ____
Method of sealing strata off Abandon.

(7) PUMP: Manufacturer's Name ____
Type: ____ H.P. ____

(8) WATER LEVELS: Land-surface elevation above mean sea level ____ ft.
Static level [illegible] ft. below top of well Date 10/17/97
Artesian pressure ____ lbs. per square inch Date ____
Artesian water is controlled by ____ (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ____
Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

"	"	"	"
"	"	"	"

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level
	NR				

Date of test ____
Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest ____ gal./min. with stem set at ____ ft. for ____ hrs.
Artesian flow ____ g.p.m. Date ____
Temperature of water ____ Was a chemical analysis made? Yes ☐ No ☒

(10) WELL LOG or ABANDONMENT PROCEDURE DESCRIPTION

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information.

MATERIAL	FROM	TO
Put Drop pipe		
2 1/2" Driven well		
SWL 10 ft Dpth 20 ft		
Bardid 3/4 hole		
plug to ground level		

OCT 20 1997
DEPARTMENT OF ECOLOGY
Central Regional Office

Work Started 10/17/97 19. Completed 10/17/97 19

WELL CONSTRUCTOR CERTIFICATION:

I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME Riebe Well Drilling Inc (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)

Address P.O. Box 10866 Yakima Wa. 98909

(Signed) [illegible] (WELL DRILLER) License No. CW422

Contractor's Registration No. 132 RI Date 10/17/97 19

(USE ADDITIONAL SHEETS IF NECESSARY)

Ecology is an Equal Opportunity and Affirmative Action employer. For special accommodation needs, contact the Water Resources Program at (206) 407-6600. The TDD number is (206) 407-6006.

ECY 050-1-20 (9/93)

SW

RESOURCE PROTECTION WELL REPORT

DEPARTMENT OF ECOLOGY
State of Washington

This is a report of the activities of a licensed Washington well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered.

Construction

Type of Well: Geotech Soil Boring
Number of Wells: 1
Type of Work: New
Method: Auger
Drilling Start Date: 12/17/2015
Drilling Completion Date: 12/17/2015
Received by Ecology: 1/19/2016 12:13 PM

Dimensions:
Borehole Diameter: 5 in
Depth of completed well: 7 ft 0 in

Construction Details

Casings:

From Depth	To Depth	Type	Diameter	Stickup
N/A				

Perforations:

Type	Size	Total Perforations	From Depth	To Depth
N/A				

Screens:

Manufacturer	Type	Dia-meter	Slot Size	From Depth	To Depth
N/A					

Sand/Gravel Packings:

Material	From Depth	To Depth
N/A		

Individual Well Details

Well	Driller's Identifier	Water Level
1		Dry Hole

Additional Well Construction Information
None

Construction Notice of Intent Number: SE56869
Decommissioning Notice of Intent Number: AE35224
Unique Ecology Well ID Tag Number: N/A
Property Owner Name: UPS
Property Owner Address: 501 W Valley Mall Blvd, Union Gap, WA 98903

Well Location:
Well Street Address: 501 W Valley Mall Blvd
City, State, Zip: Union Gap, WA
County: Yakima
Township: 13N Range: 19E Section: 32 in the SE 1/4 of the SW 1/4

Well Head Elevation:
Elevation Datum:
Elevation Method:
Latitude (DD): Longitude (DD):
Datum:
Horizontal Coordinate Collection Method:
Tax parcel No.:

Lithology

Layer: Describe by color, character, size of material and structure, and the kind and nature of the material in each layer penetrated, with at least one entry for each change of information.

From	To	Material
0 ft 0 in	4 ft 0 in	Silty Sand
4 ft 0 in	7 ft 0 in	Sand and Gravel

Well Construction Certification: I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards. Material used and information reported above are true to the best of my knowledge and belief.

Driller/Engineer/Trainee Printed Name: RITCH GIBSON	Drilling Company: GEOLOGIC DRILL EXPLORATIONS INC
Driller or trainee License Number: 1816	Address: 14811 W COULEE HITE RD
If trainee, Driller's License Number:	City, State, Zip: SPOKANE, WA, 99224

SW

RESOURCE PROTECTION WELL REPORT

DEPARTMENT OF ECOLOGY State of Washington

This is a report of the activities of a licensed Washington well driller and serves as the official record of work done within the borehole and casing and describes the amount of water encountered.

Decommissioning

Type of Well: Geotech Soil Boring
Number of Wells: 1
Type of Work: New
Method: Auger
Drilling Start Date: 12/17/2015
Drilling Completion Date: 12/17/2015
Received by Ecology: 1/19/2016 12:13 PM

Dimensions:
Diameter of borehole before decommissioning: 5 in
Well depth before decommissiong: 7 ft 0 in

Construction Details

Casings:

From Depth	To Depth	Type	Diameter	Stickup
N/A				

Perforations:

Type	Size	Total Perforations	From Depth	To Depth
N/A				

Screens:

Manufacturer	Type	Dia-meter	Slot Size	From Depth	To Depth
N/A					

Sand/Gravel Packings:

Material	From Depth	To Depth
N/A		

Individual Well Details

Well	Driller's Identifier	Decom Sealing Materials
1		Bentonite

Additional Well Decommissioning Information
None

Construction Notice of Intent Number: SE56869
Decommissioning Notice of Intent Number: AE35224
Unique Ecology Well ID Tag Number: N/A
Property Owner Name: UPS
Property Owner Address: 501 W Valley Mall Blvd, Union Gap, WA 98903

Well Location:
Well Street Address: 501 W Valley Mall Blvd
City, State, Zip: Union Gap, WA
County: Yakima
Township: 13N Range: 19E Section: 32 in the SE 1/4 of the SW 1/4

Well Head Elevation:
Elevation Datum:
Elevation Method:
Latitude (DD): Longitude (DD):
Datum:
Horizontal Coordinate Collection Method:
Tax parcel No.:

Lithology

Layer: Describe by color, character, size of material and structure, and the kind and nature of the material in each layer penetrated, with at least one entry for each change of information.

From	To	Material
0 ft 0 in	4 ft 0 in	Silty Sand
4 ft 0 in	7 ft 0 in	Sand and Gravel

Well Construction Certification: I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards. Material used and information reported above are true to the best of my knowledge and belief.

Driller/Engineer/Trainee Printed Name: RITCH GIBSON
Driller or trainee License Number: 1816
If trainee, Driller's License Number:

Drilling Company: GEOLOGIC DRILL EXPLORATIONS INC
Address: 14811 W COULEE HITE RD
City, State, Zip: SPOKANE, WA, 99224

RESOURCE PROTECTION WELL REPORT

Notice of Intent No S12850

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *(x in circle)*

- (X) Construction 147928
- ( ) Decommission *Original Construction Notice of Intent Number* _____

Type of Well *(x in circle)*

- ( ) Resource Protection
- (X) Geotech Soil Boring

Property Owner Galloway, Romero + Assoc.

Site Address Yakima F

Unique Ecology Well ID Tag No B-1

City Yakima County Yakima

Consulting Firm Shannon + Wilson

Location SE 1/4 1/4 NW 1/4 Sec 32 Twn 13N R 19 (EWM) or WWM *circle one*

Driller or Trainee Name Randall E. Wilder

Lat/Long (s t r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Driller or Trainee Signature _____

Driller or Trainee License No 2578

Tax Parcel No _____

Cased or Uncased Diameter _____ Static Level No Water

If trainee, licensed driller's Signature and License no _____

Work/Decommission Start Date 2-21-04

Work/Decommission Completed Date 2-21-04

Construction/Design	Well Data	Formation Description
8" Borehole Abandoned with Bentonite		sand Gravels Cobbles

5

6.5

Scale 1"= _____ Page _____ of _____

ECY 050 12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

Notice of Intent No 512850

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in circle)*
- ⊗ Construction 147929
- ○ Decommission *Original Construction Notice of Intent Number* _____

Property Owner Galloway, Romero + Assoc.

Unique Ecology Well ID Tag No B-2

Consulting Firm Sharrard + Wilson

Driller or Trainee Name Randall E. Wilder

Driller or Trainee Signature [signature]

Driller or Trainee License No 2578

If trainee, licensed driller's Signature and License no _____

DEPT OF ECOLOGY Received APR 09 2004 CENTRAL REGIONAL OFFICE

Type of Well *("x" in circle)*
- ○ Resource Protection
- ⊗ Geotech Soil Boring

Site Address Yakima F

City Yakima County Yakima

Location SE 1/4 1/4 NW 1/4 Sec 32 Twn 13N R 19 (E/W/M) *circle one* WWM

Lat/Long (s t r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No _____

Cased or Uncased Diameter _____ Static Level No Water

Work/Decommission Start Date 2-21-04

Work/Decommission Completed Date 2-21-04

Construction/Design	Well Data	Formation Description
8" Borehole Abandoned with Bentonite	5 — 6.5	sand Gravels Cobbles

Scale 1"= _____ Page _____ of _____ ECY 050 12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

Notice of Intent No 512850

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in circle)*
- (X) Construction 147930
- ( ) Decommission *Original Construction Notice of Intent Number* _____

Property Owner Galloway, Romero + Assoc.

Unique Ecology Well ID Tag No B-3

Consulting Firm Shannon + Wilson

Driller or Trainee Name Randall E. Wilder

Driller or Trainee Signature _____

Driller or Trainee License No 2578

If trainee, licensed driller's Signature and License no _____

DEPT OF ECOLOGY Received APR 0 9 2004 CENTRAL REGION

Type of Well *("x" in circle)*
- ( ) Resource Protection
- (X) Geotech Soil Boring

Site Address Yakima

City Yakima County Yakima

Location SE 1/4 1/4 NW 1/4 Sec 32 Twn 13N R 19 (E)WM *circle one*

Lat/Long (s t r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No _____

Cased or Uncased Diameter _____ Static Level No Water

Work/Decommission Start Date 2-21-04

Work/Decommission Completed Date 2-21-04

Construction/Design	Well Data	Formation Description
8" Borehole Abandoned with Bentonite		sand Gravels Cobbles

5 — 5

6.5 — 6.5

Scale 1"= _____ Page _____ of _____

ECY 050 12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

Notice of Intent No 512850

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

Construction/Decommission *("x" in circle)*
- ⊗ Construction 147933
- O Decommission *Original Construction Notice of Intent Number* ____

Type of Well *("x" in circle)*
- O Resource Protection
- ⊗ Geotech Soil Boring

Property Owner: Galloway, Romero + Assoc.

Site Address: Yakima F

Unique Ecology Well ID Tag No: B-4

City: Yakima County: Yakima

Consulting Firm: Shannon + Wilson

Location: SE 1/4 NW 1/4 Sec 32 Twn 13N R 19 (EWM) circle one or WWM

Driller or Trainee Name: Randall E. Wilder

Lat/Long (s t r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Driller or Trainee Signature: [signature]

Driller or Trainee License No: 2578

Tax Parcel No ____

If trainee, licensed driller's Signature and License no ____

Cased or Uncased Diameter ____ Static Level: No Water

(Work)/Decommission Start Date: 2-21-04

(Work)/Decommission Completed Date: 2-21-04

Depth	Construction/Design	Well Data	Formation Description
0–5	8" Borehole Abandoned with Bentonite		sand Gravels Cobbles
5			
6.5			

Scale 1"= ____ Page ____ of ____

ECY 050 12 (Rev 2/01)

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. /
Permit No. /

(1) OWNER: Name Tony Rioz Address 1808½ ~~St~~ ~~Street~~ Yakima WA

(2) LOCATION OF WELL: County Yakima — SE ¼ NW ¼ Sec. 32 T. 13 N., R. 19 W.M.
Bearing and distance from section or subdivision corner 2410

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐ Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Deepened ☐ Reconditioned ☐
Method: Dug ☐ Bored ☐ Cable ☒ Driven ☐ Rotary ☐ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled ...... ft. Depth of completed well ...... ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 10" Diam. from 0 ft. to 18 ft.
Threaded ☐ 6" Diam. from 0 ft. to 40 ft.
Welded ☒ ...." Diam. from .... ft. to .... ft.

Perforations: Yes ☐ No ☒
Type of perforator used ......
SIZE of perforations ...... in. by ...... in.
...... perforations from ...... ft. to ...... ft.
...... perforations from ...... ft. to ...... ft.
...... perforations from ...... ft. to ...... ft.

Screens: Yes ☐ No ☒
Manufacturer's Name ......
Type ...... Model No. ......
Diam. ...... Slot size ...... from ...... ft. to ...... ft.
Diam. ...... Slot size ...... from ...... ft. to ...... ft.

Gravel packed: Yes ☐ No ☒ Size of gravel: ......
Gravel placed from ...... ft. to ...... ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal bentonite
Did any strata contain unusable water? Yes ☐ No ☒
Type of water? ...... Depth of strata ......
Method of sealing strata off ......

(7) PUMP: Manufacturer's Name ......
Type: ...... H.P. ......

(8) WATER LEVELS: Land-surface elevation above mean sea level.... ft.
Static level 23 ft. below top of well Date 3-8-77
Artesian pressure ...... lbs. per square inch Date ......
Artesian water is controlled by ...... (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom? ......
Yield: ...... gal./min. with ...... ft. drawdown after ...... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ......
Bailer test 20 gal./min. with 15 ft. drawdown after 3 hrs.
Artesian flow ...... g.p.m. Date 3-8-77
Temperature of water ...... Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:
Formation: *Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.*

MATERIAL	FROM	TO
top soil	0	2
boulders	2	16
fine sand	16	30
coarse sand	30	37
gravel	37	40

RECEIVED
JUN 13 1977
DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

Work started 3-5 19 77 Completed 3-8 19 77

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME 'A' Bach Well Drlg. (Person, firm, or corporation) (Type or print)
Address P.O. Box 48 Yakima, WA
[Signed] Bob Cannon (Well Driller)
License No. 0702 Date 3- 19 77

(USE ADDITIONAL SHEETS IF NECESSARY) 10

S. F. No. 7356—OS—(Rev. 4-71)
ECY-070-28

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. G1-28514
Permit No. ....

(1) **OWNER:** Name Washington Fruit Address P.O. Box 1588 Yakima 98907

LOCATION OF WELL: County Yakima — SE ¼ NW ¼ Sec. 32 T. 13 N., R. 17 W.M.

Bearing and distance from section or subdivision corner

(3) **PROPOSED USE:** Domestic ☑ Industrial ☑ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) **TYPE OF WORK:** Owner's number of well (if more than one) 2
New well ☑ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☐ Jetted ☐

(5) **DIMENSIONS:** Diameter of well .... 6 inches.
Drilled .... 83 ft. Depth of completed well .... 78 ft.

(6) **CONSTRUCTION DETAILS:**

Casing installed: 6 " Diam. from +2" ft. to 78 ft.
Threaded ☐ " Diam. from .... ft. to .... ft.
Welded ☐ " Diam. from .... ft. to .... ft.

Perforations: Yes ☐ No ☑
Type of perforator used ....
SIZE of perforations .... in. by .... in.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.
.... perforations from .... ft. to .... ft.

Screens: Yes ☐ No ☑
Manufacturer's Name ....
Type .... Model No ....
Diam. .... Slot size .... from .... ft. to .... ft.
Diam. .... Slot size .... from .... ft. to .... ft.

Gravel packed: Yes ☐ No ☑ Size of gravel: ....
Gravel placed from .... ft. to .... ft.

Surface seal: Yes ☑ No ☐ To what depth? 20 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? .... Depth of strata ....
Method of sealing strata off ....

(7) **PUMP:** Manufacturer's Name ....
Type: .... H.P. ....

(8) **WATER LEVELS:** Land-surface elevation above mean sea level .... ft.
Static level .... 8 .... ft. below top of well Date 2/12/85
Artesian pressure .... lbs. per square inch Date ....
Artesian water is controlled by .... (Cap, valve, etc.)

(9) **WELL TESTS:** Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom? Air Lift
Yield: 80 gal./min. with .... ft. drawdown after .... hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test ....
Bailer test .... gal./min. with .... ft. drawdown after .... hrs.
Artesian flow .... g.p.m. Date ....
Temperature of water .... Was a chemical analysis made? Yes ☐ No ☐

(10) **WELL LOG:**

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Soil	0	3
Gravel/Sand Clay layers	3	62
Gravel Sand	62	83

RECEIVED
FEB 15 1985
DEPARTMENT OF ECOLOGY
CENTRAL REGION

Work started 2/11 19 85 Completed 2/12 19 85

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Poulin-McGuire Drilling (Person, firm, or corporation) (Type or print)

Address RT 3 Box 3356

[Signed] Tom McGuire (Well Driller)

License No. 0357 Date 2/13 19 85

OK 3/21/85

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT
STATE OF WASHINGTON

Application No. ....
Permit No. ....

(1) OWNER: Name Washington Fruit Produce Address 401 North 1st Ave

LOCATION OF WELL: County Yakima NE ¼ NW ¼ Sec 2 T 13 N., R 19 W.M.

Ba ... and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 54 ft. Depth of completed well 54 ft.

(6) CONSTRUCTION DETAILS:
Casing installed: 6" Diam. from +2 ft. to 54 ft.
Threaded ☐ ." Diam. from ft. to ft.
Welded ☐ ." Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 5 ft. below top of well Date
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☐ If yes, by whom?
Yield: 70+ gal./min. with ft. drawdown after hrs.
" " Air Lift " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:
Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
Top Soil Brown	0	8
Sand + gravel	8	54

RECEIVED
JUL 3
DEPARTMENT OF ECOLOGY
CENTRAL REGION

Work started 7/10 19 84 Completed 7/17 19 84

WELL DRILLER'S STATEMENT:
This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Parkin & McGuire Drilling (Person, firm, or corporation) (Type or print)
Address Rt 3 Box 3356
[Signed] Rick Parkin (Well Driller)
License No. 942 Date 7-27 19 84

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-20

PAR SOUTH

Please print, sign and return by mail to Department of Ecology

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT Notice of Intent No. RE10201

Construction/Decommission *(select one)*
- [x] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Consulting Firm Leidos (5574)

Unique Ecology Well ID Tag No. BHN 932

Type of Well *(select one)*
- [x] Resource Protection
- [ ] Geotech Soil Boring

Property Owner Enrique Navarette

Site Address 3202 main st

City Union Gap County Yakima

Location SW 1/4-1/4 NW 1/4 Sec 5 Twn 12 R 19 Select One [x] EWM [ ] WWM

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[x] Driller [ ] Engineer [ ] Trainee Name (Print) Jeffrey Johnson

Driller/Engineer/Trainee Signature Jeffrey Johnson

Driller or Trainee License No. 2950

If trainee, licensed driller's Signature and License No. _____

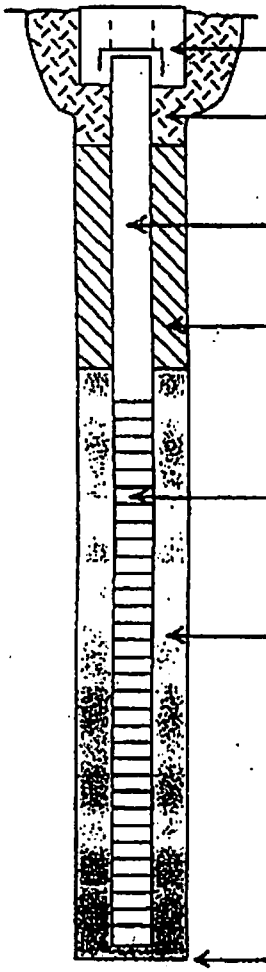
(Cased) or Uncased Diameter 6" Static Level 11

Work/Decommission Start Date 12-10-14

Work/Decommission Completed Date 12-11-14

Construction/Design

MW #1



Well Data

MONUMENT TYPE: Flush

CONCRETE SURFACE SEAL 0-1 ft.

PVC BLANK 2" x 10'

BACKFILL 7 ft.

TYPE: Bentonite Chips

PVC SCREEN 2" x 10

SLOT SIZE: 1020

TYPE: PVC Sch 40

GRAVEL PACK 12 ft.

MATERIAL: Sand 2/12

WELL DEPTH 20 ft.

Formation Description

0 - 10 ft. Cobbles

10 - 20 ft. Sand & Gravels

_____ - _____ ft.

_____ - _____ ft.

_____ - _____ ft.

DEPT OF ECOLOGY Received MAR 0 2 2015 CENTRAL REGION OFFICE

REMARKS _____

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return by mail to Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. RE10201

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *(select one)*
- [X] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Consulting Firm Leidos (5574)

Unique Ecology Well ID Tag No. BCC 193

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Jeffrey Johnson

Driller/Engineer/Trainee Signature Jeffrey Johnson

Driller or Trainee License No. 2950

If trainee, licensed driller's Signature and License No. _____

Type of Well *(select one)*
- [X] Resource Protection
- [ ] Geotech Soil Boring

Property Owner Enrique Navarette

Site Address 3202 main st

City Union Gap County Yakima

Location SW 1/4-1/4 NW 1/4 Sec 5 Twn 12 R 19 (Select One: [X] E/W/A [ ] W/W/A)

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

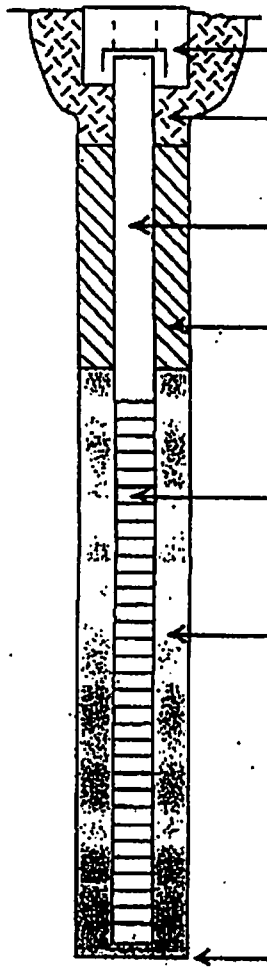
(Cased) or Uncased Diameter 6" Static Level 10

Work/Decommission Start Date 12-10-14

Work/Decommission Completed Date 12-11-14

Construction/Design

MW #3



MONUMENT TYPE: Flush

CONCRETE SURFACE SEAL 0-1 ft.

PVC BLANK 2"x 10'

BACKFILL 7 ft.

TYPE: Bentonite chips

PVC SCREEN 2"x 10

SLOT SIZE: 1020

TYPE: PVC Sch 40

GRAVEL PACK 12 ft.

MATERIAL: Sand 2/12

WELL DEPTH 20

Well Data

Formation Description

0 - 10 ft. Cobbles

10 - 20 ft. Sand & Gravels

_____ - _____ ft.

_____ - _____ ft.

_____ - _____ ft.

DEPT OF ECOLOGY Received MAR 0 2 2015 CENTRAL REGION OFFICE

REMARKS _____

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return by mail to Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. RE10201

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *(select one)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Consulting Firm Leidos (5574)

Unique Ecology Well ID Tag No. BCC 172

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Jeffrey Johnson

Driller/Engineer/Trainee Signature [signature]

Driller or Trainee License No. 2950

If trainee, licensed driller's Signature and License No. _____

Type of Well *(select one)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Enrique Navarette

Site Address 3202 main st

City Union Gap County Yakima

Location SW 1/4-1/4 NW 1/4 Sec 5 Twn 12 R 19 ☒ EWM ☐ WWM

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

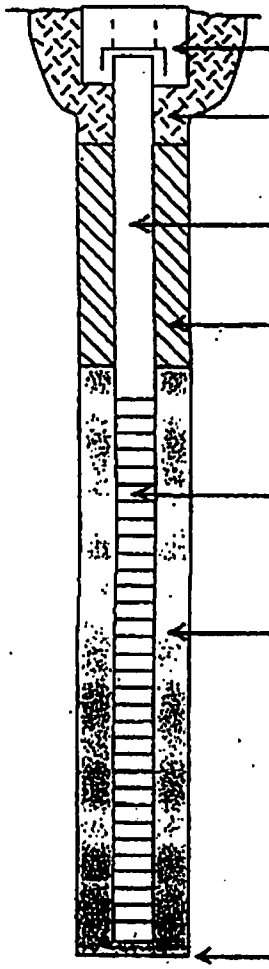
Tax Parcel No. _____

(Cased) or Uncased Diameter 6" Static Level 11

Work/Decommission Start Date 12-10-14

Work/Decommission Completed Date 12-11-14

Construction/Design



MW #5

Well Data

MONUMENT TYPE: Flush

CONCRETE SURFACE SEAL 0-1 ft.

PVC BLANK 2"x 10'

BACKFILL 7 ft.

TYPE: Bentonite Chips

PVC SCREEN 2"x 10

SLOT SIZE: 1020

TYPE: PVC Sch 40

GRAVEL PACK 12 ft.

MATERIAL: Sand 2/12

WELL DEPTH 20

Formation Description

0 - 10 ft. Cobbles

10 - 20 ft. Sand & Gravels

_____ - _____ ft.

_____ - _____ ft.

_____ - _____ ft.

DEPT OF ECOLOGY Received MAR 0 2 2015 CENTRAL REGION OFFICE

REMARKS

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return by mail to Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. RE10201

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *(select one)*
- [X] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Consulting Firm Leidos (5574)

Unique Ecology Well ID Tag No. BCC 173

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Jeffrey Johnson

Driller/Engineer/Trainee Signature Jeffrey Johnson

Driller or Trainee License No. 2950

If trainee, licensed driller's Signature and License No. _____

Type of Well *(select one)*
- [X] Resource Protection
- [ ] Geotech Soil Boring

Property Owner Enrique Navarette

Site Address 3202 main st

City Union Gap County Yakima

Location SW 1/4-1/4 NW 1/4 Sec 5 Twn 12 R 19 [X] EWM [ ] WWM

Lat/Long (s, r, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

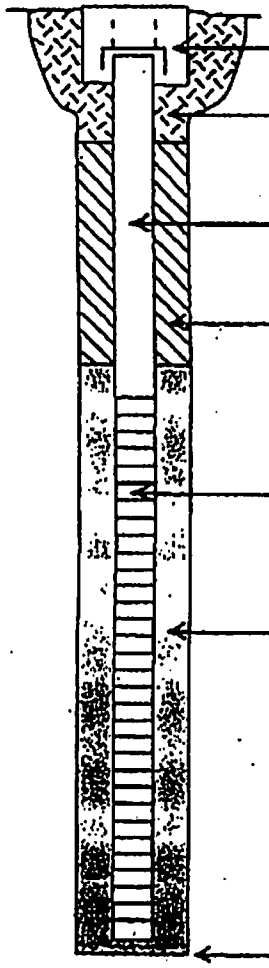
Tax Parcel No. _____

(Cased) or Uncased Diameter 6" Static Level 9

Work/Decommission Start Date 12-10-14

Work/Decommission Completed Date 12-11-14

Construction/Design



MW #4

Well Data

MONUMENT TYPE: Flush

CONCRETE SURFACE SEAL 0-1 ft.

PVC BLANK 2"x 10'

BACKFILL 7 ft.

TYPE: Bentonite chips

PVC SCREEN 2"x 10

SLOT SIZE: 1020

TYPE: PVC Sch 40

GRAVEL PACK 12 ft.

MATERIAL: Sand 2/12

WELL DEPTH 20

Formation Description

0 - 10 ft. Cobbles

10 - 20 ft. Sand & Gravels

_____ - _____ ft.

_____ - _____ ft.

_____ - _____ ft.

DEPT OF ECOLOGY Received MAR 0 2 2015 CENTRAL REGIONAL OFFICE

REMARKS

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return by mail to Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. RE10201

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *(select one)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Consulting Firm Leidos (5574)

Unique Ecology Well ID Tag No. BIM 575

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Jeffrey Johnson

Driller/Engineer/Trainee Signature Jeffrey Johnson

Driller or Trainee License No. 2950

If trainee, licensed driller's Signature and License No. _____

Type of Well *(select one)*

☒ Resource Protection

☐ Geotech Soil Boring

Property Owner Enrique Navarette

Site Address 3202 main st

City Union Gap County Yakima

Location SW 1/4-1/4 NW 1/4 Sec 5 Twn 12 R 19 ☒ EWM ☐ WWM

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

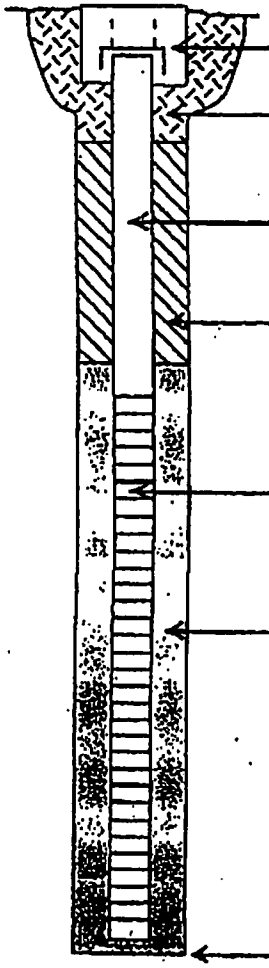
Tax Parcel No. _____

(Cased) or Uncased Diameter 6" Static Level 10

Work/Decommission Start Date 12-10-14

Work/Decommission Completed Date 12-11-14

Construction/Design



MW #2

Well Data

MONUMENT TYPE: Flush

CONCRETE SURFACE SEAL 0-1 ft.

PVC BLANK 2"x 10'

BACKFILL 7 ft.

TYPE: Bentonite Chips

PVC SCREEN 2"x 10

SLOT SIZE: 1020

TYPE: PVC Sch 40

GRAVEL PACK 12 ft.

MATERIAL: Sand 2/12

WELL DEPTH 20

Formation Description

0 - 10 ft. Cobbles

10 - 20 ft. Sand & Gravels

_____ - _____ ft.

_____ - _____ ft.

_____ - _____ ft.

DEPT OF ECOLOGY Received MAR 0 2 2015 CENTRAL REGION OFFICE

REMARKS

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

Please print, sign and return by mail to Department of Ecology

RESOURCE PROTECTION WELL REPORT

CURRENT Notice of Intent No. RE10201

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *(select one)*
- [X] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

Consulting Firm Leidos (5574)

Unique Ecology Well ID Tag No. BBB 143

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Jeffrey Johnson

Driller/Engineer/Trainee Signature Jeffrey Johnson

Driller or Trainee License No. 2950

If trainee, licensed driller's Signature and License No. _____

Type of Well *(select one)*
- [X] Resource Protection
- [ ] Geotech Soil Boring

Property Owner Enrique Navarette

Site Address 3202 main st

City Union Gap County Yakima

Location SW 1/4-1/4 NW 1/4 Sec 5 Twn 12 R 19 (Select One: [X] EWM [ ] WWM)

Lat/Long (s, t, r still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. _____

(Cased) or Uncased Diameter 6" Static Level 11

Work/Decommission Start Date 12-10-14

Work/Decommission Completed Date 12-11-14

Construction/Design	Well Data	Formation Description
MW #6	MONUMENT TYPE: Flush	0 - 10 ft. Cobbles
	CONCRETE SURFACE SEAL 0-1 ft.	10 - 20 ft. Sand & Gravels
	PVC BLANK 2"x 10'	- ft.
	BACKFILL 7 ft. TYPE: Bentonite Chips	- ft.
	PVC SCREEN 2"x 10	- ft.
	SLOT SIZE: 1020 TYPE: PVC Sch 40	
	GRAVEL PACK 12 ft. MATERIAL: Sand 2/12	
	WELL DEPTH 20	

DEPT OF ECOLOGY Received MAR 0 2 2015 CENTRAL REGION OFFICE

REMARKS _____

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report

File Original and First Copy with Department of Ecology
Second Copy — Owner's Copy
Third Copy — Driller's Copy

WATER WELL REPORT

STATE OF WASHINGTON

Application No. E

Permit No. ....

(1) OWNER: Name Printing Press Address 1008 Main, Union Gap

LOCATION OF WELL: County Yakima — SW ¼ NW ¼ Sec. 5 T. 12 N., R. 19 W.M.

Bearing and distance from section or subdivision corner

(3) PROPOSED USE: Domestic ☒ Industrial ☐ Municipal ☐
Irrigation ☐ Test Well ☐ Other ☐

(4) TYPE OF WORK: Owner's number of well (if more than one) ....
New well ☒ Method: Dug ☐ Bored ☐
Deepened ☐ Cable ☐ Driven ☐
Reconditioned ☐ Rotary ☒ Jetted ☐

(5) DIMENSIONS: Diameter of well 6 inches.
Drilled 38 ft. Depth of completed well 38 ft.

(6) CONSTRUCTION DETAILS:

Casing installed: 6 " Diam. from +1 ft. to 36 ft.
Threaded ☐ " Diam. from ft. to ft.
Welded ☒ " Diam. from ft. to ft.

Perforations: Yes ☐ No ☒
Type of perforator used
SIZE of perforations in. by in.
perforations from ft. to ft.
perforations from ft. to ft.
perforations from ft. to ft.

Screens: Yes ☐ No ☒
Manufacturer's Name
Type Model No.
Diam. Slot size from ft. to ft.
Diam. Slot size from ft. to ft.

Gravel packed: Yes ☐ No ☒ Size of gravel:
Gravel placed from ft. to ft.

Surface seal: Yes ☒ No ☐ To what depth? 18 ft.
Material used in seal Bentonite
Did any strata contain unusable water? Yes ☐ No ☐
Type of water? Depth of strata
Method of sealing strata off

(7) PUMP: Manufacturer's Name
Type: H.P.

(8) WATER LEVELS: Land-surface elevation above mean sea level .... ft.
Static level 14 ft. below top of well Date 8/12/86
Artesian pressure lbs. per square inch Date
Artesian water is controlled by (Cap, valve, etc.)

(9) WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? Yes ☐ No ☒ If yes, by whom?
Yield: gal./min. with ft. drawdown after hrs.
" " " "
" " " "

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test
Bailer test 27 gal./min. with ft. drawdown after hrs.
Artesian flow g.p.m. Date
Temperature of water Was a chemical analysis made? Yes ☐ No ☐

(10) WELL LOG:

Formation: Describe by color, character, size of material and structure, and show thickness of aquifers and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of formation.

MATERIAL	FROM	TO
River Rock and Sand	0	17
Large gravel and Sand	17	25
Large gravel, Sand and Water	25	38

RECEIVED
OCT 27 1986
DEPARTMENT OF ECOLOGY
CENTRAL REGION OFFICE

Work started 8/12/ 19 86 Completed 8/12 19 86

WELL DRILLER'S STATEMENT:

This well was drilled under my jurisdiction and this report is true to the best of my knowledge and belief.

NAME Water Wells Drilling (Person, firm, or corporation) (Type or print)

Address 5503 Ahtanum Rd. Yakima Wa.

[Signed] Vernon L. Rank (Well Driller)

License No. 0856 Date 8/15 19 86

(USE ADDITIONAL SHEETS IF NECESSARY)

ECY 050-1-70

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No. AG7753

Construction/Decommission ("x" in circle)
- ○ Construction 985627
- ⊗ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* E 004634

Type of Well ("x" in circle)
- ⊗ Resource Protection
- ○ Geotech Soil Boring

Consulting Firm PBS

Property Owner Touchstone Asset Management

Site Address 3202 Main St. E

Unique Ecology Well ID Tag No: SP-5

City Union Gap County: Yakima

Location SW 1/4 NW 1/4 Sec 5 Twn 12N R 19 E or W WWM (circle one)

Lat/Long (s,t,r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Donald J. Hansen

Driller/Engineer/Trainee Signature [signature]

Driller or Trainee License No. 2503

Tax Parcel No. ____

Cased or Uncased Diameter 2" Static Level 12'

Work/Decommission Start Date 4-17-03

Work/Decommission Completed Date 4-17-03

If trainee; licensed driller's Signature and License no. ____

Construction/Design	Well Data	Formation Description
0 5 0 15 Bottom of boring @ 16'	Soil samples collected 0-10' b.g.s Ground water Samples Collected 12-16' Through a temporary sampling screen. All down-hole tools removed prior to back filling boring w/ bentonite.	0 Sand & gravel 5 10 ∇ H_2O @ 12' b.g.s 15

DEPT OF ECOLOGY Received JAN 09 2008 CENTRAL REGION OFFICE

Scale 1"= 5

Page 5 of 5

ECY 050-12 (Rev 2/01)

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No. A 67753

Construction/Decommission ("x" in circle)
- ○ Construction 285626
- ⊗ Decommission ORIGINAL INSTALLATION Notice of Intent Number E 004634

Type of Well ("x" in circle)
- ⊗ Resource Protection
- ○ Geotech Soil Boring

Consulting Firm PBS

Property Owner Touchstone Asset Management

Site Address 3202 Main St. E

Unique Ecology Well ID Tag No: SP-1

City Union Gap County: Yakima

Location SW 1/4 NW 1/4 Sec 5 Twn 12N R 19/19 E W WWM (circle one)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Donald J. Hansler

Driller/Engineer/Trainee Signature

Driller or Trainee License No. 2503

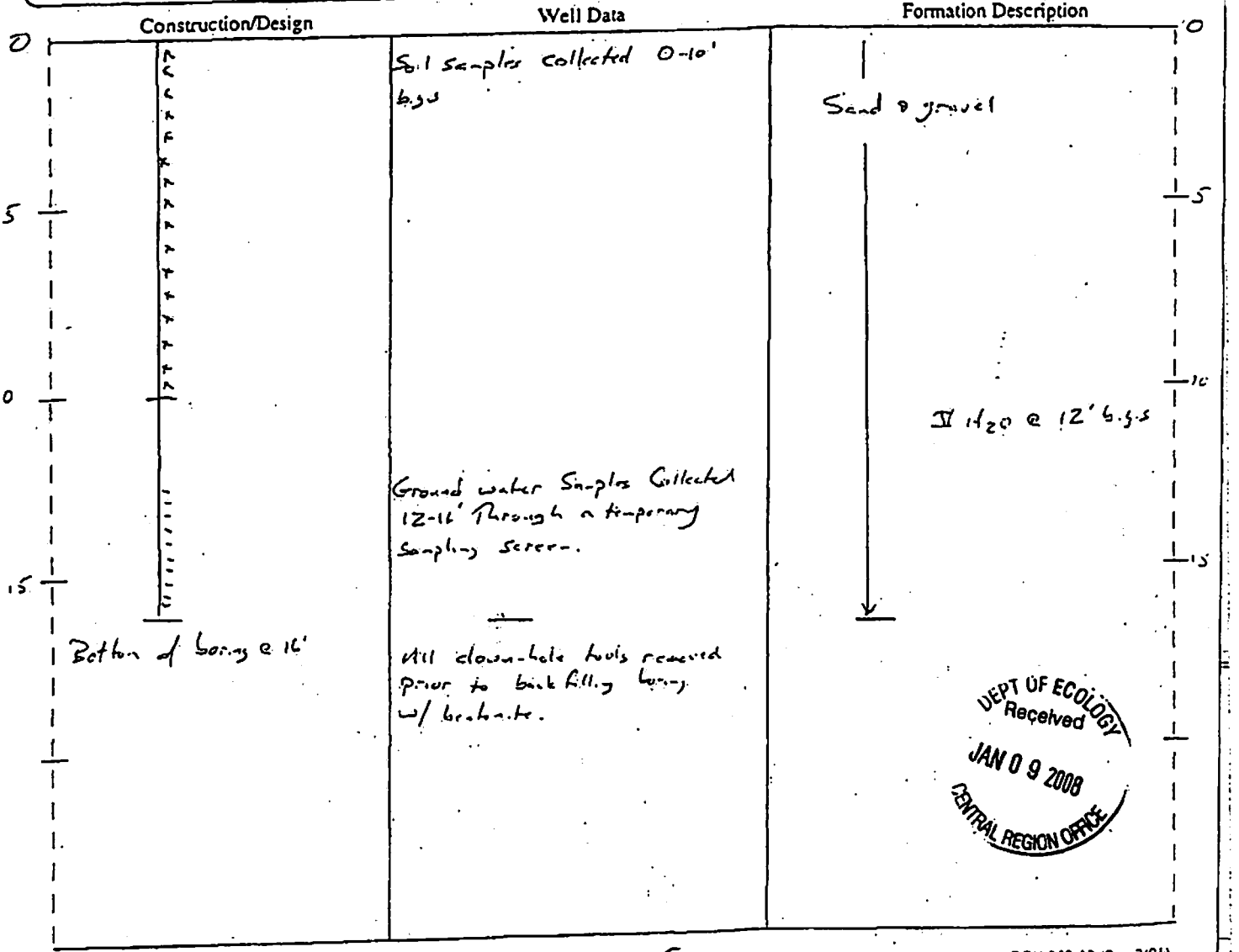
Tax Parcel No.

Cased or Uncased Diameter 2" Static Level 12'

Work/Decommission Start Date 4-17-03

If trainee, licensed driller's Signature and License no.

Work/Decommission Completed Date 4-17-03



DEPT OF ECOLOGY Received JAN 09 2008 CENTRAL REGION OFFICE

Scale 1"= 5

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No. AG7753

Construction/Decommission ("x" in circle)
- O Construction 285625
- ⊗ Decommission ORIGINAL INSTALLATION Notice of Intent Number E004634

Type of Well ("x" in circle)
- ⊗ Resource Protection
- O Geotech Soil Boring

Consulting Firm PBS

Property Owner Touchstone Asset Management

Site Address 3202 Main St. E

Unique Ecology Well ID Tag No: SP-3

City Union Gap County: Yakima

Location SW 1/4 NW 1/4 Sec 5 Twn 12N R 19 E/W/N circle one or WWM

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. ____

Cased or Uncased Diameter 2" Static Level 12'

Work/Decommission Start Date 4-17-03

Work/Decommission Completed Date 4-17-03

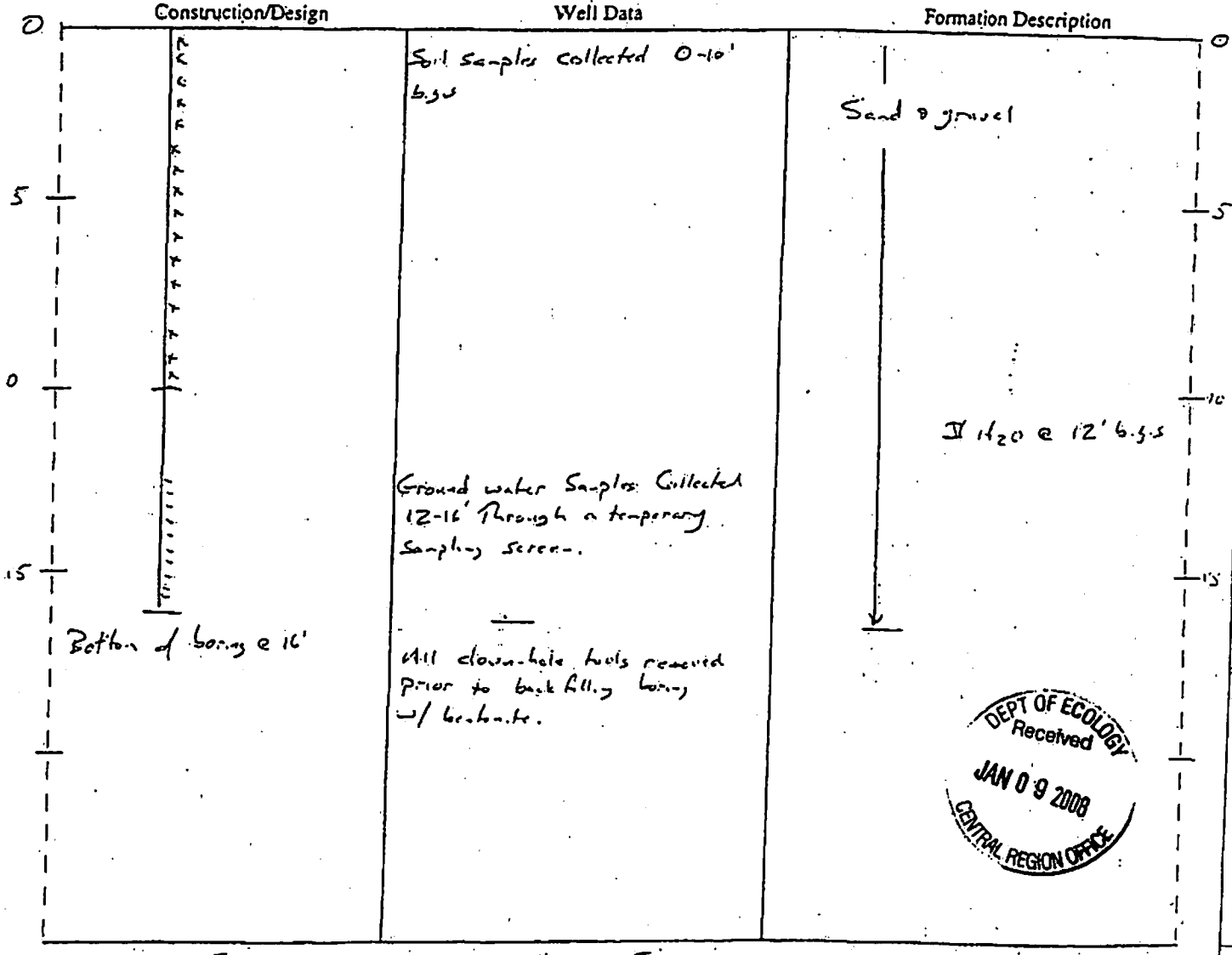
WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Donald J. Hardin

Driller/Engineer/Trainee Signature [signature]

Driller or Trainee License No. 2503

If trainee, licensed driller's Signature and License no. ____



DEPT OF ECOLOGY Received JAN 09 2008 CENTRAL REGION OFFICE

Scale 1"= 5

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No. AG7753

Construction/Decommission ("x" in circle)
- ○ Construction 285 624
- ⊗ Decommission ORIGINAL INSTALLATION Notice of Intent Number E004634

Type of Well ("x" in circle)
- ⊗ Resource Protection
- ○ Geotech Soil Boring

Consulting Firm PBS

Property Owner Tesoro Asset Management

Site Address 3202 Main St. E

Unique Ecology Well ID Tag No: SP-2

City Union Gap County: Yakima

Location SW 1/4 NW 1/4 Sec 5 Twn 12N R 19 E/W/W (circle one)

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Donald J. Harnden

Driller/Engineer/Trainee Signature

Driller or Trainee License No. 2503

Tax Parcel No. ____

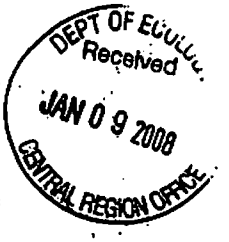
Cased or Uncased Diameter 2" Static Level 12'

Work/Decommission Start Date 4-17-03

If trainee, licensed driller's Signature and License no.

Work/Decommission Completed Date 4-17-03

Construction/Design	Well Data	Formation Description
0 5 0 15 Bottom of boring @ 16'	Soil samples collected 0-10' bgs Ground water Samples Collected 12-16' Through a temporary Sampling Screen. All downhole tools removed prior to backfilling boring w/ bentonite.	0 Sand & gravel 5 10 ∇ H_2O @ 12' b.g.s 15



Scale 1" = 5

Page 2 of 5

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

Notice of Intent No. A6775J

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Construction/Decommission *("x" in circle)*

O Construction 285623

⊗ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* E004634

Type of Well *("x" in circle)*

⊗ Resource Protection

O Geotech Soil Boring

Consulting Firm PBS

Property Owner Touchstone Asset Management

Site Address 3202 Main St. E

Unique Ecology Well ID Tag No: SP-1

City Union Gap County: Yakima

Location SW 1/4 NW 1/4 Sec. 5 Twn. 12N R. 19 E/W circle one WWM

Lat/Long (s, t, r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Donald J. Herndon

Driller/Engineer/Trainee Signature

Driller or Trainee License No. 2503

Tax Parcel No.

Cased or Uncased Diameter 2" Static Level 12'

Work/Decommission Start Date 4-17-03

Work/Decommission Completed Date 4-17-03

If trainee, licensed driller's Signature and License no.

Construction/Design	Well Data	Formation Description
0 5 0 15 Bottom of boring @ 16'	Soil samples collected 0-10' b.g.s Ground water Samples Collected 12-16' Through a temporary sampling screen. All down-hole tools removed prior to backfilling boring w/ bentonite.	0 Sand & gravel 5 10 ∇ H_2O @ 12' b.g.s 15

DEPT OF ECOLOGY Received JAN 09 2008 CENTRAL REGION OFFICE

Scale 1"= 5

Page 1 of 5

ECY 050-12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

CURRENT Notice of Intent No A67753

Construction/Decommission (x in circle) 135731

O Construction

⊗ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* E004634

Type of Well (x" in circle)

⊗ Resource Protection

O Geotech Soil Boring

Property Owner Touchstone Asset Management

Consulting Firm PBS

Site Address 3202 Main St

Unique Ecology Well ID Tag No SP-1

City Union Gap County Yakima

Location SW 1/4 NW 1/4 Sec 5 Twn 12N R 19 EWM circle one or WWM

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Lat/Long (s t r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Donald J Herndon

Driller/Engineer/Trainee Signature [signature]

Tax Parcel No ____

Driller or Trainee License No 2503

Cased or Uncased Diameter 2' Static Level 12'

If trainee, licensed driller s Signature and License no ____

Work/Decommission Start Date 4 17 03

Work/Decommission Completed Date 4 17 03

Construction/Design	Well Data	Formation Description
0	Soil samples collected 0 10' bgs	0 — Sand & gravel
5		5
10		10 — ▽ H_2O @ 12' bgs
15	Ground water Samples Collected 12-16' Through a temporary Sampling screen	15
Bottom of boring @ 16	All down hole tools removed prior to backfilling boring w/ bentonite	

Scale 1 = 5

Page 1 of 5

ECY 050 12 (Rev 2/01)

The Department of Ecology does NOT Warranty the Data and/or the Information on this Well Report.

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No A67753

Construction/Decommission (x" in circle)

○ Construction 135732

⊗ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* E004634

Consulting Firm PBS

Unique Ecology Well ID Tag No SP-2

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Donald J Henderson

Driller/Engineer/Trainee Signature

Driller or Trainee License No 2503

If trainee, licensed driller's Signature and License no

Type of Well (x" in circle)

⊗ Resource Protection

○ Geotech Soil Boring

Property Owner Tidestone Asset Management

Site Address 3202 Main St

City Union Gap County Yakima

Location SW 1/4 NW 1/4 Sec 5 Twn 12N R 19 E or W (circle one) WWM

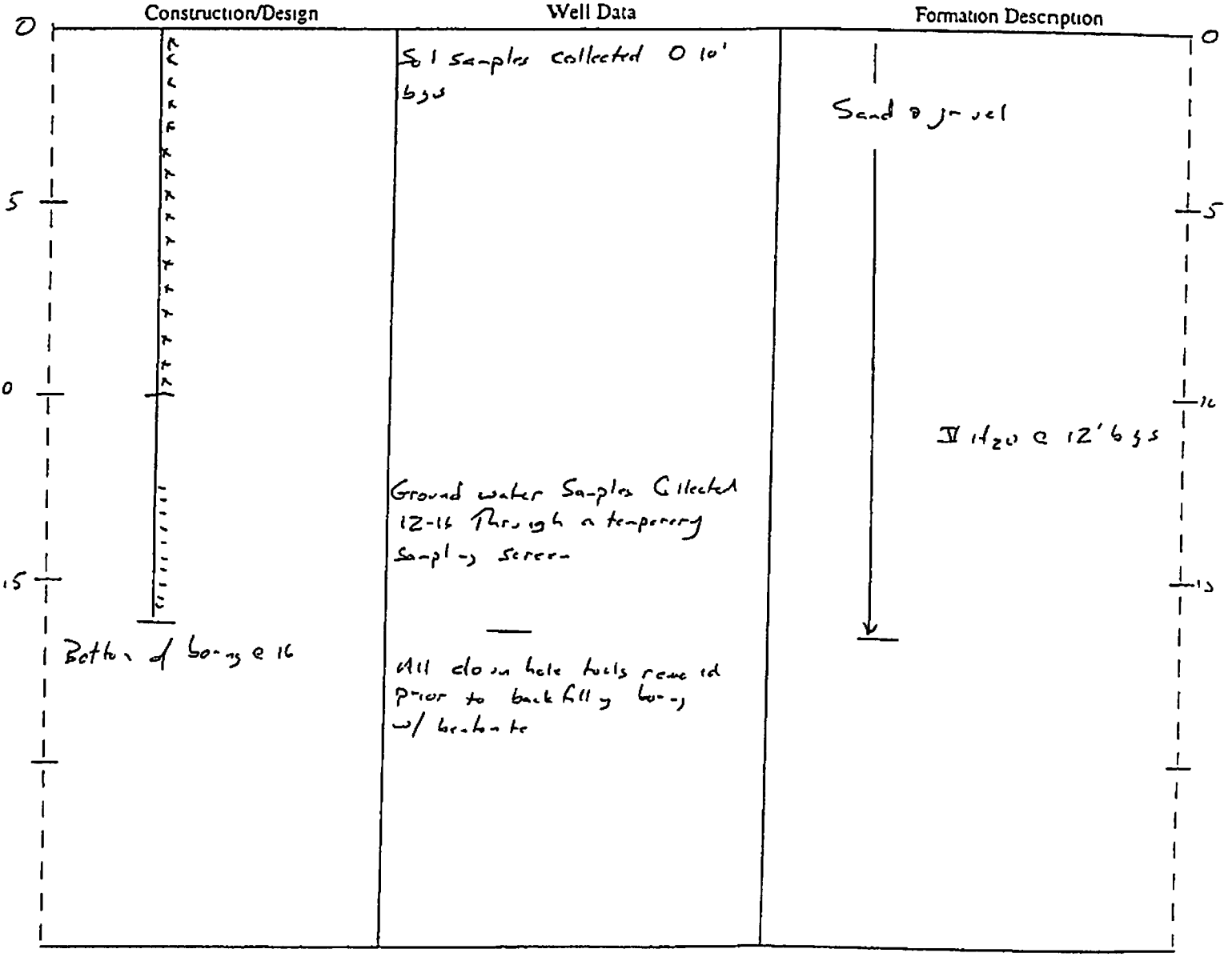
Lat/Long (s t r still REQUIRED) Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No

Cased or Uncased Diameter 2" Static Level 12'

Work/Decommission Start Date 4 17 03

Work/Decommission Completed Date 4 17 03



Scale 1 = 5

Page 2 of 2

ECY 050 12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No A67753

Construction/Decommission (x" in circle) / 35733

- O Construction
- Ø Decommission *ORIGINAL INSTALLATION Notice of Intent Number* E 004634

Type of Well (x" in circle)

- Ø Resource Protection
- O Geotech Soil Boring

Consulting Firm PBS

Property Owner Tolstoy Asset Management

Site Address 3202 Main St

Unique Ecology Well ID
Tag No SP-3

City Union Gap County Yakima

Location SW 1/4 NW 1/4 Sec 5 Twn 12N R 19 E W (circle one) or WWM

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Lat/Long (s t r still REQUIRED) Lat Deg ____ Lat Min/Sec ____

Long Deg ____ Long Min/Sec ____

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Donald J Herndon

Driller/Engineer/Trainee Signature [signature]

Driller or Trainee License No 2503

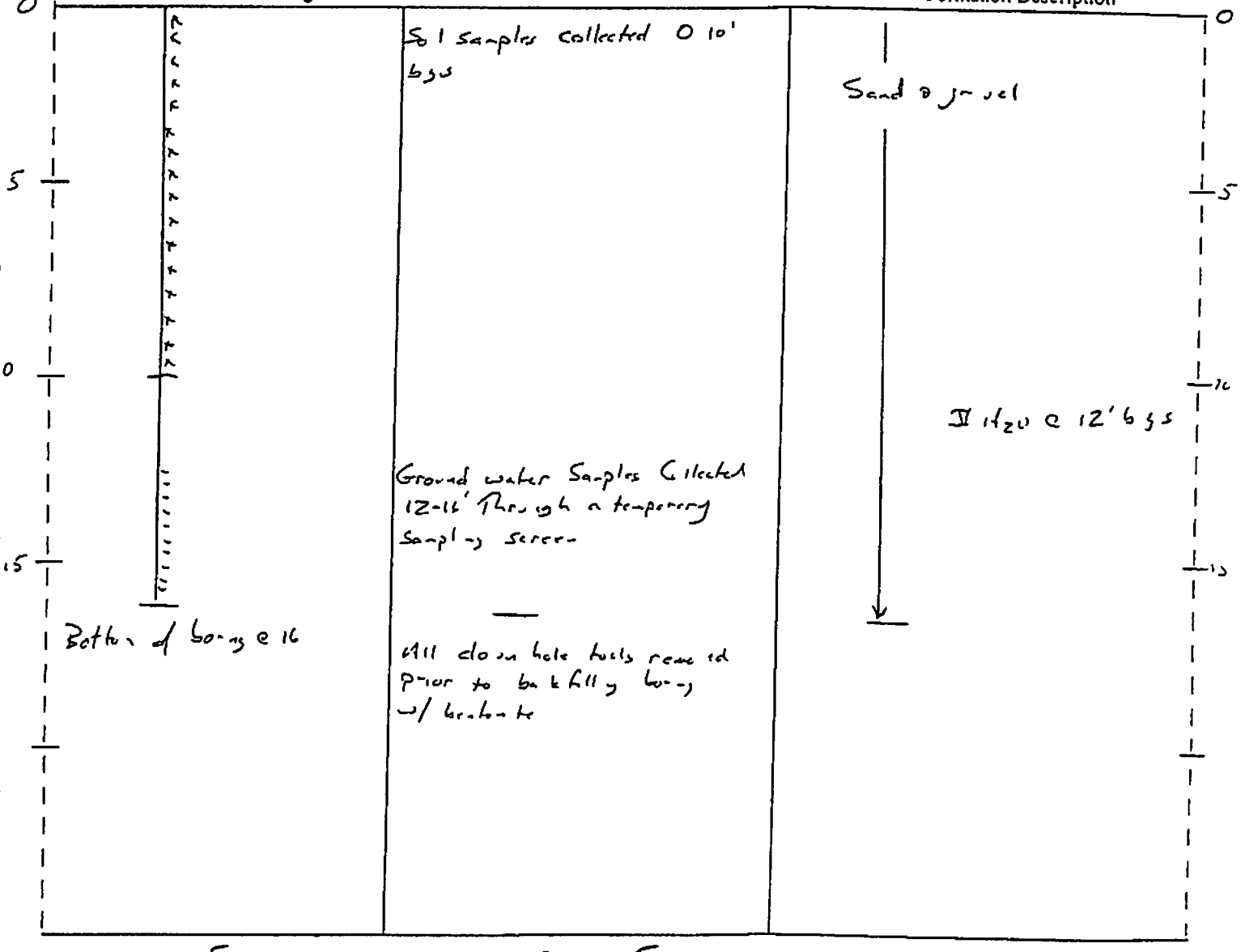
Tax Parcel No ____

Cased or Uncased Diameter 2" Static Level 12'

Work/Decommission Start Date 4 17 03

Work/Decommission Completed Date 4 17 03

If trainee licensed driller s Signature and License no ____



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ECY 050 12 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No A67753

Construction/Decommission (x" in circle)
O Construction
⊗ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* E 004634 / 135734

Type of Well (x" in circle)
⊗ Resource Protection
O Geotech Soil Boring

Consulting Firm PBS

Property Owner Teldstone Asset Management

Site Address 3202 Main St

Unique Ecology Well ID
Tag No SP-1

City Union Gap County Yakima

Location SW 1/4 NW 1/4 Sec 5 Twn 12N R 19 E W (circle one) or WWM

WELL CONSTRUCTION CERTIFICATION I constructed and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information reported above are true to my best knowledge and belief

Lat/Long (s t r still REQUIRED) Lat Deg ____ Lat Min/Sec ____
Long Deg ____ Long Min/Sec ____

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Donald J Herndon

Driller/Engineer/Trainee Signature [signature]

Driller or Trainee License No 2503

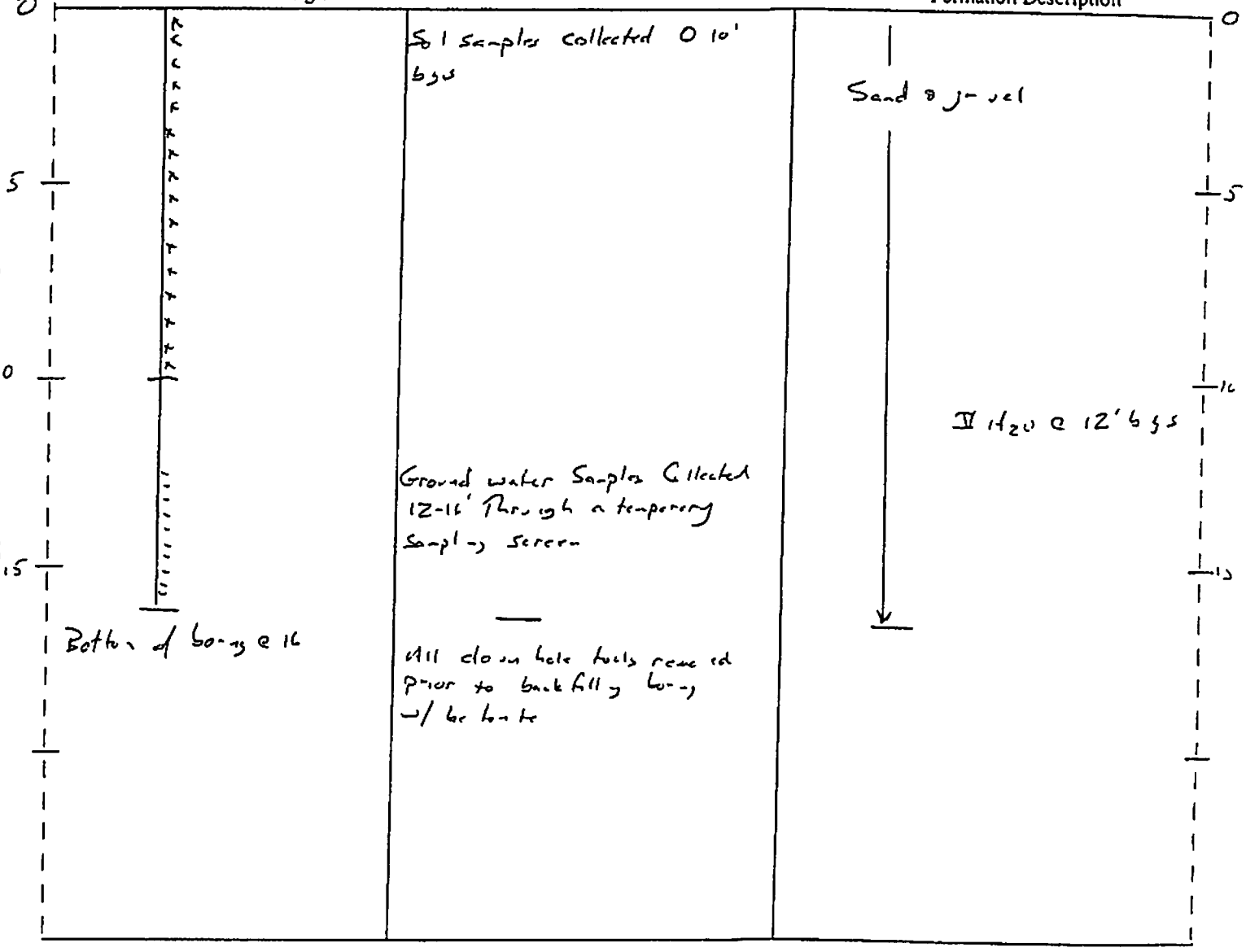
Tax Parcel No E

Cased or Uncased Diameter 2" Static Level 12'

If trainee licensed driller s Signature and License no

Work/Decommission Start Date 4 17 03

Work/Decommission Completed Date 4 17 03



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Page 4 of 5

ECY 050 17 (Rev 2/01)

RESOURCE PROTECTION WELL REPORT

(SUBMIT ONE WELL REPORT PER WELL INSTALLED)

Notice of Intent No A67753

Construction/Decommission (x" in circle)

- ○ Construction 135736
- ⊗ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* E 004634

Consulting Firm PBS

Unique Ecology Well ID
Tag No SP-5

WELL CONSTRUCTION CERTIFICATION I construct d and/or accept responsibility for construction of this well and its compliance with all Washington well construction standards Materials used and the information r ported above ar true to my best knowledge and belief

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Donald J Henderson

Driller/Engineer/Trainee Signature

Driller or Trainee License No 2503

If trainee, licensed driller s Signature and License no

Type of Well (x" in circle)

- ⊗ Resource Protection
- ○ Geotech Soil Boring

Property Owner Tidestone Asset Management

Site Address 3202 Main St

City Union Gap County Yakima

Location SW 1/4 NW 1/4 Sec 5 Twn 12N R 19 E W (circle one) or WWM

Lat/Long (s t r still REQUIRED) Lat Deg Lat Min/Sec

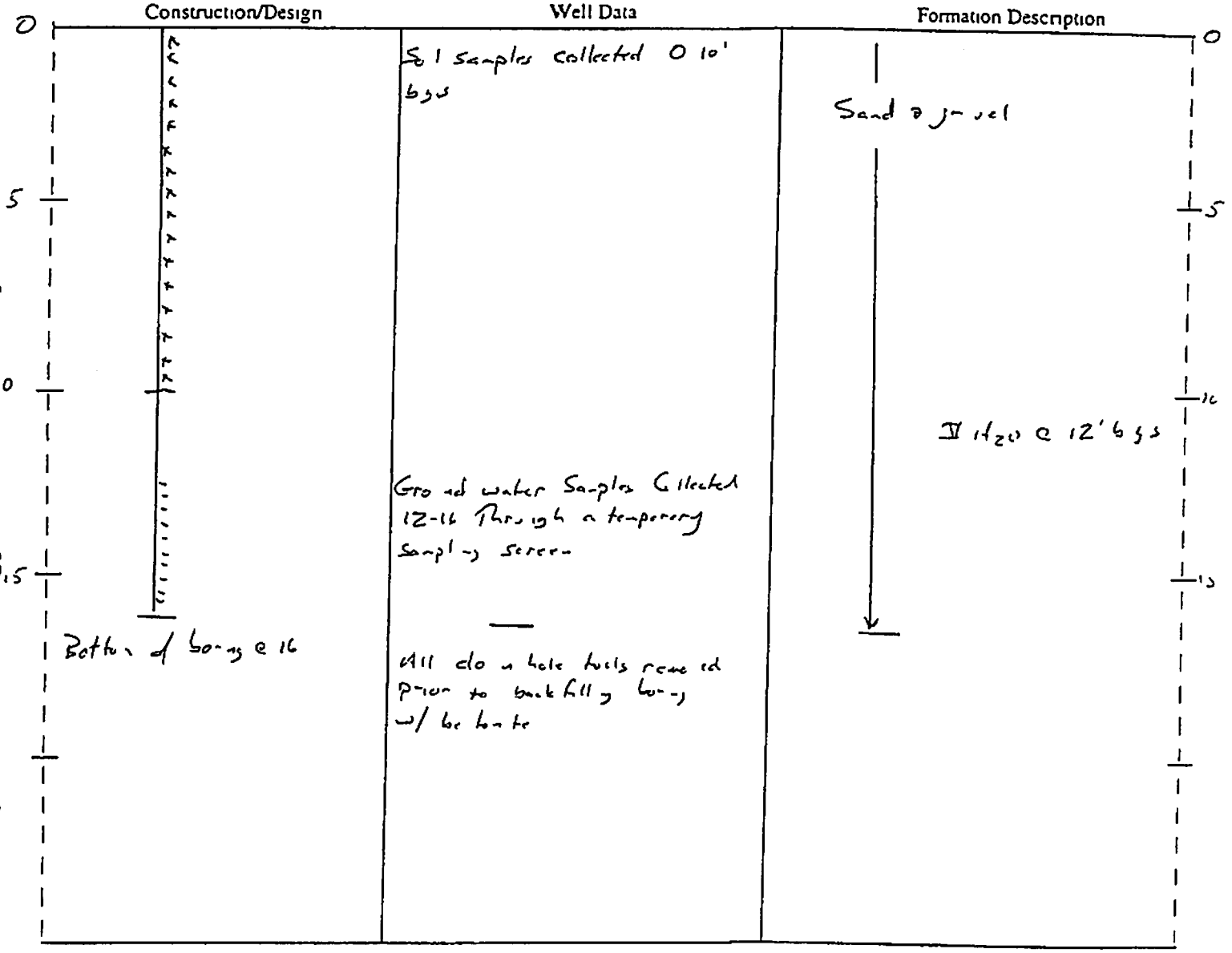
Long Deg Long Min/Sec

Tax Parcel No E

Cased or Uncased Diameter 2" Static Level 12

Work/Decommission Start Date 4 17 03

Work/Decommission Completed Date 4 17 03



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Page 5 of 5

ECY 050 12 (Rev 2/01)

PID Calibration Record
and Miscellaneous Documents

Rental Order Customer Copy

OrderNum	Customer #	Customer Name
00468025	000006606745	AEROTECH ENVIRONMENTAL CONSULTING

ShipDate	RentalID	UnitNumber	Asset Description
8/5/2016	R8200035	3245	Rae MiniRae 3000 10.6eV

Cal Summary: Pump: 500cc, Cal: 0/100ppm, 10.6

Previous Reports

Department of Ecology Files

YAKIMA COUNTY

SITE ID:	**Gearjammer Truck Plaza**		Cleanup Site ID: 7073	FS ID: 26981244
	Alternate Name(s):	Gear Jammer Truck Plaza, Gearjammer Truck Plaza, The Gearjammer, The Jammer		

LOCATION:		WRIA: 37	Lat/Long:	46.568	-120.473	View Vicinity Map
Address:	2310 RUDKIN RD		Township	Range	Section	Legislative District: 15
	UNION GAP 98903		13N	19E	32	Congressional District: 4

STATUS:	**Cleanup Started**	Rank: 5	View Site Web Page	View Site Documents
	Responsible Unit: Central	Site Manager: Smith, Frosti	Statute: MTCA	
	Is Brownfield?	Has Environmental Covenant?	Is PSI Site?	
	NFA Received?	NFA Date:	NFA Reason:	

ASSOCIATED CLEANUP UNIT(s)

cuID	Cleanup Unit Name	Unit Type	Process Type	Unit Status	Size (Acres)	ERTS ID
6038	Gearjammer Truck Plaza	Upland	Independent Action	Cleanup Started		C503247

SITE ACTIVITIES:

Applies to:	Related ID (Unit-LUST-VCP)	Activity Display Name	Status	Start Date	End Date	Legal Mechanism	Performed By	Project Manager
CleanupSite		Site Discovery/Release Report Received	Completed	3/11/1999	3/11/1999			Bassett, Dick
CleanupSite		Early Notice Letter(s)	Completed	4/23/1996	4/23/1996			Bassett, Dick
CleanupSite		Site Hazard Assessment/Federal Site Inspection	Completed	4/2/2000	6/30/2004		Ecology	Bassett, Dick
CleanupSite		Hazardous Sites Listing/NPL	Completed	1/29/2004	1/29/2004			Bassett, Dick
LUST		LUST - Notification	Completed	3/11/1999	3/11/1999			Kroon, Debra
LUST		LUST - Notification	Completed	2/26/1996	2/26/1996			
LUST		LUST - Site Assessment Report	Completed	8/31/2004	8/31/2004			
LUST		LUST - Site Characterization Report		2/22/1996	2/22/1996			
LUST		LUST - Report Received	Completed	6/20/2002	6/20/2002			
LUST		LUST - Report Received	Completed	7/20/2015	7/20/2015			
LUST		LUST - Report Received	Completed	3/24/2010	3/24/2010			
LUST		LUST - Report Received	Completed	11/11/2009	11/11/2009			
LUST		LUST - Report Received	Completed	10/23/2009	10/23/2009			

LUST		LUST - Report Received	Completed	11/7/2014	11/7/2014			
LUST		LUST - Report Received	Completed	5/8/2001	5/8/2001			
LUST		LUST - Report Received	Completed	5/8/2001	5/8/2001			
LUST		LUST - Report Received	Completed	7/13/2010	7/13/2010			
LUST		LUST - Report Received	Completed	9/28/2015	9/28/2015			
LUST		LUST - Report Received	Completed	3/16/2015	3/16/2015			
LUST		LUST - Report Received	Completed	7/3/2000	7/3/2000			
VcpProject	CE0312	VCP Application	Completed	7/28/2009	7/28/2009			Smith, Frosti
VcpProject	CE0312	VCP Status Request	Completed	5/16/2012	5/21/2012			Smith, Frosti
VcpProject	CE0312	VCP Termination	Completed	5/21/2012	5/21/2012			Smith, Frosti
VcpProject	CE0312	VCP Opinion on Interim Action	Completed	7/27/2009	9/8/2010			Bassett, Dick

AFFECTED MEDIA & CONTAMINANTS:

Media:

Contaminant:	Ground Water	Surface Water	Soil	Sediment	Air	Bedrock
Non-Halogenated Solvents	C		C			
Petroleum Products-Unspecified	C					
Petroleum-Diesel	C		C			
Petroleum-Gasoline			C			

Key:
B - Below Cleanup Level
C - Confirmed Above Cleanup Level
S - Suspected
R - Remediated
RA - Remediated-Above
RB - Remediated-Below

CleanupSiteDetails2014

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
15 W Yakima Ave, Ste 200 • Yakima, WA 98902-3452 • (509) 575-2490

September 8, 2010

Mr. Chuck Hinckley
2310 Rudkin Road
Union Gap, WA 98903

Re: Further Action at the following Site:

- **Site Name:** Gearjammer Truck Plaza
- **Site Address:** 2310 Rudkin Road
- **Facility/Site No.:** **26981244**
- **VCP Project No.:** **CE 0312**

Dear Mr. Hinckley:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Gearjammer Truck Plaza facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

YES. Ecology has determined that further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively "substantive requirements of MTCA"). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:

- Total Petroleum Hydrocarbons diesel (TPHd) into the Ground Water.

The Site is described and defined in the text and in Figures 1 through 6 in the June 21, 2010; March 19, 2010; November 11, 2009; and August 27, 2009, Groundwater Monitoring Reports by Blue Mountain Consulting.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel(s) associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Groundwater Monitoring Reports, Gearjammer Truck Plaza; Blue Mountain Environmental Consulting; June 21, 2010; March 19, 2010; November 11, 2009; and August 27, 2009.

2. Ecology letter of February 4, 2009; Richard Bassett.

3. Limited Groundwater Sampling & Analysis Report; Sage Earth Sciences, Inc.; June, 2000.

Those documents are kept in the Central Files of the Central Regional Office of Ecology (CRO) for review by appointment only. You can make an appointment by calling the CRO resource contact at (509) 454-7839.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that **further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

Diesel groundwater contamination has decreased significantly since May 23, 2000 (reference 3) when sampling analyses found TPHd at 14,000 ug/L (MTCA cleanup level is at 500 ug/L).

In the last four quarterly groundwater reports, there was no longer a report of free product in MW-3 (reference 1).

Yet, in the recent four Blue Mountain quarterly groundwater reports, TPHd was still above (580 ug/L) or close to (310 ug/L) the MTCA cleanup value of 500 ug/L (Table 720-1 Method A Cleanup Levels for Ground Water) in two of its four submittals (reference 1). An additional four quarters of sampling for just TPHd (reduced number of contaminant monitoring and analyses) at all three Site wells is required and may bring the Site to cleanup.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Contact Information

Thank you for choosing to clean up the Site under the Voluntary Cleanup Program (VCP). After you have addressed our concerns, you may request another review of your cleanup. Please do not hesitate to request additional services as your cleanup progresses. We look forward to working with you.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me by phone at (509) 454-7839 or e-mail at rbas461@ecy.wa.gov.

Sincerely,

Richard Bassett
CRO Toxics Cleanup Program

cc: Peter Trabusiner, Blue Mountain

SAGE Earth Sciences, Inc.

September 18, 2015

Mr. Chuck Hinckley
GearJammer, Inc.
2310 Rudkin Road
Union Gap, WA 98903

SUBJECT: LIMITED GROUNDWATER MONITORING REPORT FOR THE GEARJAMMER, INC. FACILITY, UNION GAP, WA.

Dear Mr. Hinckley,

Enclosed, please find two (2) copies of the above referenced report. We will transmit a copy of this report to the Washington State Department of Ecology (WSDOE), Toxics Cleanup Program. The WSDOE requires that you retain this report for a minimum of ten (10) years. Sage recommends that you retain it indefinitely.

Sage Earth Sciences, Inc. appreciates the opportunity to provide you with environmental services for your remediation project. Please contact us if you have any questions or comments.

Respectfully,
SAGE EARTH SCIENCES, INC.

David L. Green
Hydrogeologist

Enclosures: *Invoice* dated September 18, 2015 and
Groundwater Monitoring Report dated September 18, 2015.

cc: file
Washington State Department of Ecology, Toxics Cleanup Program, Yakima, WA

1705 South 24th Avenue ✤ Yakima, WA 98902
Phone: 509.834.2333 ✤ Fax: 509.834.2334 ✤ E-mail: info@sage-earth-sciences.com

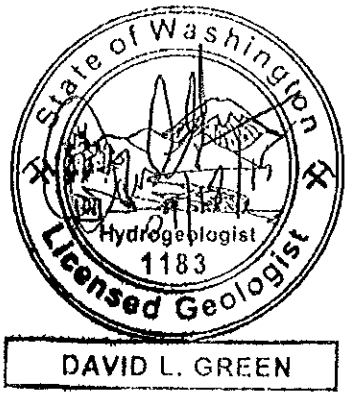
Groundwater Monitoring Report

For the GearJammer Truck Plaza
2310 Rudkin Road,
Union Gap, WA 98903

Prepared For:

GearJammer, Inc.
2310 Rudkin Road
Union Gap, WA 98903

Prepared By:



SAGE
Earth Sciences, Inc.

1705 S. 24th Ave.
Yakima, WA 98902

September 18, 2015

Executive Summary

The GearJammer Truck Plaza is located at 2310 Rudkin Road, Union Gap, WA. Sage Earth Sciences, Inc. was retained to collect and analyze a groundwater sample from Monitoring Well #3 to assess petroleum hydrocarbon concentrations. Sage conducted the limited groundwater monitoring field activities on August 31, 2015.

Sage checked for the presence of Light Non-Aqueous Phase Liquid (petroleum product), and collected Depth to Water (DTW) measurements, using a Solinst 122 interface probe during groundwater monitoring activities. No petroleum product was indicated by the interface probe. Sage observed no petroleum sheen or diesel odors during the sampling process.

Sage collected a groundwater samples (GTP-0117-MW3) from Monitoring Well #3 on August 31, 2015. Sage submitted the groundwater samples to Friedman & Bruya, Inc. (FBI), Seattle, WA for analysis using the following methods: 8021B/NWTPH-Gx (gasoline range and aromatic petroleum hydrocarbons) and NWTPH-Dx (diesel range petroleum hydrocarbons extended to include motor oil range compounds).

With the exception of diesel range petroleum hydrocarbons, the FBI independent laboratory analysis of the Groundwater Monitoring Well #3 sample found no detectable petroleum hydrocarbons. The FBI independent laboratory analysis found diesel range petroleum hydrocarbons at a concentration of 500 µg/L (ppb). Diesel range petroleum hydrocarbon concentrations were found to exceed the *Method A Groundwater Cleanup Levels* of WAC 173-340-720 at the Monitoring Well #3 location for this sampling event. Sage recommends that purge water generated during monitoring well sampling activities be uncovered and allowed to evaporate. It should be covered during period of precipitation.

TABLE OF CONTENTS

LIST OF APPENDICES

1.0 Introduction

1.1 Purpose

The purpose of this report is to describe findings associated with limited groundwater monitoring activities at the GearJammer Truck Plaza located in Union Gap, Washington. These activities were performed to assess petroleum hydrocarbon concentrations in Monitoring Well #3, where diesel and heavy oil range petroleum hydrocarbons were historically found.

1.2 Scope of Work

Sage Earth Sciences, Inc. (Sage) performed sampling of Monitoring Well #3 and groundwater gradient characterization services. Groundwater samples were submitted to Friedman and Bruya, Inc. (FBI), Seattle, WA for independent laboratory analysis.

1.3 Site Location

The GearJammer Truck Plaza is located at 2310 Rudkin Road, Union Gap, WA. It is situated within the NE 1/4 of the SE 1/4, Section 32, Township 13 North, Range 19 East, Willamette Meridian. The Monitoring Well #3 latitude is approximately 46° 34' 3.8" and the longitude is approximately 120° 28' 22.4. The location of Monitoring Well #3 is shown by Figure 1.

2.0 Groundwater Monitoring

Rodney L. Heit, licensed by the International Code Council, collected the groundwater sample and Depth to Groundwater (DTW) measurements during groundwater monitoring activities. Sage conducted field activities on August 31, 2015.

2.1 Groundwater Gradient Monitoring

Sage checked for the presence of Light Non-Aqueous Phase Liquid (petroleum product), and collected Depth to Water (DTW) measurements, using a Solinst 122 interface probe during groundwater monitoring activities. No petroleum product was indicated by the interface probe. Groundwater level and survey data are included in Table 1. The water levels appear to represent the uppermost portion of an unconfined water-bearing unit.

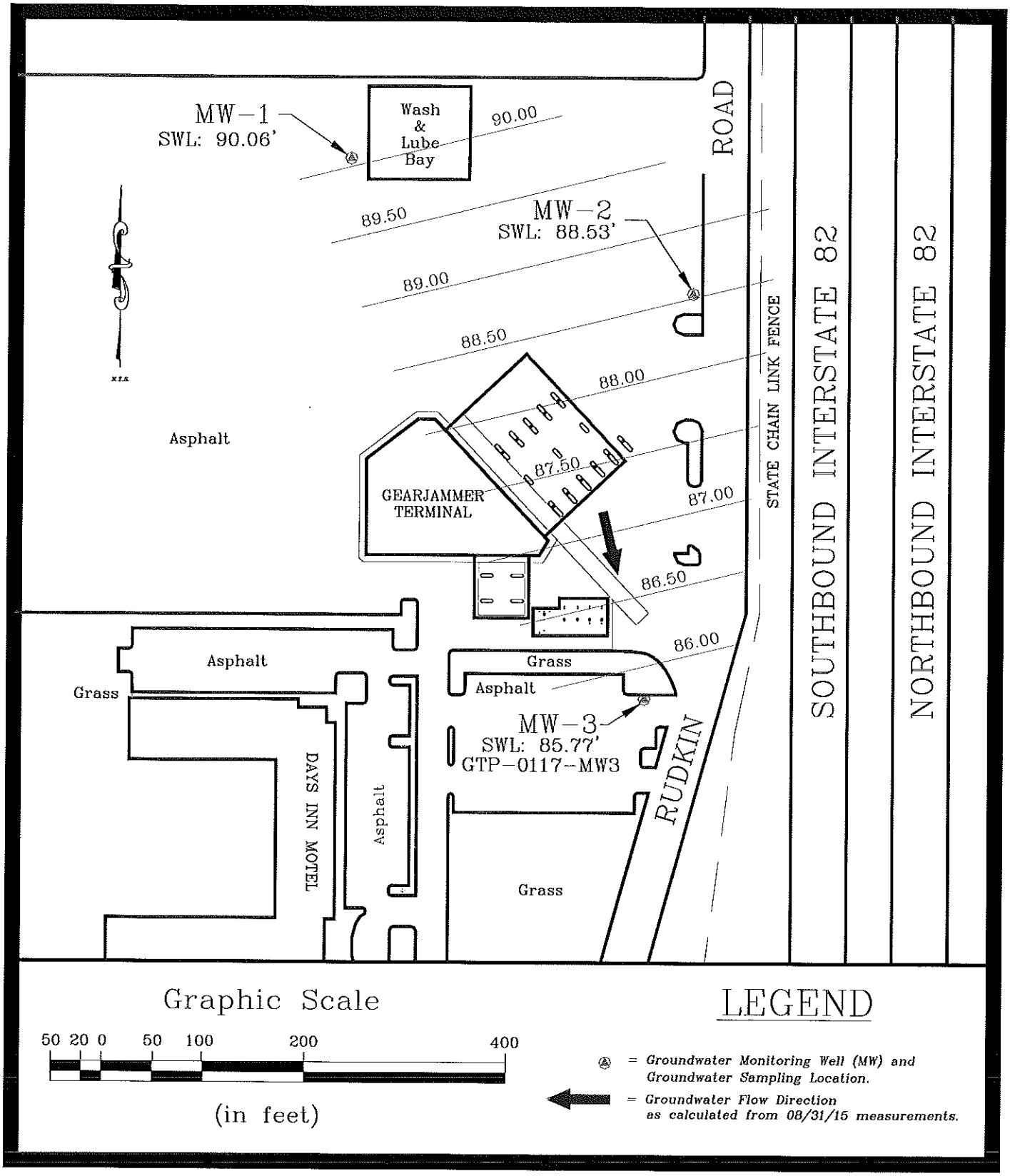


Figure 1. Groundwater Sampling Location & Water Table Contours on August 31, 2015

Table 1. Well Survey and Groundwater Level Data

Well ID	Date	Top of Casing Elevation (TBM)	Measured Depth to Groundwater (feet TOC)	Relative Groundwater Elevation (feet)	Change From Previous Elevation (feet)
MW-1	10/16/14	98.87	8.56	90.31	--
	02/23/15		10.31	88.56	-1.75
	06/01/15		9.63	89.24	+0.68
	08/31/15		8.81	90.06	+0.82
MW-2	10/16/14	97.20	8.44	88.76	--
	02/23/15		9.96	87.24	1.52
	06/01/15		9.36	87.84	+0.60
	08/31/15		8.67	88.53	+0.69
MW-3	10/16/14	95.56	9.79	85.77	--
	02/23/15		10.42	85.14	0.63
	06/01/15		10.45	85.11	-0.03
	08/31/15		9.79	85.77	+0.66

TBM – Relative to Temporary Bench Mark, BGS – Below Ground Surface, TOC – Relative to Top Of Casing

On August 31, 2015, the groundwater surface was found to lie at depths ranging from 8.67 to 9.79 feet below top of casing in the wells. The local groundwater gradient was calculated to be approximately 0.007 ft/ft from the north-northwest toward the south-southeast as shown by Figure 1.

2.2 Groundwater Sampling & Analysis

Sage collected a groundwater samples (GTP-0117-MW3) from Monitoring Well #3 on August 31, 2015. Sage collected the groundwater sample using methods described in Appendix A. The *Monitoring Well Sampling Log* (Appendix B) provides sampling observations. Sage observed no petroleum sheen or diesel odors during the sampling process. Approximately 10 gallons of well purge water was placed in barrels temporarily stored at the northern portion of the subject property.

Sage submitted the groundwater sample to Friedman & Bruya, Inc. (FBI), Seattle, WA for analysis using the following methods: 8021B/NWTPH-Gx (gasoline range and aromatic petroleum hydrocarbons) and NWTPH-Dx (diesel range petroleum hydrocarbons extended to include motor oil range compounds). The monitoring well and groundwater sampling location is shown by Figure 1.

FBI analytical results for the Monitoring Well #3 sample are summarized by Table 2. Comparison of the analytical results (Appendix C) with the *Method A Groundwater Cleanup Levels* of WAC 173-340-720 (Appendix D) indicates that remedial action is required at the Groundwater Monitoring Well #3 sampling location for this groundwater sampling event to reduce diesel range petroleum hydrocarbon concentrations.

Table 2. FBI Analytical Results for Groundwater Monitoring Well #3 Samples

Sample ID	Date	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline (ug/L)	Diesel (ug/L)	Motor Oil (ug/L)
GTP-0114-MW3	10/16/14	<1	<1	<1	<3	<100	370	<250
GTP-0115-MW3	02/23/15	<1	<1	<1	<3	<100	62	<250
GTP-0116-MW3	06/01/15	<1	<1	<1	<3	<100	2,100	310
GTP-0117-MW3	08/31/15	<1	<1	<1	<3	<100	500	<250

Red Font indicates that concentration exceeds Method A Cleanup Levels of WAC 173-340-720
Green Font indicates that concentration does not exceed Method A Cleanup Levels of WAC 173-340-720
ug/L = parts per billion

3.0 Conclusions

With the exception of diesel range petroleum hydrocarbons, the FBI independent laboratory analysis of the Groundwater Monitoring Well #3 sample found no detectable petroleum hydrocarbons. The FBI independent laboratory analysis found diesel range petroleum hydrocarbons at a concentration of 500 µg/L (ppb). Diesel range petroleum hydrocarbon concentrations were found to exceed the *Method A Groundwater Cleanup Levels* of WAC 173-340-720 at the Monitoring Well #3 location for this sampling event. Sage recommends that purge water generated during monitoring well sampling activities be uncovered and allowed to evaporate. It should be covered during period of precipitation.

4.0 Limitations

In performance of this project, Sage Earth Sciences has conducted its activities in accordance with generally accepted professional consulting principles and practices. No other warranty, express or implied, is made. The conclusions are based upon our field observations and independent laboratory analyses. Since the scope of work for this project is confined to sampling and analysis of Monitoring Well #3 for petroleum hydrocarbons and groundwater gradient characterization services, this document does not imply that the property is free of other environmental constraints. This report is solely for the use and information of our client. 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 other parameters indicated. Sage Earth Sciences, Inc. is not responsible for the impacts of changes in environmental standards, practices, or regulations subsequent to the performance of services. Sage Earth Sciences, Inc. does not warrant the accuracy of information supplied by others, nor use of segregated portions of this report. Sage Earth Sciences, Inc. assumes no liability for conditions we were not authorized to evaluate, or conditions not generally recognized as predictable when services were performed.

Appendix A

Groundwater Sampling Methodology – Low Flow Purging

Prior to introducing groundwater-sampling equipment into the monitoring well, Sage collected a Depth to Water (DTW) measurement and checked for the presence of floating product (LNAPL) on the water table using a Solinst Model 122 Interface Probe. DTW measurements are recorded on the Daily Field Sampling Log.

Unless sampling was conducted immediately after well development, Sage purged a minimum of three well column volumes of water from each well, prior to collecting groundwater samples, to introduce formation water into each well. Each well was purged using a Geotech Series II® Peristaltic Pump using a flow rate less than 1.0 liter per minute to minimize drawdown of the well. The flow rate was determined by measuring the volume of effluent collected in a graduated beaker in one-minute intervals (mL/min).

The peristaltic pump operates by mechanical peristalsis so the sample is only exposed to new polyethylene sampling tubing and norprene tubing. Water was pumped from depths between 2 feet and 3 feet below the water table. Pumped water was discharged into a 5-gallon pail for transfer into Investigative Derived Waste (IDW) storage barrels.

When three (3) well column volumes of water were purged from the well, water was discharged from the pump system directly into laboratory supplied sample containers. Sample containers consisted of:

- 40 mL VOA's preserved with HCl for NWTPH-G/VOC analysis,
- 500 mL amber jars with no preservative for NWTPH-Dx/SVOC analysis and
- 500 mL Poly containers preserved with HNO_3 for metals analysis.

Upon filling each sample container, the following methodology for sample handling was used:

1. Replace the sample container cap. Invert VOA's to ensure there is no airspace in the sample.
2. Label sample containers with a unique identification number, the analytical procedure to be used, the time/date of sample collection, and sample preservation method.
3. Log each sample on the Chain-of-Custody form.
4. Place samples in coolers containing wet ice to cool the samples to 4°C ± 2°C until transferred to a refrigerator at the Sage office for temporary storage.
5. Samples were packed on the day of transport in a shipping cooler packed with absorbent material and blue ice for shipment to the fixed laboratory.
6. The signed Chain-of-Custody forms were taped on the underside of the cooler lid in a sealed plastic bag.
7. The lid of the cooler was secured with strapping tape and custody seals were affixed across the lid/cooler interface. Appropriate waybills were taped to the top of the cooler.
8. The samples were transported to the fixed analytical laboratory via commercial carrier.

Appendix B

Daily Field Sampling Log

Project# GTP-0117 Date 8-31-2015

Field Crew Rodney Heir

Sheet 1 of 1

Partly Cloudy Breezy 74°F

Time	Sample #	Sample Location	Matrix	Staining	Odors	Depth	TOV	TLC
10:05	NA	Monitoring Well #1	water	NA	NA	8.81	—	—
10:20	NA	Monitoring well #2	water	NA	NA	8.67	—	—
11:48	GTP-0117-MW3	Monitoring well #3	water	None	None	9.79	—	—

0138

Ambient Vapors NA Units

TLC Standards NA

Appendix C

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.
Yelena Aravkina, M.S.
Michael Erdahl, B.S.
Arina Podnozova, B.S.
Eric Young, B.S.

3012 16th Avenue West
Seattle, WA 98119-2029
(206) 285-8282
fbi@isomedia.com
www.friedmanandbruya.com

September 10, 2015

Rodney Heit, Project Manager
Sage Earth Sciences, Inc.
1705 S 24th Ave
Yakima, WA 98902

Dear Mr. Heit:

Included are the results from the testing of material submitted on September 1, 2015 from the GTP-0117, F&BI 509011 project. There are 6 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you should have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.

Michael Erdahl
Project Manager

Enclosures
SES0910R.DOC

FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

CASE NARRATIVE

This case narrative encompasses samples received on September 1, 2015 by Friedman & Bruya, Inc. from the Sage Earth Sciences GTP-0117, F&BI 509011 project. Samples were logged in under the laboratory ID's listed below.

Laboratory ID	Sage Earth Sciences
509011 -01	GTP-0117-MW3

All quality control requirements were acceptable.

Date of Report: 09/10/15
Date Received: 09/01/15
Project: GTP-0117, F&BI 509011
Date Extracted: 09/02/15
Date Analyzed: 09/02/15

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES AND TPH AS GASOLINE USING METHODS 8021B AND NWTPH-Gx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Benzene	Toluene	Ethyl Benzene	Total Xylenes	Gasoline Range	Surrogate (% Recovery) (Limit 52-124)
GTP-0117-MW3 509011-01	<1	<1	<1	<3	<100	94
Method Blank 05-1751 MB	<1	<1	<1	<3	<100	95

Date of Report: 09/10/15
Date Received: 09/01/15
Project: GTP-0117, F&BI 509011
Date Extracted: 09/03/15
Date Analyzed: 09/03/15

RESULTS FROM THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND MOTOR OIL USING METHOD NWTPH-Dx

Results Reported as ug/L (ppb)

Sample ID Laboratory ID	Diesel Range (C_{10}-C_{25})	Motor Oil Range (C_{25}-C_{36})	Surrogate (% Recovery) (Limit 41-152)
GTP-0117-MW3 509011-01	500 x	<250	77
Method Blank 05-1801 MB	<50	<250	81

Date of Report: 09/10/15
Date Received: 09/01/15
Project: GTP-0117, F&BI 509011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR BENZENE, TOLUENE, ETHYLBENZENE, XYLENES, AND TPH AS GASOLINE USING EPA METHOD 8021B AND NWTPH-Gx

Laboratory Code: 509019-01 (Duplicate)

Analyte	Reporting Units	Sample Result	Duplicate Result	RPD (Limit 20)
Benzene	ug/L (ppb)	<1	<1	nm
Toluene	ug/L (ppb)	<1	<1	nm
Ethylbenzene	ug/L (ppb)	<1	<1	nm
Xylenes	ug/L (ppb)	<3	<3	nm
Gasoline	ug/L (ppb)	<100	<100	nm

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Acceptance Criteria
Benzene	ug/L (ppb)	50	95	65-118
Toluene	ug/L (ppb)	50	95	72-122
Ethylbenzene	ug/L (ppb)	50	97	73-126
Xylenes	ug/L (ppb)	150	96	74-118
Gasoline	ug/L (ppb)	1,000	96	69-134

Date of Report: 09/10/15
Date Received: 09/01/15
Project: GTP-0117, F&BI 509011

QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR TOTAL PETROLEUM HYDROCARBONS AS DIESEL EXTENDED USING METHOD NWTPH-Dx

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent Recovery LCS	Percent Recovery LCSD	Acceptance Criteria	RPD (Limit 20)
Diesel Extended	ug/L (ppb)	2,500	102	101	63-142	1

Data Qualifiers & Definitions

a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.

b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.

ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.

c - The presence of the analyte may be due to carryover from previous sample injections.

cf - The sample was centrifuged prior to analysis.

d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.

dv - Insufficient sample volume was available to achieve normal reporting limits.

f - The sample was laboratory filtered prior to analysis.

fb - The analyte was detected in the method blank.

fc - The compound is a common laboratory and field contaminant.

hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.

hs - Headspace was present in the container used for analysis.

ht – The analysis was performed outside the method or client-specified holding time requirement.

ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.

j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.

J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.

jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.

js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.

lc - The presence of the analyte is likely due to laboratory contamination.

L - The reported concentration was generated from a library search.

nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.

pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.

ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.

vo - The value reported fell outside the control limits established for this analyte.

x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.

509011

ME 09-01-15 C04/V1

SAGE Earth Sciences, Inc.

CHAIN OF CUSTODY

1705 South 24th Avenue
Yakima, WA 98902
Phone (509) 834-2333
Fax (509) 834-2334
info@sage-earth-sciences.com

Sampler: Rodney L Heit
Project ID: CTP-0117
Location: Goar Tommun Truck Plaza
Turn-around Time: Standard
Sampler Signature: [signature]
Date: 8/31/15

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	Sample Size	# of containers	NWTPH-HCID	+ BETX NWTPH-Gx	NWTPH-Dx	Method 8260B	Method 8270	Method 6010/200.	Total Lead	Lab Archive	Notes:
CTP-0117-MW 3	01A-	8/31/15	11:48	Water	2-40ml 1-500ml	3		X	X						

Laboratory Destination:

Friedman & Bruya, Inc.
3012 – 16th Avenue West
Seattle, WA 98119-2029
Phone (206) 285-8282
Fax (206) 283-5044

	SIGNATURE	PRINTED NAME	COMPANY	DATE	TIME
Relinquished By	[signature]	Rodney L Heit	Sage Earth Sciences, Inc.	8/31/15	12:10
Received By	[signature]	Nhan Phan	FeBI	9/1/15	1030
Relinquished By					
Received By					

Samples received at 4 °C

Appendix D

Table 720-1
Method A Cleanup Levels for Ground Water.[a]

Hazardous Substance	CAS Number	Cleanup Level
Arsenic	7440-38-2	5 ug/liter[b]
Benzene	71-43-2	5 ug/liter[c]
Benzo(a)pyrene	50-32-8	0.1 ug/liter[d]
Cadmium	7440-43-9	5 ug/liter[e]
Chromium (Total)	7440-47-3	50 ug/liter[f]
DDT	50-29-3	0.3 ug/liter[g]
1,2 Dichloroethane (EDC)	107-06-2	5 ug/liter[h]
Ethylbenzene	100-41-4	700 ug/liter[i]
Ethylene dibromide (EDB)	106-93-4	0.01 ug/liter[j]
Gross Alpha Particle Activity		15 pCi/liter[k]
Gross Beta Particle Activity		4 mrem/yr[l]
Lead	7439-92-1	15 ug/liter[m]
Lindane	58-89-9	0.2 ug/liter[n]
Methylene chloride	75-09-2	5 ug/liter[o]
Mercury	7439-97-6	2 ug/liter[p]
MTBE	1634-04-4	20 ug/liter[q]
Naphthalenes	91-20-3	160 ug/liter[r]
PCB mixtures		0.1 ug/liter[s]
Radium 226 and 228		5 pCi/liter[t]
Radium 226		3 pCi/liter[u]
Tetrachloroethylene	127-18-4	5 ug/liter[v]
Toluene	108-88-3	1,000 ug/liter[w]
Total Petroleum Hydrocarbons[x]		
[Note: Must also test for and meet cleanup levels for other petroleum components--see footnotes!]		
Gasoline Range Organics		800 ug/liter
Benzene present in ground water		1,000 ug/liter
No detectable benzene in ground water		
Diesel Range Organics		500 ug/liter
Heavy Oils		500 ug/liter
Mineral Oil		1,000 ug/liter
1,1,1 Trichloroethane	71-55-6	200 ug/liter[y]
Trichloroethylene	79-01-5	5 ug/liter[z]
Vinyl chloride	75-01-4	0.2 ug/liter[aa]
Xylenes	1330-20-7	1,000 ug/liter[bb]

Footnotes:

a **Caution on misusing this table.** This table has been developed for specific purposes. It is intended to provide conservative cleanup levels for drinking water beneficial uses at sites undergoing routine cleanup actions or those sites with relatively few hazardous substances. This table may not be appropriate for defining cleanup levels at other sites. For these reasons, the values in this table should not automatically be used to define cleanup levels that must be met for financial, real estate, insurance coverage or placement, or similar transactions or purposes. Exceedances of the values in this table do not necessarily mean the ground water must be restored to those levels at all sites. The level of restoration depends on the remedy selected under WAC 173-340-350 through 173-340-390.

b **Arsenic.** Cleanup level based on background concentrations for state of Washington.

c **Benzene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

d **Benzo(a)pyrene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61), adjusted to a 1 x 10 -5 risk. This value may also be used as the total concentration that all carcinogenic PAHs must meet using the toxicity equivalency methodology in WAC 173-340-708(8).

e **Cadmium.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.62).

f **Chromium (Total).** Cleanup level based on concentration derived using Equation 720-1 for hexavalent chromium. This is a total value for chromium III and chromium VI. If just chromium III is present at the site, a cleanup level of 100 ug/l may be used (based on WAC 246-290-310 and 40 C.F.R. 141.62).

g **DDT (dichlorodiphenyltrichloroethane).** Cleanup levels based on concentration derived using Equation 720-2.

h **1,2 Dichloroethane (ethylene dichloride or EDC).** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

i **Ethylbenzene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

j **Ethylene dibromide (1,2 dibromoethane or EDB).** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit.

k **Gross Alpha Particle Activity, excluding uranium.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

l **Gross Beta Particle Activity, including gamma activity.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

m **Lead.** Cleanup level based on applicable state and federal law (40 C.F.R. 141.80).

n **Lindane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

o **Methylene chloride (dichloromethane).** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

p **Mercury.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.62).

q **Methyl tertiary-butyl ether (MTBE).** Cleanup level based on federal drinking water advisory level (EPA-822-F-97-009, December 1997).

r **Naphthalenes.** Cleanup level based on concentration derived using Equation 720-1. This is a total value for naphthalene, 1-methyl naphthalene and 2-methyl naphthalene.

s **PCB mixtures.** Cleanup level based on concentration derived using Equation 720-2, adjusted for the practical quantitation limit. This cleanup level is a total value for all PCBs.

t **Radium 226 and 228.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.15).

u **Radium 226.** Cleanup level based on applicable state law (WAC 246-290-310).

v **Tetrachloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

w **Toluene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

x **Total Petroleum Hydrocarbons (TPH).** TPH cleanup values have been provided for the most common petroleum products encountered at contaminated sites. Where there is a mixture of products or the product composition is unknown, samples must be tested using both the NWTPH-Gx and NWTPH-Dx methods and the lowest applicable TPH cleanup level must be met.

– **Gasoline range organics** means organic compounds measured using method NWTPH-Gx. Examples are aviation and automotive gasoline. The cleanup level is based on protection of ground water for noncarcinogenic effects during drinking water use. Two cleanup levels are provided. The higher value is based on the assumption that no benzene is present in the ground water sample. If any detectable amount of benzene is present in the ground water sample, the lower TPH cleanup level must be used. No interpolation between these cleanup levels is allowed. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene, EDB and EDC] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and MTBE], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for gasoline releases.

– **Diesel range organics** means organic compounds measured using NWTPH-Dx. Examples are diesel, kerosene, and #1 and #2 heating oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene and PAHs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for diesel releases.

– **Heavy oils** means organic compounds measured using NWTPH-Dx. Examples are #6 fuel oil, bunker C oil, hydraulic oil and waste oil. The cleanup level is based on protection from noncarcinogenic effects during drinking water use, assuming a product composition similar to diesel fuel. The ground water cleanup level for any carcinogenic components of the petroleum [such as benzene, PAHs and PCBs] and any noncarcinogenic components [such as ethylbenzene, toluene, xylenes and naphthalenes], if present at the site, must also be met. See Table 830-1 for the minimum testing requirements for heavy oil releases.

– **Mineral oil** means non-PCB mineral oil, typically used as an insulator and coolant in electrical devices such as transformers and capacitors measured using NWTPH-Dx. The cleanup level is based on protection from noncarcinogenic

effects during drinking water use. Sites using this cleanup level must analyze ground water samples for PCBs and meet the PCB cleanup level in this table unless it can be demonstrated that: (1) The release originated from an electrical device manufactured after July 1, 1979; or (2) oil containing PCBs was never used in the equipment suspected as the source of the release; or (3) it can be documented that the oil released was recently tested and did not contain PCBs. Method B (or Method C, if applicable) must be used for releases of oils containing greater than 50 ppm PCBs. See Table 830-1 for the minimum testing requirements for mineral oil releases.

y **1,1,1 Trichloroethane.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

z **Trichloroethylene.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61).

aa **Vinyl chloride.** Cleanup level based on applicable state and federal law (WAC 246-290-310 and 40 C.F.R. 141.61), adjusted to a 1 x 10 -5 risk.

bb **Xylenes.** Cleanup level based on xylene not exceeding the maximum allowed cleanup level for total petroleum hydrocarbons and on prevention of adverse aesthetic characteristics. This is a total value for all xylenes.

Groundwater Assessment Report

Site Location:
2310 Rudkin Road
Union Gap, Washington

WSI Job No. -199-026-01

Date: March 11, 1999

Prepared For:
Chuck Hinckley
Gear Jammer Truck Stop

Prepared By:

White Shield Environmental
801 Grandridge Road
Grandview, WA 98930

WHITE SHIELD ENVIRONMENTAL

P.O. Box 477 Grandview, WA 98930-0477

(509) 882-1144 Fax (509) 882-4566

March 11, 1999

Mr. Chuck Hinckley
Gear Jammer Truck Stop
2310 Rudkin Road
Union Gap, WA 98901

RE: GROUNDWATER ASSESSMENT REPORT, GEAR JAMMER SITE, 2310 RUDKIN ROAD, UNION GAP, WA.

Dear Mr. Hinckley,

Enclosed, you will find a copy of your Groundwater Assessment Report for the Gear Jammer site in Union Gap.

There is evidence of a petroleum hydrocarbon release to the groundwater which exceeds the Model Toxics Control Act Method A Cleanup Levels (total Xylene). This release was reported to the Washington State Department of Ecology on March 11, 1999, in accordance with WAC 173-340-450, and a copy of this report has been forwarded to them. The contamination we detected appears to be aged, or weathered and may not be indicative of a current release from your site.

Please contact us if you have any further questions or comments. We will give your site priority scheduling for any remaining work.

Thank you for the opportunity to assist you with your environmental assessment.

Sincerely,
WHITE SHIELD, INC.,

for William D Gowy
Terry Kristof
Senior Geologist

APPROVED:

William D Gowy
William D. Gowy,
Manager of Environmental Services

cc: WSDOE

FILE COPY

199-026-01

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1.0 INTRODUCTION

1.1 Site History and Location

The site is a Gear Jammer Truck Stop, which includes truck fueling services, lube and wash services, parking with amenities, a deli, restaurant and sports bar. The Gear Jammer is located at 2310 Rudkin Road, in the city of Union Gap, Yakima County, Washington State. This address is described as the NE 1/4 of the SE 1/4, Section 32, Township 13 N, Range 19 East, Willamette Meridian. A complete description of the site facilities was given in the report "Phase I Environmental Site Assessement," completed in January of 1999 by White Shield, Inc., (WSI). The site location is shown in Figure 1, Site Location Map.

In 1996 one 1,100 gallon used oil, and one 8,000 gallon new oil underground storage tanks were removed from the area immediately west of the lube and wash service building. A release occurred at that time, and may have impacted the soil under the lube and wash building. The soil underneath the building was not excavated at that time to avoid disturbing the foundation of the adjacent building.

This groundwater monitor well installation and sampling program was initiated at the direction of Mr. Chuck Hinkley, owner, to test the groundwater quality at this site. White Shield, Inc., provided the site assessment and survey services, Environmental West Inc., Spokane, WA, provided the drilling and monitor well construction services and OnSite Environmental Laboratory, Redmond, WA provided the independent laboratory analyses.

1.2 Geologic Overview

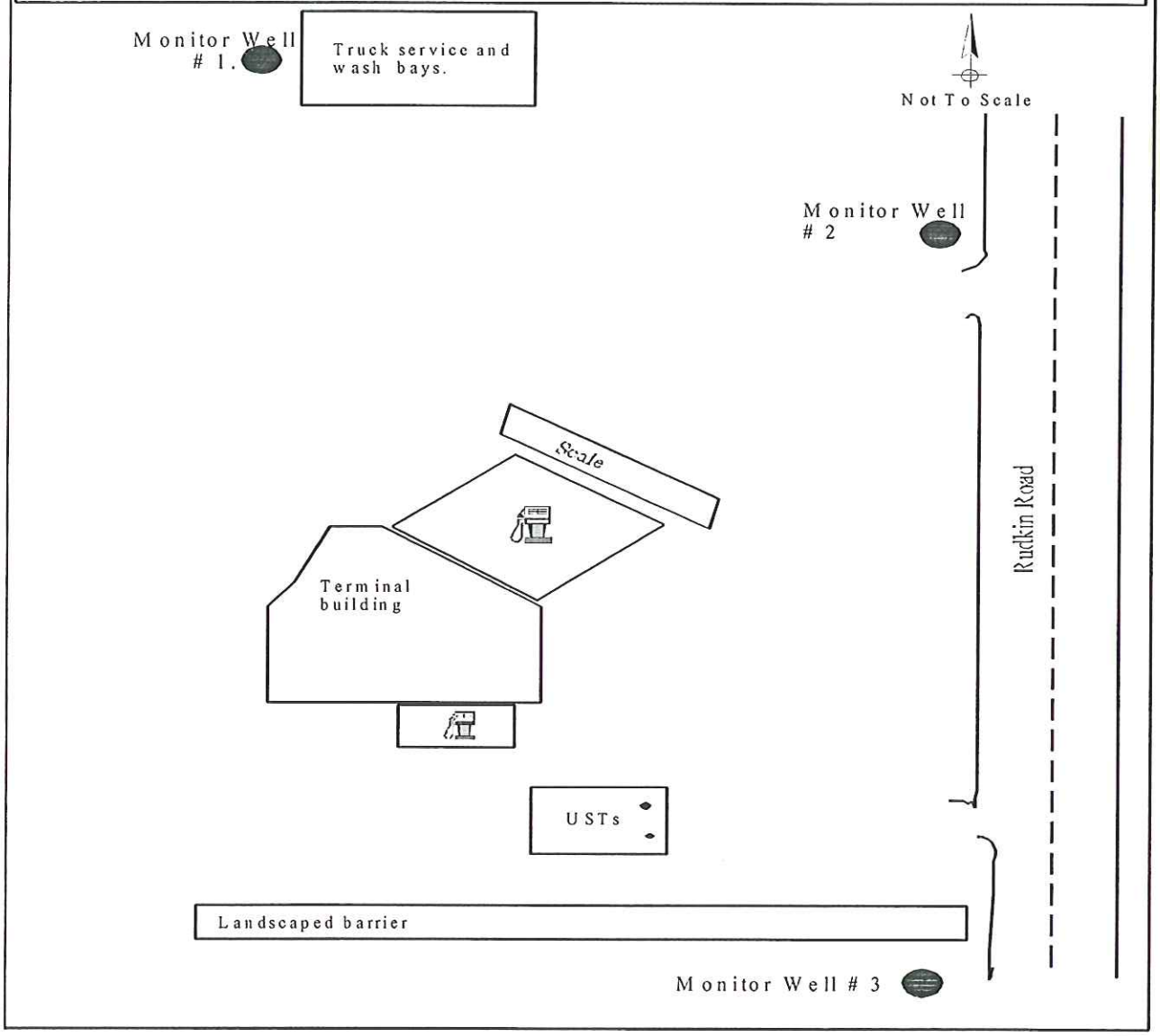
The Gear Jammer site is located west of the Pasco Basin of the Columbia Plateau Geologic Province, south of the Yakima Ridge, and Northwest of the Horse Heaven Plateau. Refer to Figure 2. The site lies approximately 3/4 miles west of the south flowing Yakima River. Groundwater in the Union Gap area flows south-east. The area is generally geologically mapped as Holocene Alluvium; unconsolidated gravel, silt, sand and boulder deposits.

1.3 Monitor Well Locations

Three monitor wells were constructed on the Gear Jammer site. Monitor Well # 1 is located immediately west of the truck service and wash bay. Monitor Well # 2 is located southeast of the truck service and wash bay and Monitor well # 3 is located southeast of the current UST area, and southeast of the entire site. Refer to Figure 3, Monitor Well Location Sketch.

Figure 3 , Monitor Well Location Sketch

The Gear Jammer Truck Stop,
Union Gap, Washington.



WSI

Quadrangle Location

Job No: 199-026-01

MONITOR WELL LOCATION SKETCH

GearJammer
2310 Rudkin Road
Union Gap, Washington

DATE:	Mounted By:	Reviewed By:	SCALE:	
March 10, 1999	GV	TK	As Shown	**FIGURE 3**

2.0 PERMITTING

Prior to mobilization for field work startup, specific well locations were spotted, underground utilities were located, and Washington State Department of Ecology (WSDOE) notification (well start card) of the intent to construct each monitoring well was completed by Environmental West and submitted to Ecology in accordance with WAC Chapter 173-1604. The completed Water Well Reports have been submitted to the WSDOE, and copies are included with this report, in Appendix A, Drill Logs.

3.0 SOIL BORINGS

Three soil borings were drilled to a depth of 15', using Environmental West's truck mounted CME Air Rotary drilling machine, sampled using a split spoon sampler, and converted to monitor wells. Terry Kristof, a WSI geologist registered with Ecology to perform site assessments was at the drilling site during all drilling operations to supervise the advancement of the soil borings. The geologist is familiar and experienced with the local lithology. Environmental West is a drilling contractor licensed by the State of Washington. Refer to Figures 4, 5 and 6 for the graphic logs and well construction details.

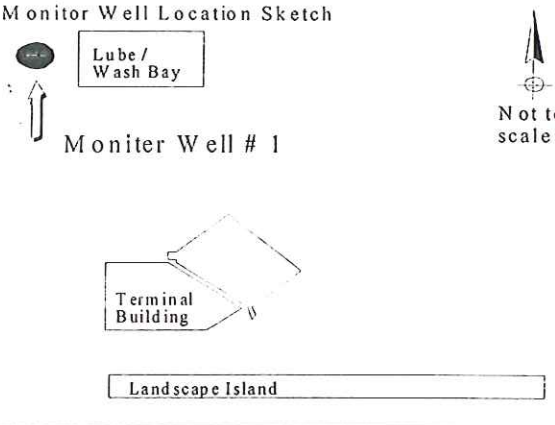
3.1.1 Boring # 1

Boring # 1 (Figure 4) was located immediately west of the lube and wash bay, where the underground storage tanks had been removed and where the release occurred. Two to three inches of asphalt surface material were cut and removed prior to drilling. The soil from the ground surface to a depth of 10' was silt, sand and fine angular gravel, which was fill material used to refill the excavation. From 10' to 15' we encountered very coarse sandy cobble - gravel with small boulders. Ground water was intersected at a depth of about 10'. We took two soil samples, one of the fill material at a depth of 5', and one at the soil - water interface, at a depth of 10' (sample # 199-026-01-100S). This sample was sent to OnSite Environmental for laboratory analysis. Refer to Photograph 1, Appendix B, Site Photographs.

3.1.2 Boring # 2

Boring # 2 (Figure 5) was located west of Rudkin Road, and southeast of the lube and wash bay. Two to three inches of asphalt surface material were cut and removed prior to drilling. The soil from the ground surface to a depth of 6" was silt, sand and fine angular gravel, base material for the asphalt surface. From 6" to 15' we encountered very coarse sandy cobble - gravel with small boulders, and sand lenses at 9' and 14.5'. Ground-water was intersected at a depth of about 10'. We took one soil sample from a depth of 10', but the material recovered was very coarse gravel and rock fragments with no silt and sand. This sample was not sent for laboratory analysis. Refer to Photograph # 2, Appendix B.

Monitor Well Location Sketch



GRAPHIC LOG, BOREHOLE # 1

Prepared For: The Gear Jammer, Union Gap, WA.
Prepared By: White Shield, Inc.
Geologist: Terry Kristof
Drilled By: Environmental West, Inc., Spokane, WA. Drilled using an air rotary rig equipped with a hammer bit.
Sampled using a 1.5' by 1.5" diameter split spoon sampler driven by a 140 lb drop hammer.

Date: 3/4/99

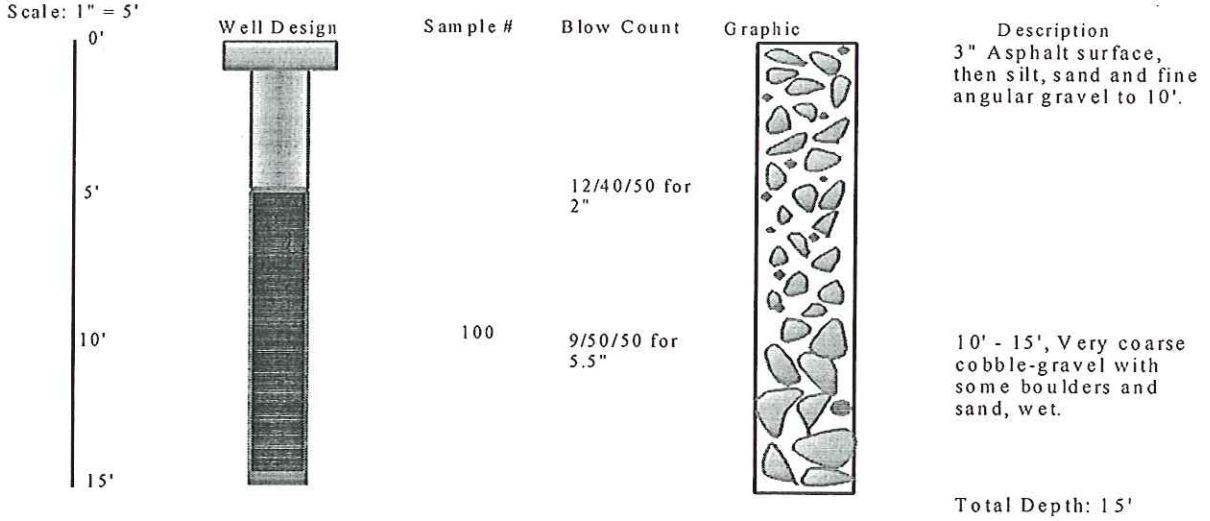
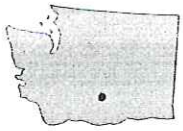


Figure 4

WSI



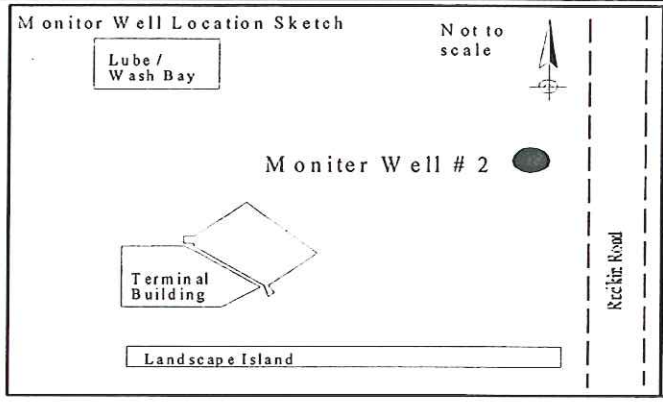
Quadrangle Location

Job No: 199-026-01

GRAPHIC LOG, BOREHOLE # 1

GearJammer
2310 Rudkin Road
Union Gap, Washington

DATE: March 10, 1999	Mounted By: GV	Reviewed By: TK	SCALE: As Shown	FIGURE 4



GRAPHIC LOG, BOREHOLE # 2

Prepared For: The Gear Jammer, Union Gap, WA.
Prepared By: White Shield, Inc.
Geologist: Terry Kristof
Drilled By: Environmental West, Inc., Spokane, WA. Drilled using an air rotary Rig equipped with a hammer bit.
Sampled using a 1.5' by 1.5" diameter split spoon sampler driven by a 140 lb drop hammer.

Date: 3/4/99

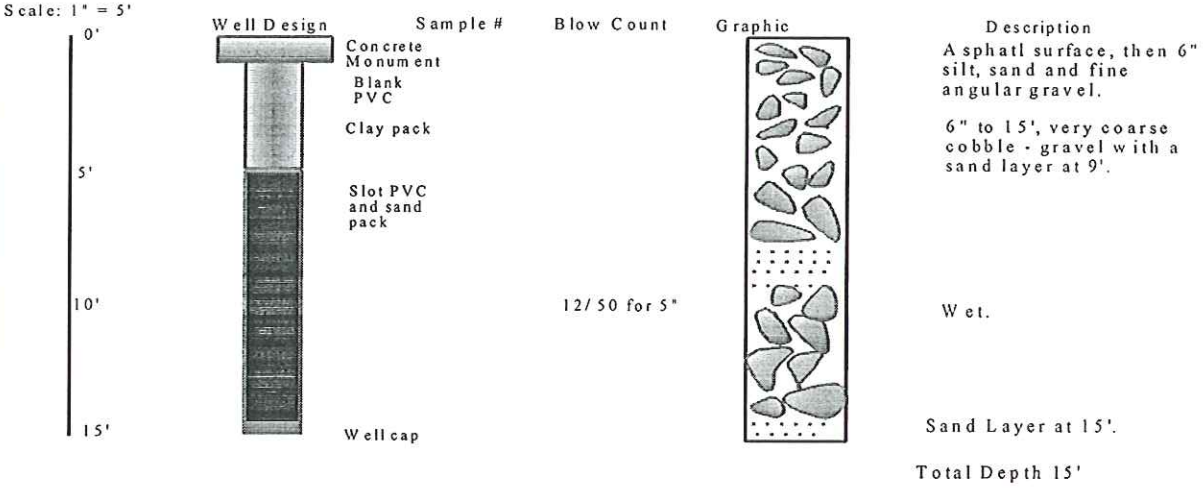
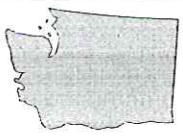


Figure 5

WSI



Quadrangle Location

Job No: 199-026-01

GRAPHIC LOG, BOREHOLE # 2

GearJammer
2310 Rudkin Road
Union Gap, Washington

DATE: March 11, 1999	Mounted By: GV	Reviewed By: TK	SCALE: As Shown	**FIGURE 5**

3.1.3 Boring # 3

Boring # 3 (Figure 6) was located west of Rudkin Road, at the southeastern edge of the site, and southeast of the current underground storage tank region. Two to three inches of asphalt surface material were cut and removed prior to drilling. The soil from the ground surface to a depth of 6" was silt, sand and fine angular gravel, base material for the asphalt surface. From 6" to 15' we encountered very coarse sandy cobble - gravel with small boulders. Ground water was intersected at a depth of about 10'. We took one soil sample from a depth of 10', but the material recovered was very coarse gravel and rock fragments with no silt and sand. This sample was not sent for laboratory analysis. Refer to Photograph #3, Appendix B.

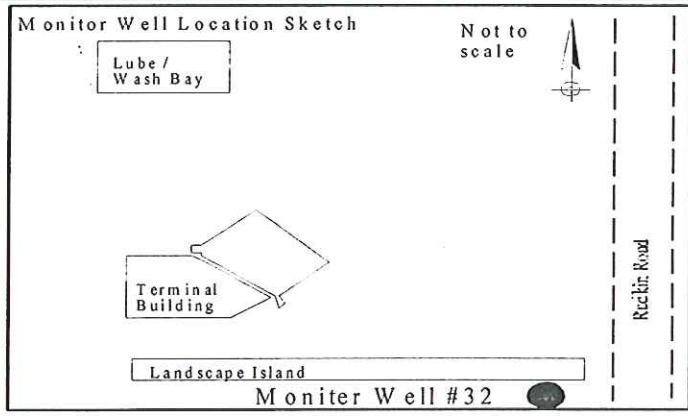
4.0 MONITOR WELL CONSTRUCTION

Groundwater monitor well construction was completed in accordance with regulations outlined in Chapter 173-160 WAC, *Minimum Standards for Construction and Maintenance of Wells*. Monitor wells were constructed as follows:

- Casing material is threaded flush jointed schedule 40 (2-inch wells) PVC blank casing, with 0.010-inch slotted well screen casing.
- Casing diameters for the groundwater monitor wells are 2 inches.
- Well screens are 10 feet in length with the base of the screened casing set from 15' to 5' below ground surface. Blank casing extends from the top of the screen to just below the ground surface, the base of the casing is sealed with a PVC flush-threaded bottom cap, and the top covered with a locking expansion plug-type cap. The plug-type caps have been secured with a padlock.
- The base of the borehole annulus was packed with clean, inert filter sand. The filter sand interval extended to 2 feet above the screened casing section. Hydrated bentonite was placed above the sand pack and extended to approximately 2 feet below ground surface. The remainder of the annulus was filled with a concrete slurry to a point just below the wellhead. Each well was completed to grade in a watertight, traffic-rated monument.

5.0 GROUNDWATER MONITOR WELL DEVELOPMENT

Groundwater monitor well development was conducted utilizing the drilling rig and a bottom discharge bailer in combination with a surge block and pump. The well was developed by pulling the surge block slowly past the screened interval of the well. After surging, the well was pumped removing water and suspended sediments from the well cavity. Development continued until the following objectives were met:



GRAPHIC LOG, BOREHOLE # 3

Prepared For: The Gear Jammer, Union Gap, WA.
Prepared By: White Shield, Inc.
Geologist: Terry Kristof
Drilled By: Environmental West, Inc., Spokane, WA. Drilled using an air rotary Rig equipped with a hammer bit.
Sampled using a 1.5' by 1.5" diameter split spoon sampler driven by a 140 lb drop hammer.

Date: 3/4/99

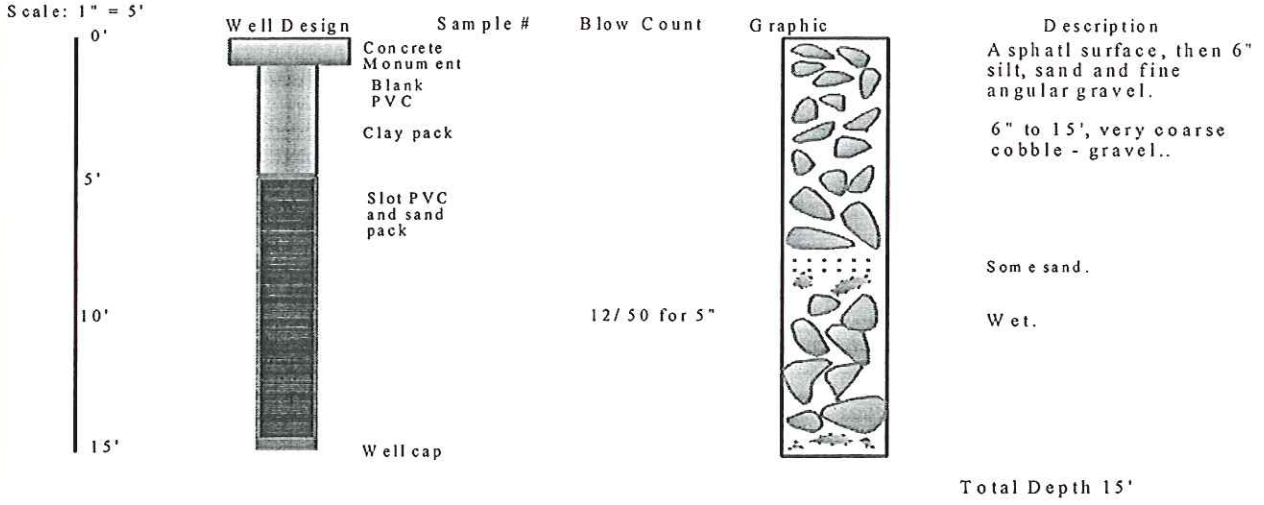


Figure 6

WSI

Quadrangle Location

Job No: 199-026-01

GRAPHIC LOG, BOREHOLE # 3

GearJammer
2310 Rudkin Road
Union Gap, Washington

DATE:	Mounted By:	Reviewed By:	SCALE:	
March 11, 1999	GV	TK	As Shown	**FIGURE 6**

SITE ASSESSMENT FOR UNDERGROUND STORAGE TANK REMOVAL AT:

C LS
U235
1526

THE GEARJAMMER
2310 RUDKIN ROAD
Union Gap, WA 98903

PREPARED BY:

Walkenhauer & Associates, Inc.
P.O. Box 1521
Yakima, WA 98907
(509)248-9070

SITE ASSESSMENT FOR UNDERGROUND STORAGE TANK REMOVAL AT:

C LS
U235
1526

THE GEARJAMMER
2310 RUDKIN ROAD
Union Gap, WA 98903

PREPARED BY:

Walkenhauer & Associates, Inc.
P.O. Box 1521
Yakima, WA 98907
(509)248-9070

SUMMARY

Walkenhauer & Associates, Inc. provided exploratory investigation services and a site assessment for The Gearjammer, Yakima, Washington for the removal of 1 - 1,100 gallon waste oil underground storage tank (U.S.T.), DOE #001526/70, and the removal of 1 - 8,000 gallon new oil underground storage tank, DOE #001526/60, and all associated connecting piping.

Joseph Walkenhauer, registered with the International Fire Codes Institute and the Washington State Department of Ecology Underground Storage Tank Program, performed the investigation and site assessment. The investigation began by inspecting the tanks for damage that may have caused leaks. The surrounding area was checked for possible soil contamination. We sampled according to Guidelines for Site Checks & Site Assessments for Underground Storage Tanks (Feb. 1991).

Tank #1, DOE #001526/70 was a 1,100 gallon waste oil U.S.T. This tank was in good condition and showed no signs of leaks. Soil sampling from around this tank was below the MTCA standards.

Tank #2, DOE #001526/60 was an 8,000 gallon new oil U.S.T. This tank was removed and appeared to be in good condition. During the cleaning of this tank, some oil was spilled into the excavation pit. This oil was cleaned up, and the soil was left on site for further remediation. The first set of soil samples from this area showed signs of heavy oils above the MTCA standards. The contaminated soil was removed to the extent that the excavation pit compromised the structural integrity of the building next to it. Two more samples were taken of the surrounding soil, and one sample came back above the MTCA standards (sample #GJ-110 at 2100 ppm for heavy oil.)

Due to the compromised structural integrity of the building next to the excavation area, and because of the waste water run-off into the excavation pit from the surrounding parking lot used by semi trucks, the area may have had petroleum hydrocarbons, compromising the validity of the soil samples. It was decided to fill this area with clean fill dirt.

It is my opinion that this area poses no threat to human health or the environment at this time, and no further remediation actions are necessary at this time.

If I can be of any further assistance, please contact me and I will be happy to assist any way that I can.

Sincerely,

Joe Walkenhauer
President,
Walkenhauer & Associates, Inc.

TABLE OF CONTENTS

DIVISION 1
INTRODUCTION

1.1 PURPOSE

This report describes findings, conditions, and actions taken from work performed during the investigation, inspection, and during removal of 2 underground storage tanks from The Gearjammer Truck Plaza, 2310 Rudkin Rd., Union Gap, WA. The purpose of our investigation and inspection was to assess the conditions of the soil near and around the underground storage tanks and the possibility of petroleum hydrocarbons contamination. The inspection and work responds to regulatory requirements set forth by the United States Environmental Protection Agency (EPA) and the State of Washington, Department of Ecology (DOE).

1.2 SCOPE

This report completes the investigation and work provided by Walkenhauer & Associates, Inc. for determining the presence or absence of significant contamination at The Gearjammer Truck Plaza, 2310 Rudkin Rd., Union Gap, WA.

DIVISION 2
BACKGROUND INFORMATION

2.1 SITE LOCATION & LEGAL DESCRIPTION

The property is located at 2310 Rudkin Rd., Union Gap, WA. The Underground Storage Tanks (UST's) were used for storage of new motor oil and waste motor oil for The Gearjammer Truck Plaza, Union Gap, WA.

2.2 SITE TOPOGRAPHY

The Gearjammer Truck Plaza is located between Ahtanum Ridge and the Rattlesnake Hills to the South, Yakima Ridge to the North, the Cascade Mountain Foothills to the West, and Black Rock & Hanford to the East (see Figure 1). The local topography West of the Yakima River dips very gently to the Southeast, following the Yakima River drainage. The East side of the River climbs Southeasterly and reaches elevation 30 miles from the Yakima River in the Black Rock area of 2,000 feet.

2.3 SITE HISTORY

This site is used as an oil changing facility for semi-trucks.

2.4 SITE GEOGRAPHY

The property is situated upon deposits consisting of gray hard rock layered with dark brown soil, with very little top soil. At approx. 6 feet, a 6 to 12 inch layer of hard pan was located. Rock size is 2 - 12 inches in diameter.

2.5 REGIONAL GEOGRAPHY

The ridges surrounding Yakima are composed of Columbia River basalt and interbedded sediments of the Ellensburg formations. The region reflects a history of North-South compressional forces. These forces produced the hills and valleys, which affect surface and ground water hydrology in areas adjacent to the river valley.

Yakima bedrock is basalt lava flows of the Columbia Plateau. An East-West ridge resulting from folding lies approximately 10 miles South of the site. This anticline is structurally continuous, but has been geographically divided by the Yakima River into Ahtanum Ridge and Rattlesnake Ridge. The foothill of the Cascade Range lays North-South and is about 30 miles West of the Property, with Yakima Ridge 4 miles to the North. The Columbia River lays approximately 40 miles to the East with a steady climb to the Black Rock area 20 miles East of Moxee, then leveling for approximately 10 miles at an elevation of approximately 2,000 feet, then dropping rapidly to the Columbia River.

2.6 HYDROLOGY

The major drainage features for this portion of the Yakima River Basin include Cascade foothills, Ahtanum Ridge, Yakima Ridge, and the Yakima River. The land slopes very gently Southeast, paralleling the Yakima River. The nearest surface water is the Yakima River, located approx. 3/4 mile east of property. Groundwater flow patterns in Yakima typically follow a Southeasterly direction, but could be altered due to local influences.

WALKENHAUER
& ASSOCIATES Inc.
'IRONMENTAL MANAGEMENT

P.O. Box 1521
Yakima, WA. 98907
1-800-473-5030

Gearjammer Truck Stop
2310 Rudkin Road
Union Gap, WA. 98903

Site Layout Map

1100 Gallon
Waste Oil
Tank

8000 Gallon
New Oil Tank

Gearjammer Truck Service Center

Description:
Date:
No.:
Drawing No.:

WALKENHAUER
& ASSOCIATES Inc.
ONMENTAL MANAGEMENT

P.O. Box 1521
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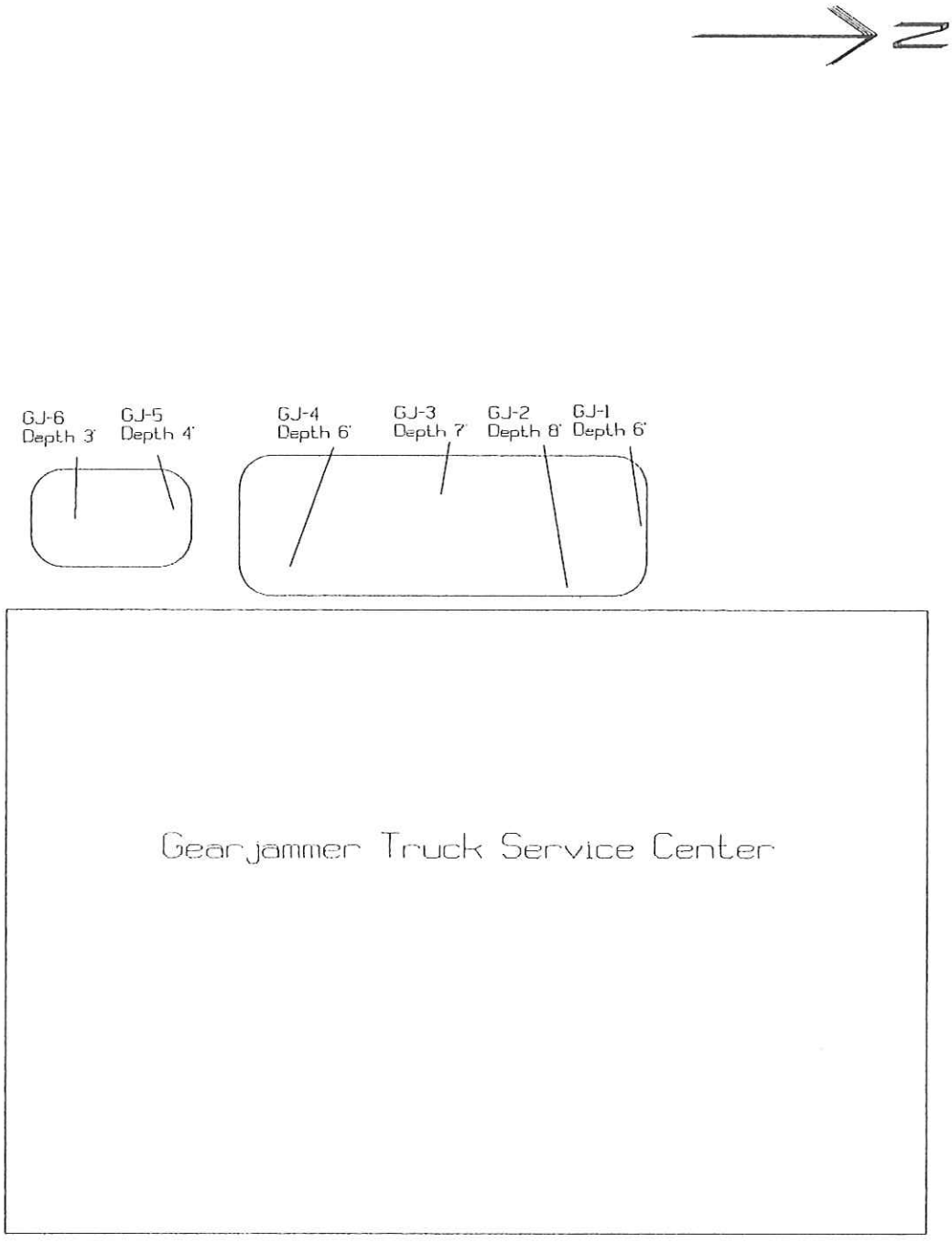
1-800-473-5630

Gearjammer Truck Stop
2310 Rudkin Road
Union Gap, WA. 98903

Sampling Map 1-A
Removal of 1. 1100 gal. UST
and 1. 8000 gal UST



Description:
D
J **lo.:**
D **wing No.:**

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& ASSOCIATES Inc.
ENVIRONMENTAL MANAGEMENT

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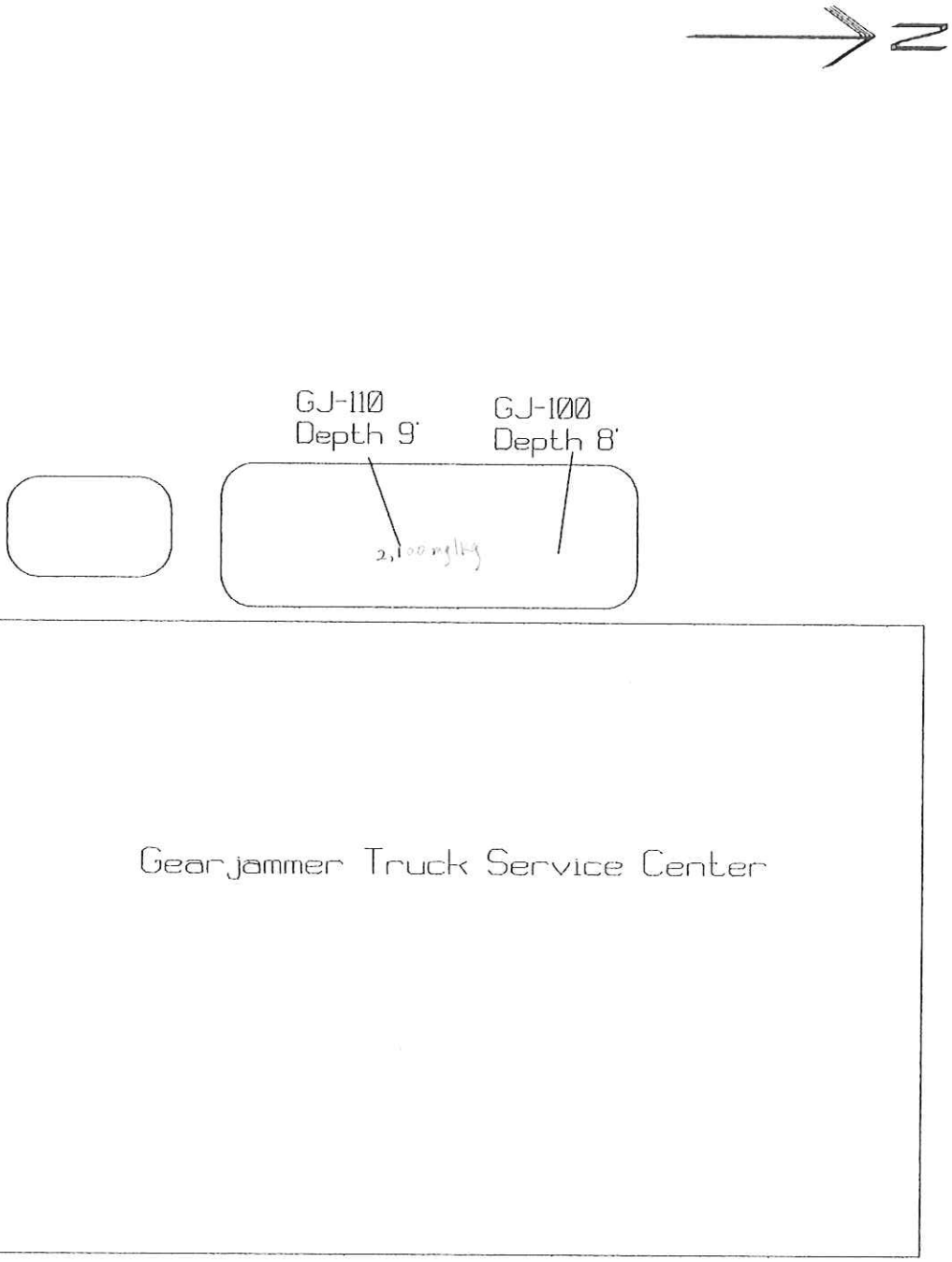
Yakima, WA. 98907
1-800-473-5630

Gearjammer Truck Stop
2310 Rudkin Road
Union Gap, WA. 98903

Sampling Map 1-B



Description:
Date:
Job No.:
Drawing No.:

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Walkenhauer & Associates	Project Name:	GGAR Jammer/Wildcat	
P.O. Box 1521	Client Project :	Not Provided	
Yakima, WA 98907			Received: Dec 27, 1995
Attention: Joe Walkenhauer	NCA Project #:	B512457	Reported: Dec 28, 1995

PROJECT SUMMARY PAGE

Laboratory Sample Number	Sample Description	Sample Matrix	Date Sampled
B512457-01	GJ-1	Soil	12/22/95
B512457-02	GJ-2	Soil	12/22/95
B512457-03	GJ-3	Soil	12/22/95
B512457-04	GJ-4	Soil	12/22/95
B512457-05	GJ-5	Soil	12/22/95
B512457-06	GJ-6	Soil	12/22/95
B512457-07	WC-01	Soil	12/26/95
B512457-08	WC-02	Soil	12/26/95
B512457-09	WC-03	Soil	12/26/95

The results in this report apply to the samples analyzed in accordance with the chain of custody document.
This analytical report must be reproduced in its entirety.

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Jack Cooper
Project Manager

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Walkenhauer & Associates
P.O. Box 1521
Yakima, WA 98907
Attention: Joe Walkenhauer

Client Project ID: GGAR Jammer/Wildcat
Sample Matrix: Soil
First Sample #: B512457-01

Received: Dec 27, 1995
Reported: Dec 28, 1995

TOTAL SOLIDS & MOISTURE CONTENT REPORT

Sample Number	Sample Description	Total Solids %	Moisture Content %
B512457-01	GJ-1	89	11
B512457-02	GJ-2	82	18
B512457-03	GJ-3	86	14
B512457-04	GJ-4	79	21
B512457-05	GJ-5	77	23
B512457-06	GJ-6	81	19
B512457-07	WC-01	91	9.0
B512457-08	WC-02	91	9.0
B512457-09	WC-03	84	16

The enclosed analytical results for soils, sediments and sludges have been converted to a DRY WEIGHT reporting basis.
To attain the wet weight "as received" equivalent, multiply the dry weight result by the decimal fraction of percent Total Solids.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Jack Cooper
Project Manager

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alkenhauer & Associates	Client Project ID:	GGAR Jammer/Wildcat	Sampled:	Dec 22, 1995
P.O. Box 1521	Sample Matrix:	Soil	Received:	Dec 27, 1995
Yakima, WA 98907	Analysis Method:	WTPH-HCID	Extracted:	Dec 27, 1995
ttention: Joe Walkenhauer	First Sample #:	B512457-01	Analyzed:	Dec 28, 1995
			Reported:	Dec 28, 1995

HYDROCARBON IDENTIFICATION

Sample Number	Sample Description	HCID as Gasoline C7 - C12 mg/kg (ppm)	GRO Surrogate Recovery %	HCID as Diesel C12 - C24 mg/kg (ppm)	DRO Surrogate Recovery %	HCID Heavy Oil >C24 mg/kg (ppm)
B512457-01	GJ-1	<20	93	<50	107	<100
B512457-02	GJ-2	<20	81	Present	58	Present
B512457-03	GJ-3	<20	90	Present	94	Present
B512457-04	GJ-4	<20	94	<50	82	<100
B512457-05	GJ-5	<20	94	Present	80	Present
B512457-06	GJ-6	<20	96	<50	82	<100
BLK122795	Method Blank	<20	94	<50	96	<100

VTPH-HCID is a qualitative procedure which is used identify petroleum products containing components from C7 to >C24 by Gas Chromatography using a capillary column and a Flame Ionization Detector (FID). While this method is intended to be qualitative, it can be used to eliminate the need for further analysis for those samples which demonstrate TPH levels significantly below the egulatory threshold. Surrogate Recovery control limits are 50 - 150%.

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Jack Cooper
Project Manager

512457.WLK <3>

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Walkenhauer & Associates	Client Project ID:	GGAR Jammer/Wildcat	Sampled:	Dec 26, 1995
P.O. Box 1521	Sample Matrix:	Soil	Received:	Dec 27, 1995
Yakima, WA 98907	Analysis Method:	WTPH-G	Analyzed:	Dec 28, 1995
Attention: Joe Walkenhauer	First Sample #:	B512457-07	Reported:	Dec 28, 1995

TOTAL PETROLEUM HYDROCARBONS-GASOLINE RANGE

Sample Number	Sample Description	Sample Result mg/kg (ppm)	Surrogate Recovery %
B512457-07	WC-01	N.D.	103
B512457-08	WC-02	1.7	103
B512457-09	WC-03	2.3	99
BLK122895	Method Blank	N.D.	110

Reporting Limits	1.0

4-Bromofluorobenzene surrogate recovery control limits are 50 - 150 %.
Volatile Total Petroleum Hydrocarbons are quantitated as Gasoline Range Organics (toluene - dodecane).
Analytes reported as N.D. were not detected above the stated Reporting Limit. The results reported above are on a dry weight basis.

NORTH CREEK ANALYTICAL Inc.

Laura Dutton

Jack Cooper
Project Manager

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9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

alkenhauer & Associates	Client Project ID:	GGAR Jammer/Wildcat	Analyst: B. Christlieb, F. Shino
P.O. Box 1521	Sample Matrix:	Soil	
Yakima, WA 98907	Analysis Method:	WTPH-G	
ttention: Joe Walkenhauer	Units:	mg/kg (ppm)	Analyzed: Dec 28, 1995
			Reported: Dec 28, 1995

HYDROCARBON QUALITY CONTROL DATA REPORT

ACCURACY ASSESSMENT
Laboratory Control Sample

Gasoline	
Spike Conc. Added:	5.0
Spike Result:	3.8
% Recovery:	76
Upper Control Limit %:	115
Lower Control Limit %:	33

PRECISION ASSESSMENT
Sample Duplicate

Gasoline Range Hydrocarbons	
Sample Number:	B512457-09
Original Result:	N.D.
Duplicate Result:	N.D.
Relative % Difference:	Relative Percent Difference values are not reported at sample concentration levels less than 10 times the Detection Limit.
Maximum RPD:	67

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Laura Dutton

Jack Cooper
Project Manager

$$\%\ \text{Recovery:} = \frac{\text{Spike Result}}{\text{Spike Concentration Added}} \times 100$$

$$\text{Relative \% Difference:} = \frac{\text{Original Result - Duplicate Result}}{(\text{Original Result + Duplicate Result}) / 2} \times 100$$

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9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

Walkenhauer & Associates	Client Project ID:	GGAR Jammer/Wildcat	Sampled:	Dec 26, 1995
P O. Box 1521	Sample Matrix:	Soil	Received:	Dec 27, 1995
Yakima, WA 98907	Analysis Method:	EPA 8020	Analyzed:	Dec 28, 1995
Attention: Joe Walkenhauer	First Sample #:	B512457-07	Reported:	Dec 28, 1995

BTEX DISTINCTION

Sample Number	Sample Description	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)	Surrogate Recovery %
B512457-07	WC-01	N.D.	N.D.	N.D.	N.D.	99
B512457-08	WC-02	N.D.	N.D.	N.D.	N.D.	102
B512457-09	WC-03	N.D.	N.D.	N.D.	N.D.	95
BLK122895	Method Blank	N.D.	N.D.	N.D.	N.D.	104
Reporting Limits:		0.050	0.050	0.050	0.10	

4-Bromofluorobenzene surrogate recovery control limits are 34 - 166 %.
Analytes reported as N.D. were not detected above the stated Reporting Limit.
The results reported above are on a dry weight basis.

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Laura Dutton

Jack Cooper
Project Manager

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9405 S.W. Nimbus Avenue • Beaverton, OR 97008-7132 (503) 643-9200 • FAX 644-2202

...lkenhauer & Associates	Client Project ID: GGAR Jammer/Wildcat	Analyst:	B. Christlieb
P.O. Box 1521	Sample Matrix: Soil		F. Shino
Yakima, WA 98907	Analysis Method: EPA 8020		
...tention: Joe Walkenhauer	Units: mg/kg (ppm)	Analyzed:	Dec 28, 1995
	QC Sample #: B512471-02	Reported:	Dec 28, 1995

MATRIX SPIKE QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl Benzene	Xylenes
Sample Result:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	0.61	0.61	0.61	1.84
Spike Result:	0.52	0.50	0.50	1.53
Spike % Recovery:	85%	82%	82%	83%
Spike Dup. Result:	0.48	0.47	0.48	1.45
Spike Duplicate % Recovery:	79%	77%	79%	79%
Upper Control Limit %:	111	118	120	128
Lower Control Limit %:	59	55	61	55
Relative % Difference:	8.0%	6.4%	4.2%	5.4%
Maximum RPD:	17	16	17	17

NORTH CREEK ANALYTICAL Inc.

Jack Cooper
Project Manager

$$\%\ \text{Recovery:} \quad \frac{\text{Spike Result - Sample Result}}{\text{Spike Conc. Added}} \times 100$$

$$\text{Relative \% Difference:} \quad \frac{\text{Spike Result - Spike Dup. Result}}{\text{(Spike Result + Spike Dup. Result) / 2}} \times 100$$

NORTH CREEK ANALYTICAL

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11115 Montgomery, Suite B, Spokane, WA 98[illegible]779 [illegible]924 FA[illegible]4-92[illegible]
15055 S.W. Sequoia Parkway, Suite 110, Portland, OR 97224-7155 (503) 624-9[illegible] FAX 684-3782

CHAIN OF CUSTODY REPORT

CLIENT: Walkenhauer & assoc.
ADDRESS: Po Box 1521
Yakima Wa. 98907
PHONE: (509) 248-9070 FAX: (509) 248-9251

REPORT TO:
BILLING TO:
P.O. NUMBER:
NCA QUOTE #:

SAME DAY RUSH	(+150%)
NEXT BUSINESS DAY RUSH	(+100%) ✓
2 BUSINESS DAY RUSH	(+80%)
3 BUSINESS DAY RUSH	(+60%)
5 BUSINESS DAY RUSH	(+40%)
10 BUSINESS DAY STANDARD	(LIST PRICE)
5 BUS. DAY HYDROCARBONS	(LIST PR[illegible]

PROJECT NAME: Gear Jammer / Wildcat
PROJECT NUMBER:
SAMPLED BY: J H Walkenhauer

SAMPLE IDENTIFICATION: (NUMBER OR DESCRIPTION)	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CONT.	Analysis Request: WTPH-HCID	WTPH-G	COMMENTS & PRESERVATIVES USED	NORTH CREEK SAMPLE NUMBER
1. GJ-1	12-22-95 14:30			X			B512457-0
2. GJ-2	" "			X			-0
3. GJ-3	" "			X			-0
4. GJ-4	" "			X			-0
5. GJ-5	" "			X			-0
6. GJ-6	" "			X			-06
7.							
8. WC-01	12-26-95 12:30				X		-07
9. WC-02	" "				X		-08
10. WC-03	" "				X		-09

RELINQUISHED BY: W Walkenhauer DATE: 12-26-95
FIRM: Walkenhauer & assoc. TIME: 14:00

RECEIVED BY: Richelle M Rose DATE: 12/27/95
FIRM: NCA TIME: 1125

RELINQUISHED BY: DATE:
FIRM: TIME:

RECEIVED BY: DATE:
FIRM: TIME:

ADDITIONAL REMARKS:

PAGE [illegible] OF