

Subsurface Investigation Report

Bulk Cardlock Facility

131 N Washington Street, Canyon City, Oregon 97820

HydroCon Project Number: 10044-006.00

Prepared for:

Ed Staub & Sons

1301 Esplanade Avenue

Klamath Falls, OR 97401

February 28, 2024

Prepared by:



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1.0 INTRODUCTION

HydroCon was contracted by Ed Staub & Sons (ES&S) to perform a subsurface investigation at the bulk storage and cardlock fueling facility located at 131-133 N Washington Street in Canyon City, Oregon (Figure 1; the Site). The subsurface investigation was completed on December 19-20, 2023 in order to assess subsurface conditions at the approximate locations of previously present above-ground storage tanks (ASTs) located along the eastern boundary of the Site. The ASTs were situated on a driveway higher in elevation relative to the remaining areas of the Site. Site features and historical AST locations are depicted on Figure 2.

2.0 SITE BACKGROUND

According to information available for review on the DEQ LUST database, the Site has been an active petroleum bulk plant since 1932. The Site previously had seven ASTs that were regulated as USTs, due to more than 10% of their exterior surface being below the ground surface. Applicable regulatory background documents are attached in Appendix A.

2.1 LUST 45-00-0027

In November 2000, an emergency response was initiated when down-gradient homes and businesses reported gasoline odors in their buildings. The source of gasoline vapors was traced to an on-site leaking gasoline AST, which was immediately stopped. An initial site investigation was performed to evaluate the extents of petroleum impacts to soil and groundwater. Data from the assessment activities indicated that impacts to groundwater resulting from the gasoline leak had migrated 500 feet downgradient of the Site, impacting the two properties directly north of the Site. Soil impacts were limited to the Site. Surface water impacts in Canyon Creek were never detected.

Remedial actions performed included the initial extraction of 9,000 gallons of product and groundwater from an on-site dry well, the installation of a soil vapor extraction (SVE) system in 2001, and installation of a groundwater extraction system (GWE) in 2001. The SVE and GWE systems were operated until 2005. Indoor air monitoring was also performed at the two down-gradient properties.

In 2008, a conditional No Further Action (NFA) determination was granted for the Site. A risk assessment concluded that indoor air quality in the two down-gradient buildings was no longer significantly impacted from the release, based on vapor intrusion assessment and air quality monitoring results. Beneficial use of groundwater and residential use of the Site and the north adjacent property were prohibited as part of the conditional NFA.

2.2 Previous ASTs

Seven of the previously present ASTs were regulated as underground storage tanks (USTs) since more than 10 percent of the tank systems were determined to be underground. The ASTs were removed between 2013 and 2016, and the Site was upgraded with five ASTs which are currently present at the facility in a concrete containment structure, located west and lower in elevation relative to the previous ASTs. The area was re-graded when the Site was upgraded in the mid-2010s. Three USTs are currently present on the southern end of the Site for the cardlock portion of the Site.

This investigation was requested by Oregon Department of Environmental Quality (DEQ) to assess the areas where the previous ASTs were located. Site assessment sampling was not completed when the ASTs were removed from the Site.

3.0 REGIONAL GEOLOGY AND HYDROGEOLOGY

Canyon City is located along Canyon Creek in the base of a narrow canyon, which runs north to south. The Site is approximately 100 feet east of Canyon Creek. The eastern portion of Site, which is the main focus of this investigation, is located adjacent to the eastern valley slope. The city was reportedly placer mined in the 1910s, and the current city is built on the leveled tailings.

Canyon Creek is a losing stream which discharges to the local shallow aquifer. Geology at the Site is identified as reworked alluvial deposits consisting primarily of boulders, cobbles, and gravel, underlain by sand and gravel to at least 30 feet below ground surface (bgs). Groundwater at the Site is documented to fluctuate between 7 and 18 feet bgs, and flows to the north-northwest.

4.0 SUBSURFACE INVESTIGATION

A discussion of the field work performed at the Site is provided below.

4.1 *Pre-Field Investigation Activities*

4.1.1 Permits

No permits were required for the safe completion of field activities for this scope of work.

4.1.2 Health and Safety Plan

HydroCon prepared a Site-specific health and safety plan (HASP) to govern health and safety protocols used during this investigation. Work was performed using Occupational Safety and Health Administration (OSHA) Level D work attire consisting of hard hats, safety glasses, protective gloves, high visibility safety vest, and protective boots.

4.2 *Underground Utility Locates*

Prior to the commencement of subsurface activities, a public utility notification was requested through the Oregon One Call service. In addition, a private locating company (Advanced Underground Utility Locating) was contracted to locate private utility lines and clear boring locations of potential underground conflicts.

4.3 Temporary Borings

Anderson Environmental Contracting, LLC (AEC) was subcontracted to perform the drilling services. A total of four (4) borings (HC01 through HC04) were advanced at the Site on December 19-20, 2023 to evaluate the current subsurface conditions. Each boring was advanced using a track-mounted rotary sonic drill rig. Borings were drilled along the topographical ridge and access road in the vicinity of the former ASTs on the east side of the Site, and southwest adjacent to the current ASTs and containment on the western portion of the property. Boring locations are shown on Figure 3.

4.3.1 Soil Sampling

Borings were advanced in ten-foot intervals to a maximum completion depth ranging between 15 and 20 feet below ground surface (bgs). Soil samples were collected continuously using an open tube core barrel sampler emptied into a new polyethylene bag for inspection. The soil cores were inspected for lithologic composition, presence of water, and field screened for the presence of petroleum hydrocarbons (stain, odor, and organic vapors with a photoionization detector [PID]). Boring logs detailing the lithology, field screening results, and sample depths, are included in Appendix B.

Selected soil samples were submitted to the laboratory based on sampling objectives (i.e., depth, field screening) and field screening results. The selected soil samples were removed from the polyethylene bag using a new pair of disposable nitrile gloves and placed directly into labeled laboratory prepared jars and sealed with Teflon-lined lids. Soil samples were placed into laboratory supplied containers (utilizing 5035A field preservation) and immediately placed in an ice filled cooler along with chain-of-custody documentation for delivery to Apex Laboratories in Tigard, Oregon.

4.3.2 Groundwater Sampling

After reaching total depth, boring HC01 was fitted with a temporary groundwater monitoring well, constructed with new 1-inch diameter PVC well materials including lengths of slotted well screen and blank PVC casing. Groundwater was not encountered in borings HC02 through HC04.

Groundwater was purged from the temporary well prior to sample collection until no further improvement in water clarity was observed. Despite purging temporary wells, the water remained slightly turbid, as is common with temporary PVC wells. The groundwater sample was collected from the temporary well using a peristaltic pump attached to new, low-density polyethylene (LDPE) tubing. The groundwater sample was placed into laboratory supplied containers and placed in an iced cooler for delivery to Apex Laboratories in Tigard, Oregon.

All drilling and sampling tools were decontaminated between boring locations using a hot water pressure washer and Alconox® followed by a potable water rinse.

4.4 Field Screening

Field screening consisted of volatile organic vapor measurements using a PID, sheen testing, visual observations (staining, etc.), and olfactory observations. A portion of each soil sample was placed in a sealable plastic bag. The tip of the PID was inserted into the plastic bag in the airspace above the soil sample and the PID measurement was recorded. The PID was calibrated before use at the site to a test gas standard consisting of 100 ppmv isobutylene. Sheen testing consisted of placing a small portion of soil in clear water and observing the water for the presence of hydrocarbon sheen.

4.5 Laboratory Analysis

A total of seven soil samples and one groundwater sample were collected for laboratory analysis. Five soil samples and one groundwater sample were analyzed for the following suite of parameters:

- Gasoline-range petroleum hydrocarbons (GRPH) by Northwest Method NWTPH-Gx.
- Diesel-range (DRPH) and oil-range (ORPH) petroleum hydrocarbons by Northwest Method NWTPH-Dx.
- Benzene, toluene, ethylbenzene, total xylenes, and naphthalene (BTEX+N) and Risk-Based Volatile Organic Compounds (RBDM VOCs) by EPA Method 8260D.
- Soil samples utilized EPA Method 5035A for the preservation of volatiles.

5.0 INVESTIGATION RESULTS

This section provides a description of the subsurface soil and groundwater and a discussion of the field screening and laboratory results.

5.1 Subsurface Conditions

The Site is covered with a layer of crushed gravel. At boring location HC01, in the western portion of the Site, lower in elevation relative to boring locations HC02 through HC04, the subsurface soil consisted of sand and gravel. Groundwater was encountered at 12.45' below ground surface (bgs).

At boring locations HC02 through HC04, subsurface soils consisted of gravelly silt to a general depth of 7 feet bgs, and gravel with silt was present below that to 15 feet bgs. No groundwater was encountered in borings HC02 through HC04.

5.2 Field Screening Results

Based on field screening procedures, no indications of petroleum contamination were observed in soil cuttings or groundwater produced from any of the borings. Field screening results are included on the boring logs in Appendix B.

5.3 Analytical Results

The laboratory results were compared to potentially applicable DEQ risk-based concentrations (RBCs) for commercial, occupational, and construction and excavation workers. The Site is used for commercial purposes, and no potable water wells are present. The Site and surrounding area obtain their water from the Canyon City municipal system.

The following sections describe the results of the laboratory analytical testing. The complete laboratory reports and chain-of-custody documentation are included in Appendix C.

5.3.1 Soil Analytical Results

Soil analytical results are reported as milligrams per kilogram (mg/kg) and are summarized in Table 1 and Figure 4.

DRPH was detected in three samples, the highest of which was a detected concentration of 417 mg/kg in sample HC03-5.0. Other detected DRPH concentrations were 38.4 mg/kg (HC02-5.0) and 47.6 mg/kg (HC04-5.0). The detected DRPH concentrations do not exceed any applicable RBCs.

GRPH, ORPH, BTEX+N, and RBDM VOCs were not detected above laboratory method reporting limits (MRLs) in all soil samples.

5.3.2 Groundwater Analytical Results

Groundwater analytical results are reported as micrograms per liter ($\mu\text{g/L}$) and are summarized in Table 2 and Figure 5.

Toluene was detected at a concentration of 1.38 $\mu\text{g/L}$ in sample HC01-W. The detected concentration is not above any applicable RBCs.

All remaining analytes were below their respective MRLs.

6.0 DISCUSSION AND RECOMMENDATIONS

Four borings were advanced at the Site to assess subsurface conditions under and down-gradient from the former ASTs that were located along the elevated eastern flank of the Site. Following removal of the ASTs in the mid-2010s, the eastern area was regraded and altered. HydroCon made efforts including comparison of historical aerials and field locating services to locate the borings at locations most

appropriate to assess the subsurface for any potential impacts.

Field screening did not indicate the presence of petroleum contamination during the investigation. Laboratory analytical results detected DRPH at multiple locations at depths of 5 feet bgs, however each detected concentration was below applicable RBCs, and furthermore below the Soil Matrix Level 2 cleanup level of 500 mg/kg. It does not appear that any significant source of petroleum contamination is present as a result of the historically present ASTs. The Site does possess a conditional NFA for a previous release detected in 2000.

Based on the results of this investigation, no additional investigation or remedial actions are recommended, and the matter can be closed with DEQ.

7.0 QUALIFICATIONS

HydroCon's services were performed in a manner consistent with generally accepted practices of the profession undertaken in similar studies in the same geographical area during the same time period. HydroCon makes no warranties, either expressed or implied, regarding the findings, conclusions or recommendations. Please note that HydroCon does not warrant the work of laboratories, regulatory agencies, or other third parties supplying information used in the preparation of the report.

Findings and conclusions resulting from these services are based upon information derived from the on-site activities and other services performed under this scope of work; such information is subject to change over time. Certain indicators of the presence of hazardous substances, petroleum products, or other constituents may have been latent, inaccessible, unobservable, nondetectable or not present during these services, and we cannot represent that the site contains no hazardous substances, toxic materials, petroleum products, or other latent conditions beyond those identified during this monitoring. Subsurface conditions may vary from those encountered at specific sampling locations or during other surveys, tests, assessments, investigations, or exploratory services; the data, interpretations and findings are based solely upon data obtained at the time and within the scope of these services.

This report is intended for the sole use of **Ed Staub & Sons**. This report may not be used or relied upon by any other party without the written consent of HydroCon. The scope of services performed in execution of this evaluation may not be appropriate to satisfy the needs of other users, and use or re-use of this document or the findings, conclusions, or recommendations is at the risk of said user.

The conclusions presented in this report are, in part, based upon subsurface sampling performed at selected locations and depths. There may be conditions between borings or samples that differ significantly from those presented in this report and which cannot be predicted by this study.

Signature:

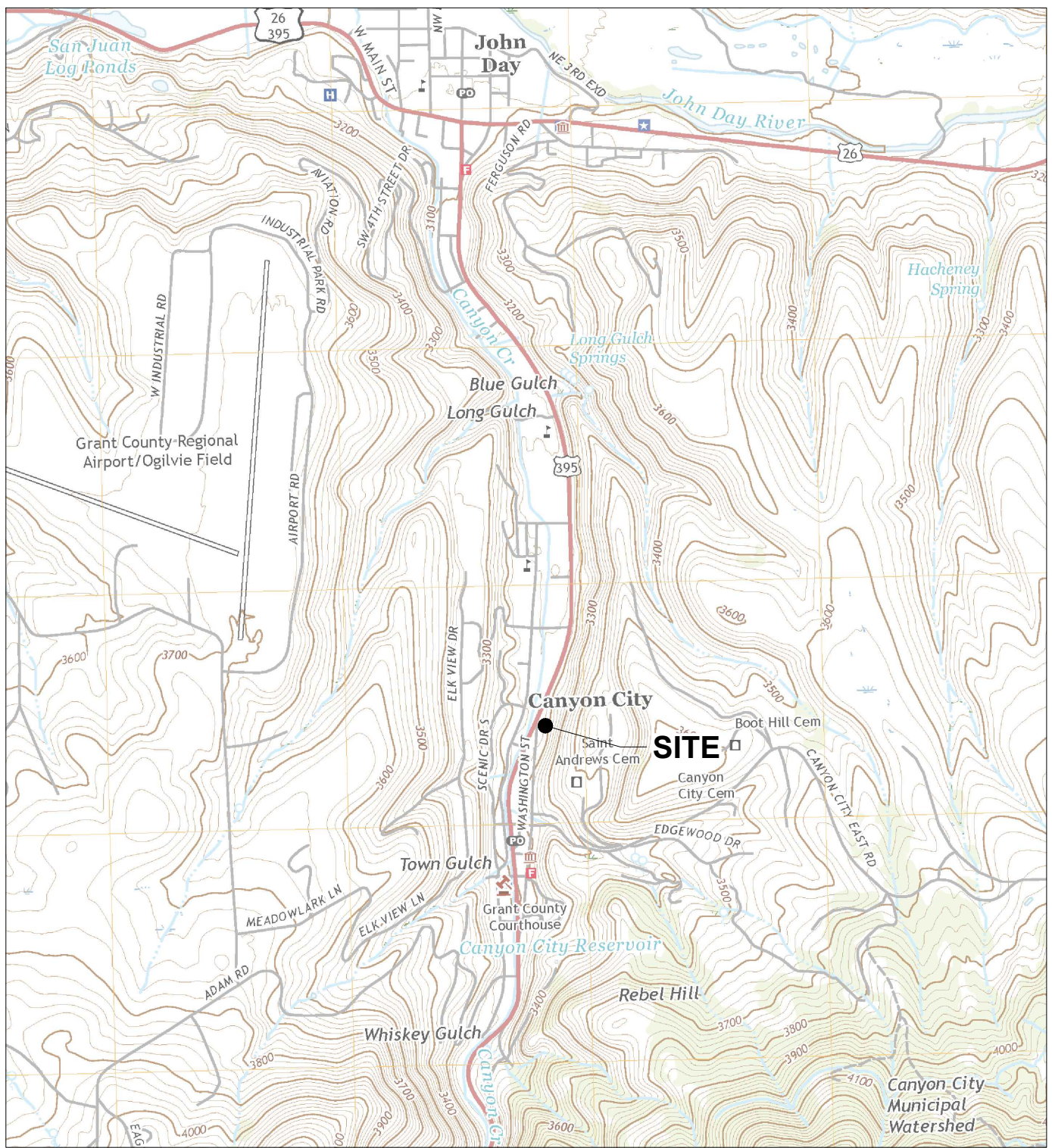
Report Prepared By:



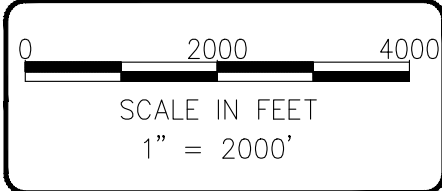
Chris Daschel, RG
Project Geologist



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NOTE(S):
 USGS, JOHN DAY QUADRANGLE
 OREGON - GRANT COUNTY
 7.5 MINUTE SERIES (TOPOGRAPHIC)



DATE: 2-22-24
 DWN: MW
 CHK: CD
 APPROVED: CD
 PRJ. MGR: CD
 PROJECT NO:
 10044-006

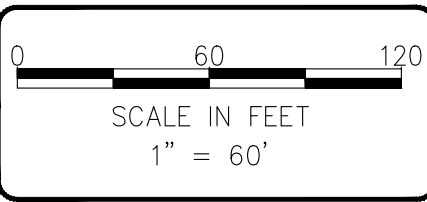
FIGURE 1
SITE LOCATION MAP
 ES&S - CANYON CITY BULK PLANT
 131 WASHINGTON STREET
 CANYON CITY, OREGON

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Legend

- - Subject Site Property Boundary (Approximate)
- Grant County Parcel Boundary (Approximate)



DATE: 2-22-24
DWN: MW
CHK: CD
APPROVED: CD
PRJ. MGR: DB
PROJECT NO:
10044-006




FIGURE 2
SITE FEATURES

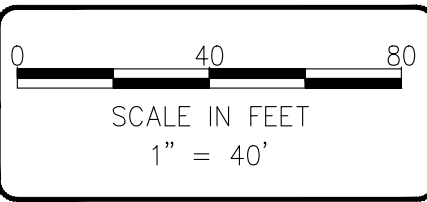
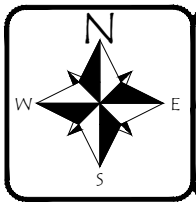
ES&S - CANYON CITY BULK PLANT
131 WASHINGTON STREET
CANYON CITY, OREGON

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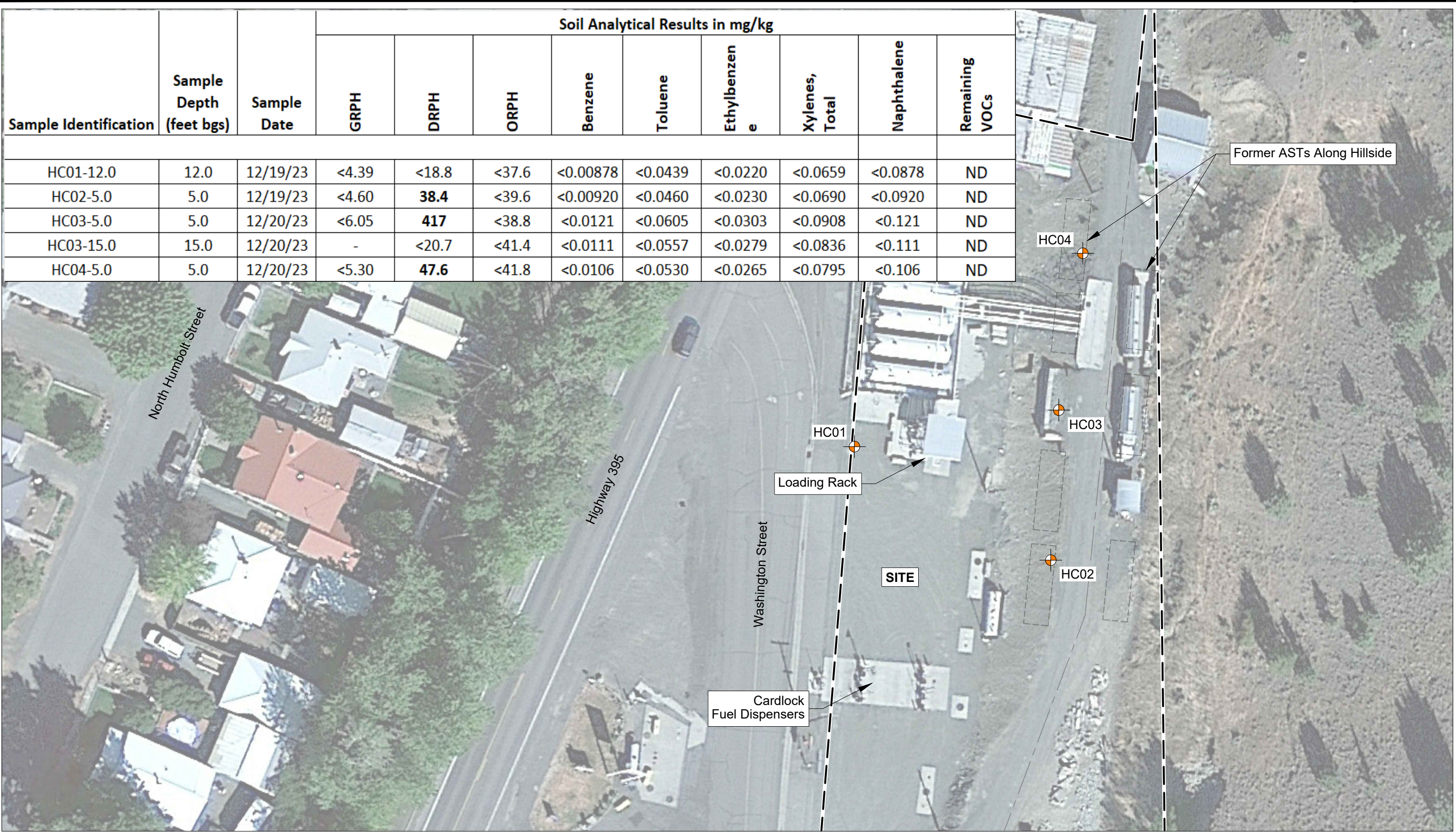
Legend

- HC01  Subsurface Exploration (HydroCon, 2023)
-  Subject Site Property Boundary (Approximate)
-  Grant County Parcel Boundary (Approximate)



DATE: 2-22-24
 DWN: MW
 CHK: CD
 APPROVED: CD
 PRJ. MGR: DB
 PROJECT NO:
 10044-006

FIGURE 3
 BORING LOCATIONS
 ES&S - CANYON CITY BULK PLANT
 131 WASHINGTON STREET
 CANYON CITY, OREGON

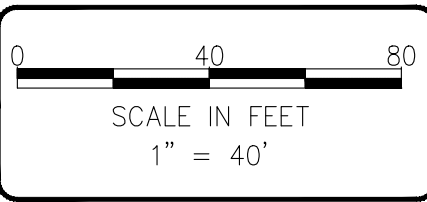
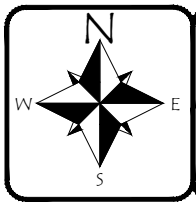


Sample Identification	Sample Depth (feet bgs)	Sample Date	Soil Analytical Results in mg/kg								
			GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Xylenes, Total	Naphthalene	Remaining VOCs
HC01-12.0	12.0	12/19/23	<4.39	<18.8	<37.6	<0.00878	<0.0439	<0.0220	<0.0659	<0.0878	ND
HC02-5.0	5.0	12/19/23	<4.60	38.4	<39.6	<0.00920	<0.0460	<0.0230	<0.0690	<0.0920	ND
HC03-5.0	5.0	12/20/23	<6.05	417	<38.8	<0.0121	<0.0605	<0.0303	<0.0908	<0.121	ND
HC03-15.0	15.0	12/20/23	-	<20.7	<41.4	<0.0111	<0.0557	<0.0279	<0.0836	<0.111	ND
HC04-5.0	5.0	12/20/23	<5.30	47.6	<41.8	<0.0106	<0.0530	<0.0265	<0.0795	<0.106	ND

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Legend

- HC01 Subsurface Exploration (HydroCon, 2023)
- Subject Site Property Boundary (Approximate)
- Grant County Parcel Boundary (Approximate)



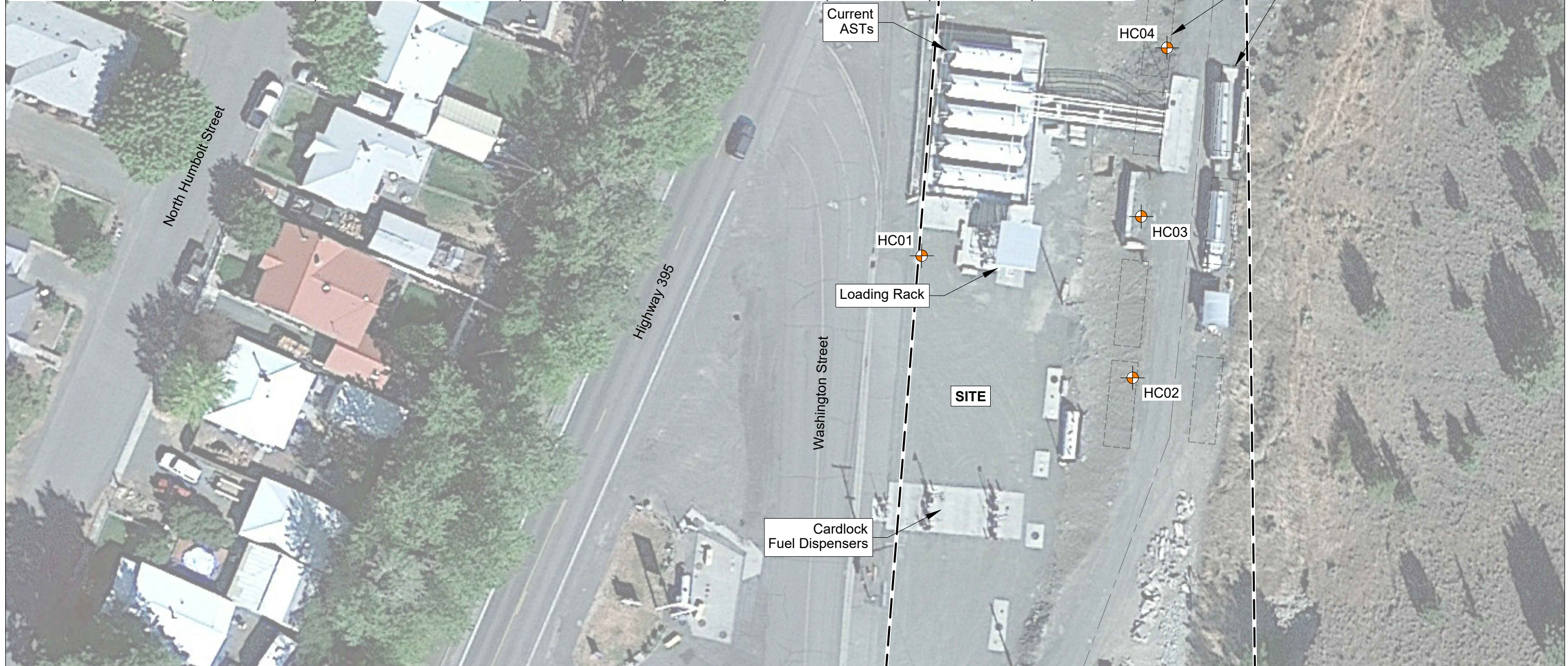
HydroCon
 An ACC Environmental Consultants, Inc. Company
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 Phone 360.703.6079 Fax 360.703.6086

DATE: 2-22-24
 DWN: MW
 CHK: CD
 APPROVED: CD
 PRJ. MGR: DB
 PROJECT NO:
 10044-006

FIGURE 4
 SOIL ANALYTICAL RESULTS
 ES&S - CANYON CITY BULK PLANT
 131 WASHINGTON STREET
 CANYON CITY, OREGON

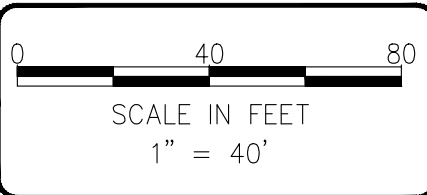
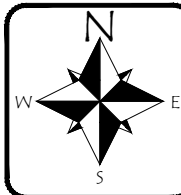
Groundwater Analytical Results in µg/L

Sample ID	Sample Date	Groundwater Analytical Results in µg/L								
		GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Xylenes, Total	Naphthalene	Remaining VOCs
HC01-W	12/19/23	<100	<83.3	<167	<0.200	1.38	<0.500	<1.50	<4.00	ND



Legend

- HC01 Subsurface Exploration (HydroCon, 2023)
- Subject Site Property Boundary (Approximate)
- Grant County Parcel Boundary (Approximate)



DATE: 2-22-24
 DWN: MW
 CHK: CD
 APPROVED: CD
 PRJ. MGR: DB
 PROJECT NO:
 10044-006

FIGURE 5
 GROUNDWATER ANALYTICAL RESULTS

ES&S - CANYON CITY BULK PLANT
 131 WASHINGTON STREET
 CANYON CITY, OREGON



Table 1
Soil Analytical Results
Ed Staub and Sons Canyon City Bulk Plant
131 Washington Street, Canyon City, OR 97820

Sample Identification	Sample Depth (feet bgs)	Sample Date	Soil Analytical Results in mg/kg								
			GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Xylenes, Total	Naphthalene	Remaining VOCs
HC01-12.0	12.0	12/19/23	<4.39	<18.8	<37.6	<0.00878	<0.0439	<0.0220	<0.0659	<0.0878	ND
HC02-5.0	5.0	12/19/23	<4.60	38.4	<39.6	<0.00920	<0.0460	<0.0230	<0.0690	<0.0920	ND
HC03-5.0	5.0	12/20/23	<6.05	417	<38.8	<0.0121	<0.0605	<0.0303	<0.0908	<0.121	ND
HC03-15.0	15.0	12/20/23	-	<20.7	<41.4	<0.0111	<0.0557	<0.0279	<0.0836	<0.111	ND
HC04-5.0	5.0	12/20/23	<5.30	47.6	<41.8	<0.0106	<0.0530	<0.0265	<0.0795	<0.106	ND
Applicable DEQ Risk-Based Concentrations¹											
Volatilization to Outdoor Air (RBC_{so})											
Occupational			69,000	>Max	>Max	50	>Csat	160	>Csat	83	-
Soil Ingestion, Dermal Contact, and Inhalation (RBC_{ss})											
Occupational Worker			20,000	14,000	36,000	37	88,000	150	25,000	23	-
Construction Worker			9,700	4,600	11,000	380	28,000	1,700	20,000	580	-
Excavation Worker			>Max	>Max	>Max	11,000	770,000	49,000	560,000	16,000	-

NOTES:

bgs = below ground surface

Chemical analyses performed by APEX Labs of Tigard, Oregon.

Gasoline-Range Total Petroleum Hydrocarbons (GRPH) analyzed by Northwest Method NWTPH-Gx.

Diesel-Range & Oil-Range Total Petroleum Hydrocarbons (DRPH) analyzed by Northwest Method NWTPH-Dx.

BTEX + Naphthalene analyzed by EPA Method 8260D.

¹Oregon Department of Environmental Quality (DEQ). Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites (June 2023 update)

mg/kg = milligrams per kilogram (parts per million)

Bold indicates analyte detection.

"<6.09" indicates the analyte was not detected above the laboratory reporting limit.

>Csat = this soil RBC exceeds the limit of three-phase equilibrium partitioning.

>Max = this constituent RBC for this pathway is calculated as greater than 1,000,000 mg/kg. Therefore, this substance is deemed to not pose risks in this scenario.

* - Sample flagged as results for diesel range is due to overlap from gasoline range product.



Table 2
 Groundwater Analytical Results
 Ed Staub and Sons Canyon City Bulk Plant
 131 Washington Street, Canyon City, OR 97820

Sample ID	Sample Date	Groundwater Analytical Results in µg/L								
		GRPH	DRPH	ORPH	Benzene	Toluene	Ethylbenzene	Xylenes, Total	Naphthalene	Remaining VOCs
HC01-W	12/19/23	<100	<83.3	<167	<0.200	1.38	<0.500	<1.50	<4.00	ND
Applicable DEQ Risk-Based Concentrations¹										
Vapor Intrusion into Buildings (RBC_{wi})										
Commercial	*Chronic*	520	1,700	1,500	12	150,000	31	3,300	50	-
	Acute	---	---	---	650	160,000	420,000	200,000	83,000	-
Volatilization to Outdoor Air (RBC_{wo})										
Occupational		>S	>S	>S	14,000	>S	43,000	>S	16,000	-
Groundwater in Excavation (RBC_{we})										
Cons. & Exc. Worker		14,000	>S	>S	1,800	220,000	4,500	23,000	500	-

NOTES:

Chemical analyses performed by APEX Labs of Tigard, Oregon.

Gasoline-Range Total Petroleum Hydrocarbons (GRPH) analyzed by Northwest Method NWTPH-Gx.

Diesel-Range Total Petroleum Hydrocarbons (DRPH) analyzed by Northwest Method NWTPH-Dx.

Oil-Range Total Petroleum Hydrocarbons (ORPH) analyzed by Northwest Method NWTPH-Dx.

RBDM Compunds analyzed by EPA Method 8260D

¹Oregon Department of Environmental Quality (DEQ). Risk-Based Decision Making for the Remediation of Petroleum-Contaminated Sites.

µg/L = micrograms per liter (parts per billion)

Bold indicates analyte detection above MRL.

RED denotes concentration exceeds applicable RBC

"<100" indicates the analyte was not detected above the laboratory reporting limit.

>S = this groundwater RBC exceeds the solubility limit.

(---) No value exists for this Screening value

APPENDIX A
DEQ DATABASE DOCUMENTS



Underground Storage Tank Program Facility Summary Report

For Facility 1990 - CANYON CITY PACIFIC PRIDE CARDLOCK

General Information

Facility ID: 1990

Phone Number: (530) 667-8913

Current Cert No: 12-1990-2023-OPER

Facility: CANYON CITY PACIFIC PRIDE CARDLOCK

Training Date: 10/28/2003

Facility Contact: Brad Staub

Address: 131 N WASHINGTON

Group Or Area:

Training Exempt: N

City, State, Zip: CANYON CITY,OR 97820

Last TCR: FCI 11/9/2021

LUST Facility: NO

County: GRANT

Region: ER



Underground Storage Tank Program Facility Summary Report

For Facility 1990 - CANYON CITY PACIFIC PRIDE CARDLOCK

General Information

Financial Responsibility	FR In Compliance	Begin Date	End Date
Insurance	YES	3/26/2023	3/26/2024
Insurance	YES	3/26/2022	3/26/2023
Insurance	YES	3/26/2021	3/26/2022
Insurance	YES	3/26/2020	3/26/2021
Insurance	YES	3/26/2019	3/26/2020
Insurance	YES	3/26/2018	3/26/2019
Insurance	YES	3/26/2017	3/26/2018
Insurance	YES	3/26/2016	3/26/2017
Insurance	YES	3/26/2015	3/26/2016
Insurance	YES	8/3/2014	8/3/2015
Insurance	YES	8/3/2013	8/3/2014
Insurance	YES	8/3/2012	8/3/2013
Insurance	YES	8/3/2011	8/3/2012
Insurance	YES	8/3/2010	8/3/2011
Insurance	YES	5/3/2010	5/3/2011
Insurance	YES	5/3/2008	5/3/2010
Insurance	YES	5/3/2007	5/28/2008
Insurance	YES	5/3/2006	5/3/2007
Insurance	YES	5/3/2002	5/3/2004

Tank Details

Tank ID	Permit #	Tank Status	Age	Gallons Tank Content	EGen	CERCLA	CAS#	Other	Material
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Underground Storage Tank Program Facility Summary Report

For Facility 1990 - CANYON CITY PACIFIC PRIDE CARDLOCK

1	DHGC	Active	42	6,000 Gasoline	N	Cathodically Protected Steel
2	DHGD	Active	47	12,000 Gasoline	N	Cathodically Protected Steel
3	DHGE	Active	49	6,000 Gasoline	N	Cathodically Protected Steel

Facility Contacts						
Owner Type	Contact	Organization	Address	City, St, Zip	Phone	
Permittee	Brad Staub	Ed Staub and Sons	PO Box 506	Tulelake, CA 96134-0506	(530) 667-8913	
LegalOwner	Brad Staub	SOSS, LLC	PO Box 506	Tulelake, CA 96134-0506	(530) 667-8913	
UST Owner	Brad Staub	SOSS, LLC	PO Box 506	Tulelake, CA 96134-0506	(530) 667-8913	

Compliance Payment				No LUST Records Found
Invoice ID	Status	Tank Fee	Fee Rcvd Amount	
UST23-00330	PAID	\$975.00	\$975.00	
UST22-00334	PAID	\$975.00	\$975.00	
UST21-00341	PAID	\$975.00	\$975.00	
UST20-00348	PAID	\$885.00	\$885.00	
UST19-00348	PAID	\$735.00	\$735.00	
UST18-00353	PAID	\$585.00	\$585.00	
UST17-00359	PAID	\$405.00	\$405.00	
UST16-00361	PAID	\$405.00	\$405.00	
UST15-00365	PAID	\$405.00	\$405.00	
UST14-00370	PAID	\$405.00	\$405.00	



Underground Storage Tank Program Facility Summary Report

For Facility 1990 - CANYON CITY PACIFIC PRIDE CARDLOCK

Compliance Payment			
Invoice ID	Status	Tank Fee	Fee Rcvd Amount
UST13-00369	PAID	\$405.00	\$405.00
UST12-00376	PAID	\$405.00	\$405.00
UST11-00380	PAID	\$405.00	\$405.00
UST10-00387	PAID	\$405.00	\$405.00
UST09-00391	PAID	\$405.00	\$405.00
UST08-00409	PAID	\$405.00	\$405.00
UST07-00418	PAID	\$255.00	\$255.00
UST06-00427	PAID	\$255.00	\$255.00
UST05-00442	PAID	\$255.00	\$255.00
UST04-00445	PAID	\$255.00	\$255.00
UST03-00454	PAID	\$255.00	\$255.00
UST02-00459	PAID	\$315.00	\$315.00
UST01-00480	PAID	\$180.00	\$180.00
UST00-00514	PAID	\$180.00	\$180.00

Tank Construction Details of Active Tanks		
Tank Code: 1	Installation Date: 4/30/1981	Tank Manufacture: Sti-p3
Certificate: Operation	Lining Date:	Pipe Manufacture: Total Containment
Est Gallons: 6,000	Cathodic Date: 97/05/16	Spill Device Type: Spill Bucket
		Overfill Device Type: Overfill Alarm
Tank Construction:	Substance:	Tank Release Detection:



Underground Storage Tank Program Facility Summary Report

For Facility 1990 - CANYON CITY PACIFIC PRIDE CARDLOCK

- Cathodically Protected Steel	- Gasoline	- Automatic tank gauging: Veeder-Root
<hr/>		
Pipe Material: - Fiberglass Reinforced Plastic - Double Walled	Pipe Type: - Pressure	Pipe Release Detection: - Automatic line leak detectors: Mechanical - Line tightness testing
<hr/>		
Tank Code: 2 Certificate: Operation Est Gallons: 12,000	Installation Date: 4/30/1976 Lining Date: Cathodic Date: 97/05/16	Tank Manufacture: Sti-p3 Pipe Manufacture: Total Containment Spill Device Type: Spill Bucket Overfill Device Type: Overfill Alarm
<hr/>		
Tank Construction: - Cathodically Protected Steel	Substance: - Gasoline	Tank Release Detection: - Automatic tank gauging: Veeder-Root
<hr/>		
Pipe Material: - Fiberglass Reinforced Plastic - Double Walled	Pipe Type: - Pressure	Pipe Release Detection: - Automatic line leak detectors: Mechanical - Line tightness testing
<hr/>		
Tank Code: 3 Certificate: Operation Est Gallons: 6,000	Installation Date: 4/30/1974 Lining Date: Cathodic Date: 97/05/16	Tank Manufacture: Sti-p3 Pipe Manufacture: Total Containment Spill Device Type: Spill Bucket Overfill Device Type: Overfill Alarm
<hr/>		
Tank Construction: - Cathodically Protected Steel	Substance: - Gasoline	Tank Release Detection: - Automatic tank gauging: Veeder-Root
<hr/>		
Pipe Material:	Pipe Type:	Pipe Release Detection:



Underground Storage Tank Program Facility Summary Report

For Facility 1990 - CANYON CITY PACIFIC PRIDE CARDLOCK

- | | | |
|---------------------------------|------------|---|
| - Fiberglass Reinforced Plastic | - Pressure | - Automatic line leak detectors: Mechanical |
| - Double Walled | | - Line tightness testing |



Underground Storage Tank Program Facility Summary Report

For Facility 10860 - CANYON CITY BULK PLANT

General Information

Facility ID: 10860

Phone Number: (530) 667-8913

Current Cert No: 12-10860-2022-OPER

Facility: CANYON CITY BULK PLANT

Training Date: 10/28/2003

Facility Contact: Brad Staub

Address: 133 N WASHINGTON ST

Group Or Area:

Training Exempt: N

City, State, Zip: CANYON CITY,OR 97820

Last TCR: FCI 11/9/2021

LUST Facility: YES

County: GRANT

Region: ER



Underground Storage Tank Program Facility Summary Report

For Facility 10860 - CANYON CITY BULK PLANT

General Information

Financial Responsibility	FR In Compliance	Begin Date	End Date
Insurance	YES	3/26/2021	3/26/2022
Insurance	YES	3/26/2020	3/26/2021
Insurance	YES	3/26/2019	3/26/2020
Insurance	YES	3/26/2018	3/26/2019
Insurance	YES	3/26/2017	3/26/2018
Insurance	YES	3/26/2016	3/26/2017
Insurance	YES	3/26/2015	3/26/2016
Insurance	YES	8/3/2014	8/3/2015
Insurance	YES	8/3/2013	8/3/2014
Insurance	YES	8/3/2012	8/3/2013
Insurance	YES	8/3/2011	8/3/2012
Insurance	YES	8/3/2010	8/3/2011
Insurance	YES	5/3/2010	5/3/2011
Insurance	YES	5/3/2008	5/3/2010
Insurance	YES	5/3/2007	5/3/2008
Insurance	YES	5/3/2006	5/3/2007
Insurance	YES	5/3/2002	5/3/2004

Tank Details

Tank ID	Permit #	Tank Status	Age	Gallons	Tank Content	EGen	CERCLA	CAS#	Other	Material
1	BBFGF	Active		10,000	Diesel		N			Cathodically Protected Steel



Underground Storage Tank Program Facility Summary Report

For Facility 10860 - CANYON CITY BULK PLANT

2	BBFGG	Active	5,000 Diesel	N	Lined Interior
3	BBFGH	Active	2,500 Gasoline	N	Cathodically Protected Steel Lined Interior
4	BBFGJ	Removed	10,000 Gasoline	N	Unknown
5	BBFHK	Removed	10,000 Diesel	N	Cathodically Protected Steel Lined Interior
6	BBFHA	Removed	10,000 Gasoline	N	Cathodically Protected Steel Lined Interior

Facility Contacts						
Owner Type	Contact	Organization	Address	City, St, Zip	Phone	
Permittee	Brad Staub	Fast Break of Oregon, LLC	PO Box 506	Tulelake, CA 96134-0506	(530) 667-8913	
LegalOwner	Brad Staub	SOSS, LLC	PO Box 506	Tulelake, CA 96134-0506	(530) 667-8913	
UST Owner	Brad Staub	SOSS, LLC	PO Box 506	Tulelake, CA 96134-0506	(530) 667-8913	
Compliance Payment				LUST Information		
Invoice ID	Status	Tank Fee	Fee Rcvd Amount	LUST Log Number	Final Invoice Date	Date Closed
UST23-01254	PAID	\$975.00	\$975.00	12-00-0027	01/13/2009	01/13/2009



Underground Storage Tank Program Facility Summary Report

For Facility 10860 - CANYON CITY BULK PLANT

Compliance Payment			
Invoice ID	Status	Tank Fee	Fee Rcvd Amount
UST22-01267	PAID	\$975.00	\$975.00
UST21-01282	PAID	\$975.00	\$975.00
UST20-01303	PAID	\$885.00	\$885.00
UST19-01327	PAID	\$735.00	\$735.00
UST18-01345	PAID	\$585.00	\$585.00
UST17-01369	PAID	\$405.00	\$405.00
UST16-01388	PAID	\$675.00	\$675.00
UST15-01408	PAID	\$675.00	\$675.00
UST14-01432	PAID	\$675.00	\$675.00
UST13-01461	PAID	\$675.00	\$675.00
UST12-01479	PAID	\$675.00	\$675.00
UST11-01501	PAID	\$675.00	\$675.00
UST10-01518	PAID	\$675.00	\$675.00
UST09-01541	PAID	\$675.00	\$675.00
UST08-01604	PAID	\$810.00	\$810.00
UST07-01645	PAID	\$510.00	\$510.00
UST06-01682	PAID	\$510.00	\$510.00
UST05-01737	PAID	\$510.00	\$510.00
UST04-01766	PAID	\$510.00	\$510.00
UST03-01813	PAID	\$510.00	\$510.00
UST02-01845	PAID	\$630.00	\$630.00

For Facility 10860 - CANYON CITY BULK PLANT As of 12/13/2023 12:12:54 PM



Underground Storage Tank Program Facility Summary Report

For Facility 10860 - CANYON CITY BULK PLANT

Compliance Payment			
Invoice ID	Status	Tank Fee	Fee Rcvd Amount
UST01-01926	PAID	\$360.00	\$360.00
UST00-02164	PAID	\$360.00	\$360.00

Tank Construction Details of Active Tanks		
Tank Code: 1	Tank Manufacture: Unknown	
Certificate: Operation	Installation Date:	Pipe Manufacture: Unknown
Est Gallons: 10,000	Lining Date:	Spill Device Type: Spill Bucket
	Cathodic Date:	Overfill Device Type: Overfill Alarm
Tank Construction:	Substance:	Tank Release Detection:
- Cathodically Protected Steel - Lined Interior	- Diesel	- Automatic tank gauging: Veeder-Root
Pipe Material:	Pipe Type:	Pipe Release Detection:
- Flexible Plastic - Double Walled	- Pressure	- Automatic line leak detectors: Mechanica - Line tightness testing
Tank Code: 2	Tank Manufacture: Unknown	
Certificate: Operation	Installation Date:	Pipe Manufacture: Unknown
Est Gallons: 5,000	Lining Date:	Spill Device Type: Spill Bucket
	Cathodic Date:	Overfill Device Type: Overfill Alarm
Tank Construction:	Substance:	Tank Release Detection:
- Cathodically Protected Steel - Lined Interior	- Diesel	- Automatic tank gauging: Veeder-Root



Underground Storage Tank Program Facility Summary Report

For Facility 10860 - CANYON CITY BULK PLANT

Pipe Material: - Flexible Plastic - Double Walled	Pipe Type: - Pressure	Pipe Release Detection: - Automatic line leak detectors: Mechanical - Line tightness testing
Tank Code: 3 Certificate: Operation Est Gallons: 2,500	Installation Date: Lining Date: Cathodic Date:	Tank Manufacture: Unknown Pipe Manufacture: Unknown Spill Device Type: Spill Bucket Overfill Device Type: Overfill Alarm
Tank Construction: - Cathodically Protected Steel - Lined Interior	Substance: - Gasoline	Tank Release Detection: - Automatic tank gauging: Veeder-Root
Pipe Material: - Flexible Plastic - Double Walled	Pipe Type: - Pressure	Pipe Release Detection: - Automatic line leak detectors: Mechanical - Line tightness testing



Oregon

Theodore R. Kulongoski, Governor

Department of Environmental Quality

Eastern Region

700 SE Emigrant Ave., Suite 330

Pendleton, OR 97801

(541) 276-4063 Voice/TTY

FAX (541) 278-0168

January 12, 2009

Greg Jackson
Jackson Oil
P.O. Box 280
Canyon City, OR 97820

RE: Conditional No Further Action

Jackson Oil Bulk Plant
131 N. Washington, Canyon City
LUST 12-00-0027
ECSI 2749, 2865

Dear Mr. Jackson:

The Department of Environmental Quality (DEQ) Leaking Underground Storage Tank (LUST) program has reviewed assessment and remedial actions performed at the above referenced site. Based on the review, DEQ recommended issuing a Conditional No Further Action (NFA) determination for the site following a public comment period.

DEQ's determination that Conditional NFA is appropriate is a result of our evaluation of the facts as we understand them following the implementation of institutional controls at the site. The basis for DEQ's decision was presented DEQ's *Conditional No Further Action Decision Document* dated November 17, 2008.

DEQ requested a public comment period during the period of December 1 to 31, 2008. The request appeared in the December issue of the Secretary of State's Bulletin and in the local newspaper (Blue Mtn. Eagle). No comments were received.

Deed restrictions in the form of an Easement and Equitable Servitudes (E&ES) were recorded on three properties: the Jackson Oil Bulk Plant (tax lot 100), Vern's Apartment (tax lot 200), and Four-Plex (tax lot 201). The restrictions on the Jackson Oil Bulk Plant and Vern's Apartment properties include prohibiting residential use and prohibiting beneficial groundwater use. The restrictions on the Four-Plex include prohibiting beneficial groundwater use. The E&ES for the Vern's Apartment and Four-Plex properties were recorded with Grant County on April 23, 2008. The E&ES for the Jackson Oil Bulk Plant site was recorded on August 27, 2008.

Based on the above actions, the DEQ is issuing a Conditional NFA determination for this site under Oregon Revised Statutes (ORS) 465.200 etc. seq.

DEQ's Conditional NFA determination will not be applicable if new or undisclosed facts show that the cleanup does not comply with the referenced rules. We recommend that a copy of all information be maintained with the permanent facility records. DEQ files and the LUST database will be updated to reflect the Conditional NFA determination.



Jackson Oil Bulk Plant
January 12, 2009
Page 2

Should you have any questions about the Conditional NFA, please feel free to contact me at (541) 298-7255, extension 29 or the project manager, Katie Robertson at (541) 278-4620. DEQ has appreciated the opportunity to assist you in the evaluation of your property.

Sincerely,

Handwritten signature of Katie Robertson in black ink, with a horizontal line under the last few letters of the name.

Sheila Monroe
Cleanup Program Manager
Eastern Region

cc: Steve Airhart, Freestone Environmental Services, Inc., 1100 Jadwin Ave., Suite 250,
Richland, WA 99352
Martin Leuenberger, Coughlin Leuenberger & Moon PC, P.O. Box 1026,
Baker City, OR 97814
Steven Soha, Soha & Lange, 701 5th Ave, Suite 2400, Seattle, WA 98104
Bob & Joni Warren, P.O. Box 266, Canyon City, OR 97820

Conditional No Further Action Decision Document
Jackson Oil Bulk Plant
Canyon City, Grant County, Oregon
Project Manager: Katie Robertson
November 17, 2008

LUST Number: 12-00-0027

ECSI Numbers: 2749 (Canyon City Apartment Vapors), 2865 (Jackson Oil Bulk Plant)

Prepared By: Katie Robertson, Cleanup Project Manager

Approved By: Sheila Monroe, Cleanup Program Manager

Responsible Party: Jackson Oil Company

QTime Number: 21642

RP Contact: Greg Jackson
Jackson Oil
P.O. Box 280
Canyon City, OR 97820

This document presents the basis for the Oregon Department of Environmental Quality's (DEQ's) recommendation of a Conditional No Further Action determination for the Jackson Oil Bulk Plant located at 133 North Washington Street in Canyon City, Oregon (see Figure 1). Remedial actions were performed in accordance with the initial *Risk-Based Corrective Action Plan* dated February 19, 2004 and the *Amendment to the Risk-Based Corrective Action Plan for the Jackson Oil Bulk Storage Facility*, dated July 26, 2006. The recommended remedy was selected in accordance with Oregon Revised Statutes (ORS) 465.200 through 465.455 and OAR Chapter 340, Division 122, Sections 010 to 0140 and Sections 0220 through 0240.

The recommended remedial action is based on information documented in the administrative record (LUST File No. 12-00-0027) for this site. This document summarizes the more detailed information contained in these reports.

Background

The site is located at 133 North Washington Street in Canyon City, Oregon (Figure 1). The site is an active gas station, card-lock, and bulk petroleum fuel facility. The bulk plant facilities include three underground storage tanks (USTs) and 19 above ground storage tanks (ASTs) of which seven are regulated as USTs since greater than 10 percent of the tank system is below ground. The bulk plant was built in 1932.

Regional Geology and Hydrogeology

The City of Canyon City is located along the Canyon Creek in the base of a narrow canyon. The site is located approximately 100 feet east of Canyon Creek. The eastern portion of the site is located adjacent to the canyon wall. Most of the bottomlands that lie within the corporate

boundary of the city were placer mined in 1916 and 1917, reportedly to depths of 15 feet. The tailings were later leveled and reclaimed in the 1950s.

Canyon Creek is a losing stream that likely divides groundwater within the canyon. The creek influences the groundwater flow direction.

Site Geology and Hydrogeology

The site geology as documented during site assessments consist of reworked alluvial deposits consisting primarily of boulders, cobbles, and gravel underlain by sand or clayey gravel to the maximum depth explored of 30.5 feet below ground surface (bgs).

Groundwater at the site fluctuates between about 7 feet and 18 feet bgs. The groundwater flow direction is generally towards the north/northeast.

Emergency Response and Initial Site Investigation (2000)

On November 14, 2000, DEQ received a pollution complaint from a resident who noticed what he thought were gas vapors entering his apartment through the water pipes leading to his water heater. The apartment is located directly north of the bulk plant at 218 North Canyon City Boulevard (see Figure 2). The resident was evacuated from the apartment. The building is a combined apartment, shop, storage building that was converted from a feed/grain storage facility in the late 1990s. Gas vapors were also reported at another residence (Temple residence) located at 133 North Washington Street and about 3,000 feet down gradient from the site. The petroleum release was traced to a leak in saddle tap located on the north end of AST #6 at the bulk plant site. The leak was immediately stopped upon discovery. Soil staining was identified in the vicinity of AST #4. The contents of both ASTs were removed and the tanks were inspected. Other than the saddle tap on AST #6, no other leaks were identified. However, the presence of diesel-related compounds in soil and groundwater samples indicate an undocumented release may have occurred and have contributed to soil and groundwater impacts.

Between November 29 and December 7, 2000, vapor monitoring of ambient air was performed inside nearby buildings, crawl spaces, utility vaults, and outdoor areas. Vapors were only identified at the two residences (Vern's Apartment, Temple residence). The two residences were ventilated. Following the initial response, gasoline vapors were not detected again in the Temple residence nor was soil or groundwater contamination documented at the Temple property.

Three test pits, eleven hand auger borings, 48 soil borings, surface water samples, and 10 monitoring wells were advanced to evaluate the extent of soil and groundwater impacts. Assessment activities were performed both on- and off-site in November and December 2000. Approximately 9,000 gallons of product/water was pumped from an existing dry well on-site and from a stand pipe in test pit TP-1.

Data from the assessment activities performed indicated that the impacts to groundwater migrated down gradient (north) approximately 500 feet. Concentrations of benzene declined by an order of magnitude every 100 feet in the down gradient direction. The decline indicated significant dilution from the Creek and dispersion within the porous media were attenuating the petroleum release. Surface water sampling in Canyon Creek indicated the creek had not been impacted by the release.

Groundwater impacts were primarily encountered beneath the site and the two properties directly north of the site (Vern's Apartment, Four-Plex). Soil impacts were limited to areas directly beneath the ASTs.

Site Assessments (2001)

Three additional groundwater monitoring wells and two soil vapor extraction (SVE) wells were installed in May 2001. Ambient air samples were collected from the Vern's Apartment and Four-Plex buildings.

Two 6-inch groundwater extraction wells and one additional monitoring well were reportedly installed at the site in November 2001. A groundwater pump test was also reportedly performed. No information was present in the DEQ file detailing activities performed during the second half of 2001.

Soil Vapor Extraction System (2001 - 2005)

Following the completion of a SVE pilot test in May 2001, two sets of horizontal soil vapor extractions pipes were installed. The horizontal piping was installed on the north and south sides of the Vern's Apartment building. The SVE system was started on June 18, 2001 but shut down on June 29, 2001 due to the high concentrations of gasoline vapors being discharged. The SVE system was re-started during the later half of 2001. The SVE system was shut down in April 2005.

Groundwater Extraction System (2002 - 2005)

A groundwater extraction (GWE) system was installed in March 2002 utilizing two 6-inch diameter wells. The GWE system was started on April 11, 2002. The pump and treat system treated about four million gallons of water prior to being shut down in April 2005.

Risk-Based Corrective Action Plan (2004)

A *Risk-Based Corrective Action Plan* was prepared in February 2004 to detail remedial actions at the site. The operation of a groundwater pump and treat system along with indoor monitoring on the adjacent property was the remedial action selected. The corrective action plan also provided the following components to the site's conceptual site model.

Locality of the Facility

The locality of the facility (LOF) was defined primarily through the use of air, soil and groundwater monitoring data. The LOF is shown on Figure 3.

Land Use

The site and surrounding properties are located in an area that is zoned commercial. Although properties are zoned commercial, residential use is allowed and is present. Reasonably likely future land use in this area is expected to remain consistent with current land uses.

Beneficial Water Use

A water well survey, including a door to door search, was completed for properties within ½ mile of the site. Five wells were identified within the search area. Three of the wells are actively used and all five wells are used for irrigation.

All of the properties in the vicinity of the site are reportedly on municipal water. Canyon City obtains their municipal supply from two springs located approximately 5 miles south of town and from a well that is located within approximately ½ mile from the site and 400 feet higher in elevation than the site. The City of John Day obtains their municipal supply from three springs, located in Long Gulch, approximately 0.85 mile north of the site.

Several points of diversion water rights are present on Canyon Creek with ½ mile of the site. The water rights are for irrigation purposes. However, sampling data indicates that Canyon Creek has not been impacted by the release.

Ecological Scoping

A Level 1 Scoping Ecological Risk Assessment was performed in May 2003. The assessment concluded that the site is devoid of ecologically important species and habitat. No further ecological investigation of the area was recommended.

Receptors and Pathways

The following receptors and pathways as outlined in DEQ's RBDM guidance were retained for further evaluation:

Air

- Residential and Occupational for Inhalation of Indoor Air pathway.

Soil

- Residential, Occupational, Construction Worker, and Excavation Worker for Ingestion, Dermal Contact, and Inhalation pathway.
- Residential and Occupational for Volatilization to Outdoor Air pathway.
- Residential and Occupational for Vapor Intrusion into Buildings pathway.

Groundwater

- Residential and Occupational for Volatilization to Outdoor Air
- Residential and Occupational for Vapor Intrusion into Buildings
- Construction and Excavation Work for Groundwater in Excavation

Indoor Air Assessment (2005)

Indoor air samples were collected from Vern's Apartment and Four-Plex buildings in April 2001, April 2002, April 2005, and July 2005. An outdoor air sample was also collected in April 2005 and two outdoor air samples were collected in July 2005.

Due to the complexity of evaluating the relationship between subsurface vapor intrusion and ambient air conditions including all the viable influences such as building construction, HVAC system, and occupant activities, a monitoring plan was developed to evaluate multiple lines of evidence to obtain a fuller understanding of actual indoor air conditions.

A total of eight air samples were collected October 2005. Two were collected from beneath the slabs of the Vern's Apartment and Four-Plex buildings, two indoor air samples were collected

from inside the Vern's Apartment and Four-Plex buildings, and four outdoor ambient samples were collected. Based on the sampling data from this monitoring event, a 1.4 micrograms per meter cubed (ug/m^3) was determined to be a reasonable value to use to estimate local ambient concentrations of benzene in outdoor air. Outdoor ambient concentrations were also determined to be a likely significant contributor to the measured indoor air concentrations and vary over approximately one order of magnitude over all sampling events.

The highest sub slab vapor concentration ($2.7 \text{ ug}/\text{m}^3$) was evaluated with EPA's Johnson and Ettinger model and resulted in risk estimates below the acceptable level. Based on the foregoing, sub slab vapor appears to be a minor contributor to the indoor benzene concentrations relative to local outdoor ambient and possibly indoor sources, and that sub slab vapor is unlikely to be present at concentrations that pose risks to building occupants.

To further confirm this conclusion one last air sampling event was performed in May 2006. The event consisted of collecting two air samples from beneath the slabs of the Vern's Apartment and Four-Plex buildings, collecting two indoor air samples from inside the Vern's Apartment and Four-Plex buildings, and collecting two outdoor ambient samples. Sample results were consistent with previous results. As a result the vapor intrusion into indoor air pathway was determined to be incomplete.

Amendment to Risk-Based Corrective Action Plan (2006)

The *Risk-Based Corrective Action Plan* dated February 2004 was amended in 2006. The remedial action amendment is documented in the report entitled *Amendment to the Risk-Based Corrective Action Plan*, dated July 26, 2006. Based on the results of groundwater monitoring and indoor air sampling, the corrective action plan was updated to reflect current conditions. The amended plan proposed to implement a deed restriction on the site and adjacent property to prohibit residential and groundwater use as well as groundwater monitoring.

Quarterly Groundwater Monitoring

A total of 14 monitoring wells, three GWE wells, and two SVE wells have been installed during investigation activities at the site. Wells MW-2, MW-4, MW-6, MW-8, and MW-9 were decommissioned.

Groundwater monitoring has been performed generally on a quarterly to semi-annual basis since December 2000. A total of 22 events have been performed. The groundwater migration direction is generally towards the north/northeast consistent with the surface water flow direction in Canyon Creek. The most recent groundwater contour map is included as Figure 4.

Groundwater samples collected from the monitoring wells were analyzed for gasoline and benzene, toluene, ethylbenzene, and xylenes (BTEX) during each monitoring event. Concentrations of gasoline and BTEX compounds were primarily detected in groundwater from wells MW-3, MW-10, MW-12, MW-13, MW-14, and RW-3. The remaining wells have not had detected concentrations of gasoline and BTEX compounds since at least April 2001.

Groundwater from wells MW-2, MW-3, and MW-9 were analyzed for the full volatile organic compound (VOC) list in December 2002. In addition to BTEX compounds, concentrations of one or more of the following VOCs were detected in the groundwater samples from MW-2 and

MW-3; methyl tert-butyl ether (MtBE), sec-butylbenzene, n-propylbenzene, 1,3,5-trimethylbenzene (1,3,5-TMB), 1,2,4-trimethylbenzene (1,2,4-TMB) and naphthalene. Several of the detected concentrations exceeded the groundwater inhalation and ingestion from tap water pathway. However, this pathway was determined to be incomplete and the VOC list was reduced.

Groundwater samples from all wells were analyzed during at least one monitoring event for MtBE, polynuclear aromatic hydrocarbons (PAHs), dissolved lead, diesel, and heavy oil. Samples for all of these compounds were collected between December 2000 and February 2002. Concentrations of MtBE were not detected in any of the groundwater samples analyzed. A concentration of dissolved lead was detected in well MW-3 (1.41 ug/l). Concentrations of diesel were detected in wells MW-3 (21,600 ug/l), MW-13 (1,900 ug/l), and MW-14 (632 ug/l). A concentration of heavy oil was detected in well MW-3 (3,020 ug/l). Concentrations of one or more PAHs were detected in the groundwater from wells MW-3, MW-10, MW-12, MW-13, and RW-2. Several of the detected concentrations exceeded the groundwater inhalation and ingestion from tap water pathway. However, this pathway was determined to be incomplete and the analyte list was reduced.

Easement and Equitable Servitudes

Deed restrictions in the form of an Easement and Equitable Servitudes (E&ES) were recorded on three properties within the LOF: the Jackson Oil Bulk Plant (tax lot 100), Vern's Apartment (tax lot 200), and Four-Plex (tax lot 201). The restrictions on the Jackson Oil Bulk Plant and Vern's Apartment properties include prohibiting residential use and prohibiting beneficial groundwater use. The restrictions on the Four-Plex include prohibiting beneficial groundwater use. The E&ES for the Vern's Apartment and Four-Plex properties were recorded with Grant County on April 23, 2008. The E&ES for the Jackson Oil Bulk Plant site was recorded on August 27, 2008.

Revised Conceptual Site Model

Following the completion of additional assessment, specifically indoor air, and the recordation of E&ES on three properties, the follow receptors and pathways remain at the site.

Soil

- Occupational, Construction Worker, and Excavation Worker for Ingestion, Dermal Contact, and Inhalation pathway.
- Occupational for Volatilization to Outdoor Air pathway.

Groundwater

- Occupational for Volatilization to Outdoor Air
- Construction and Excavation Work for Groundwater in Excavation

Soil Risk Based Screening

Concentrations detected in soil samples do not exceed applicable pathways.

Groundwater results were compared to generic RBCs for the groundwater pathways listed above. Concentrations of petroleum products and their constituents were not detected in groundwater samples exceeding any of the applicable pathways except for diesel in groundwater MW-3. The

groundwater from well MW-3 was sampled only one time for diesel in February 2002. The detected concentration of diesel during that event was 21,600 ug/l which exceeds the groundwater in excavation pathway RBC of 9,700 ug/l. Underground utilities in the area are water and sanitary sewer. The water lines are located 3 feet to 4 feet bgs and the sanitary sewer lines are located 5 feet to 10 feet bgs. As part of the emergency response action, the utilities were located and are primarily located under the major road ways and not in the vicinity of well MW-3. Given the length of time since the initial release, the operation of the SVE and GWE systems, diesel concentrations are unlikely to pose a risk in the vicinity of well MW-3. The groundwater data has shown that the groundwater plume has stabilized and continues to naturally attenuate.

Proposed Conditional No Further Action

The site has been proposed for a risk-based closure. All of the potential exposure concerns have been or are proposed to be addressed though:

- Elimination during development of the site-specific CSM (discussed in detail above); and
- Institutional controls as defined in the Easement and Equitable Servitude.

A public comment period will be held to allow for notice and comments on the proposed Conditional No Further Action recommendation. A final decision concerning the proposed Conditional No Further Action determination will be made after consideration of public comments.

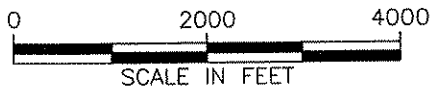
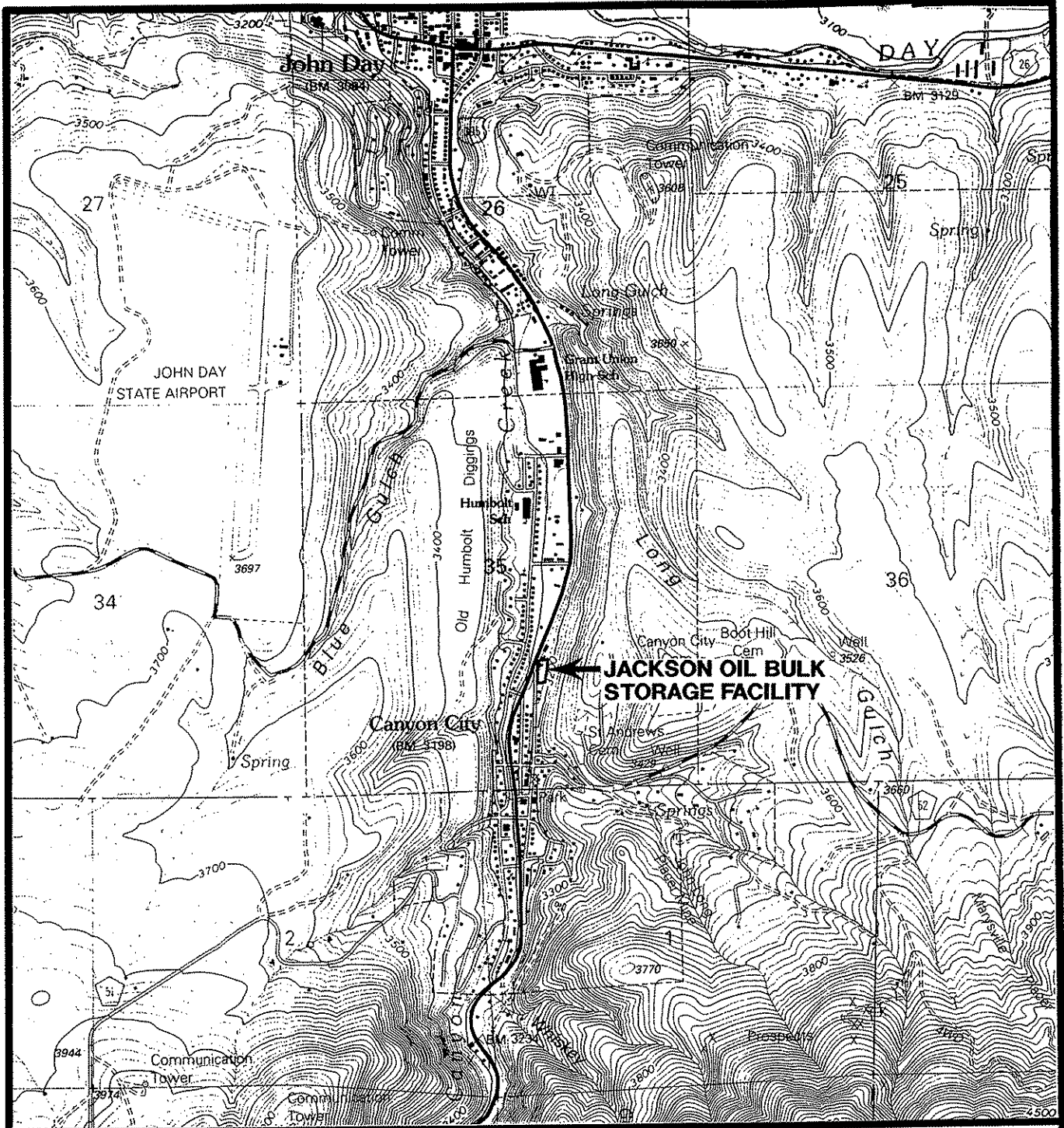
The proposed remedial action meets the requirements of OAR Chapter 340, Division 122, Sections 0205 to 0360; and Chapter 340, Division 122, Sections 010 to 0140 and Sections 0220 through 0240. The recommended remedy was also selected in accordance with ORS 465.200 through 465.455.

Figures

Figure 1 – Site Location Map

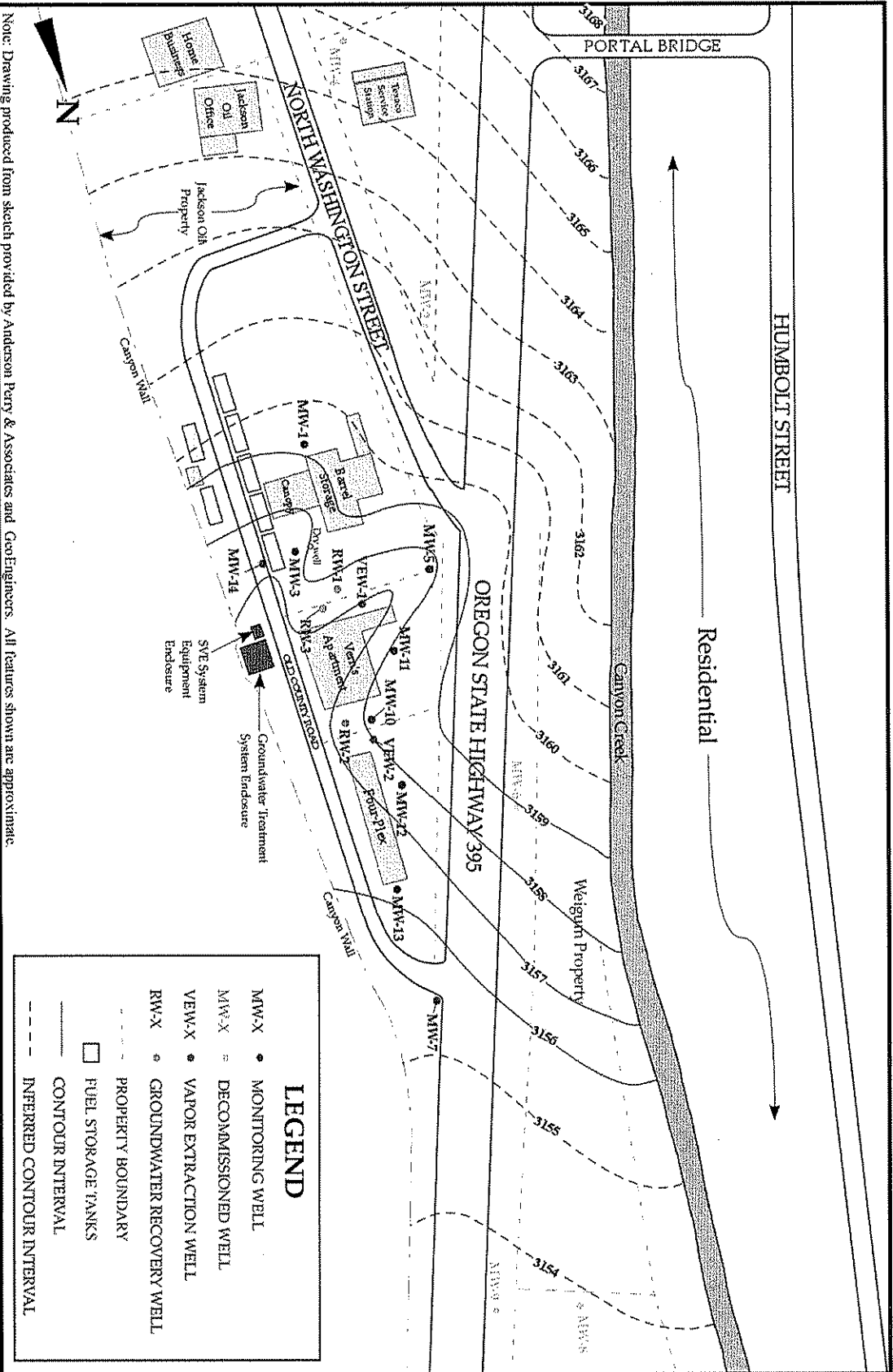
Figure 2 – Site Map

Figure 3 – Locality of the Facility



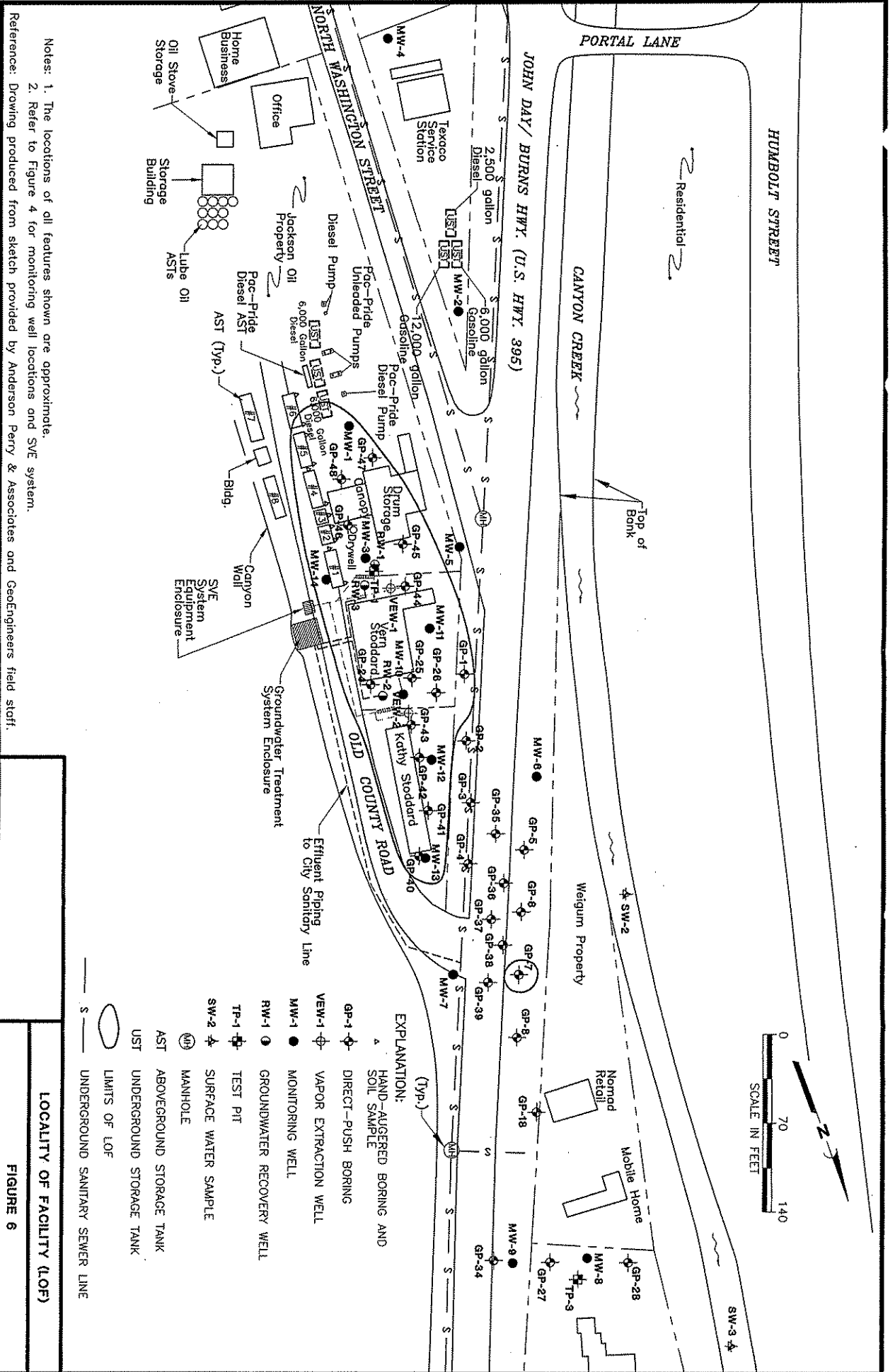
Reference: USGS 7.5' topographic quadrangle map, "John Day, OR," dated 1998.





Note: Drawing produced from sketch provided by Anderson Perry & Associates and GeoEngineers. All features shown are approximate.

Figure 4: Groundwater Elevations, October 7 2008.



**October 2008 Data Summary Report
for the Jackson Oil Bulk Storage
Facility Groundwater Cleanup**

Canyon City, Oregon

LUST# 12-00-0027, UST# 10860

Prepared for:

Jackson Oil, Inc.

Prepared by:



Submitted to:



Oregon Department of
Environmental Quality

November 11, 2008

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Figure 5 – Change in Benzene Concentration of Selected Wells, 2005 -2008

Figure 6 – Dissolved Benzene Plume Map

APPENDIX

Appendix 1 - Analytical Report for October 7, 2008 Groundwater Sampling

1.0 INTRODUCTION

This data report summarizes groundwater collection activities and analytical results for the October 2008 sampling event undertaken as part of long-term groundwater monitoring at the Jackson Oil Bulk Storage Facility (“site”) in Canyon City, Oregon. Figure 1 shows an aerial photo of the site and the adjoining area. Currently, the groundwater beneath the site and the surrounding area is being monitored for gasoline-range hydrocarbons (“gasoline”) and BTEX compounds. Neither the soil vapor extraction system nor the groundwater treatment system has operated since April 2005. Sampling activities described in the report were performed on October 7, 2008.

2.0 GROUNDWATER MONITORING AND SITE STATUS

The following section summarizes field activities performed by Freestone Environmental Services, Inc. (“Freestone”) personnel and analytical results from groundwater samples. Groundwater samples were collected for semi-annual monitoring on October 7, 2008 from all accessible monitoring wells (MW-1, MW-3, MW-5, MW-7, MW-10, MW-11, MW-13 and MW-14) and recovery wells (RW-2 and RW-3). No data was collected from monitoring well MW-12 because the flush mount monument was covered with gravel from winter re-grading and could not be found by the sampling crew in a timely manner. The site layout map, shown in Figure 2, depicts the locations of important buildings and groundwater monitoring wells.

2.1 GROUNDWATER SAMPLE COLLECTION METHODS

Groundwater samples were collected by Freestone personnel using dedicated 1-liter Teflon bailers and nylon rope. Prior to sampling, approximately three well volumes of groundwater were purged from each well. Purge water was collected in 5-gallon buckets and added to the batch tank of the groundwater treatment system.

Four 40-ml VOA bottles containing hydrochloric acid preservative were filled at each well sample location. Additionally, two quality control (QC) samples were collected as follows:

- A QC blank labeled “blank” was collected from the tap water outlet at the Shell Convenience Store/Gas Station located across the street from Jackson Oil.

- A duplicate sample labeled RW-3p was collected from well RW-3.

Samples were stored and shipped in an ice-chest containing blue ice. All samples were sent to Test America Analytical Testing Corporation (“Test America”) in Beaverton, Oregon. Samples were extracted and analyzed for gasoline and BTEX compounds by NW-TPH-Gasoline and EPA 8021 BTEX methods. The laboratory analytical report for the sampling event is found in Appendix 1.

2.2 GROUNDWATER ANALYTICAL RESULTS

Table 1 displays the results of the analytical data from groundwater samples collected to date. Figure 3 shows the site map with analytical results for gasoline and BTEX compounds over the past three sampling events.

As noted on page 3 of the laboratory analytical report (Appendix 1), the laboratory was unable to get a passing benzene continuing calibration verification (CCV) standard. The analytical method allows for a 85-115% control limit window, however the benzene recovery was between 84.6% and 84.7%. As a result, the benzene data is biased either 0.3% or 0.4% low, depending on the analytical sequence associated with them. Assuming a 0.4% low bias, the maximum measured benzene concentration (508 ug/L at well RW-3) would only increase by 2 ug/L. As such, this out-of-compliance calibration was determined to be negligible and will not influence the interpretations of this report.

A summary of the analytical results from Table 1 and Figure 3, as compared to the results from April 2007 (Freestone 2007) follows:

- All analytes remained below detection limits for monitoring wells MW-1, MW-5, MW-7, MW-11, MW-13, and MW-14.
- MW-10, which showed 2.32 ug/L concentration of benzene in April 2007, now has concentrations below detectable limits for all analytes.
- Benzene concentrations decreased or remained below detectable limits in all wells.

- All analyte concentrations in monitoring wells RW-2 and RW-3 decreased. Only gasoline and benzene remain elevated above detectable limits in RW-2. Toluene concentrations in RW-3 are now below detectable limits.
- Gasoline concentrations in MW-3 increased slightly. All other analyte constituents decreased.

2.3 GROUNDWATER ELEVATION MONITORING

Depth to water was measured in all of the accessible wells using a 100-ft Solinst polyethylene electronic tape with 0.01 ft embossed depth markings. The top of casing was used as the reference datum. Surface water measurements were also collected from the Portal Lane, Nugget, and Inland bridges using surveyed nails located on the south side of each bridge as the reference datum.

Table 2 shows groundwater elevation data from each sampling event, produced by using survey data to convert depth to water measurements. From this data, a groundwater elevation map was produced to reflect conditions as of October 2008 (Figure 4).

Compared to measurements taken in April 2007 (Freestone 2007), groundwater elevations in vicinity of the site decreased a mean average of 1.1 ft. A decrease in the groundwater elevation is expected during the fall months as a result of low recharge to the aquifer during the dry season.

2.4 ANALYTICAL EVALUATION

October 2008 revisions to the generic risk-based concentrations (RBCs) for groundwater and air by the Oregon Department of Environmental Quality (ODEQ) affect the regulatory values for toluene and ethylbenzene, but not total xylenes, gasoline-range hydrocarbons, or benzene. Although multiple volatile organic compounds were analyzed, benzene is the primary human health risk driver at the site. Prior to the recent implementation of property deed restrictions (see Section 2.5), the target cleanup level for benzene was 160 ug/L (RBC for the residential vapor intrusion pathway). With the deed restrictions in place, the target cleanup level reverts to the occupational RBC of 2700 ug/L.

Figure 5 shows a semi-log plot of benzene concentrations in wells with detectable concentrations from July 2005 to October 2008. The plot shows October 2008 benzene concentrations decreasing in all wells as compared to April 2007. Since April 2007, the benzene concentration in well RW-2 has dropped below the target concentration level. Currently only well RW-3 contains benzene concentrations above the target level.

With the 2008 revisions to the RBC values for ethylbenzene, measured concentrations in wells MW-3 and RW-3 now exceed the limits for residential and occupational ingestion and inhalation from tap water (1.2 µg/L and 7.4 µg/L, respectively). Measured concentrations remain within regulatory limits for vapor intrusion into buildings (410 µg/L residential; 7,000 µg/L occupational). Measured concentrations of toluene and total xylenes remain within RBC limits for all wells.

The center (i.e., highest concentrations) of the plume has not changed significantly in the history of groundwater monitoring at the site and remains in the vicinity of well RW-3 (Figure 6). Results from sampling events in October 2006 and 2007 suggested slight downgradient (north) elongation of the contamination plume as indicated by elevated benzene levels in wells MW-10 and RW-2 (Freestone 2006a, 2007). Benzene levels in these two wells decreased in 2008 and no detectable levels of benzene were found in the downgradient wells sampled (MW-13 and MW-7), suggesting that plume elongation has not continued. Additionally, overall plume concentrations appear to have decreased, with all measured values falling under 1000 ug/L.

Gasoline-range hydrocarbon concentrations in well MW-3 showed slight elevation over the previous sampling event (Figure 3). A similar occurrence in benzene concentrations in MW-3 in 2007 was explained by groundwater contact with residual soil contamination in the "smear zone" near the source (Freestone 2007). While benzene concentrations in MW-3 decreased in 2008, the elevated gasoline concentrations suggest that the "smear zone" effects may still be a factor in groundwater contamination.

2.5 REMEDIAL ACTION STATUS

The approved remedial action to address residual benzene concentrations in groundwater at the Jackson Oil site is to perform long term groundwater monitoring and to implement deed restrictions in the form of Easement and Equitable Servitudes (E&ES). An agreement to file and execute the conditions of an E&ES on Tax Lots 200 (Vern's Apartment) and 201 (Four-Plex) was signed by the property owners (the Warrens) and representatives of Jackson Oil on April 8, 2008

Key components of the agreement that pertain to the future groundwater monitoring and remedial activities include:

- Continued access to the Warrens' property for the purpose of conducting groundwater monitoring as required for the issuance of a no-further action letter from ODEQ.
- Removal of the monitoring wells located on the Warren property by Jackson Oil upon the issuance of a no-further action letter from ODEQ.

According to ODEQ's website, the E&ES documents for Tax Lots 200 and 201 were recorded on April 23, 2008 and the E&ES document for Tax Lot 100 was recorded on August 27, 2008.

Key provisions of the E&ES documents that pertain to remedial action include:

- The restriction of extraction of groundwater for purposes of consumption or other beneficial use for all three tax lots, as long as the hazardous substance concentrations exceed the acceptable risk level for such use.
- The prohibition of residential use of Tax Lots 100 (Jackson Oil) and 200 (Vern's Apartment).
- The restriction of residential use of Tax Lot 201 (Four-Plex) unless the controls set in place by the E&ES are maintained.

3.0 REGULATORY PATH FORWARD

The Amendment to the Risk-Based Corrective Action Plan for the Jackson Oil Bulk Storage Facility (Freestone 2006b) established the applicable receptor/exposure scenarios of concern for the site and listed the appropriate generic risk-based concentrations (RBCs) for groundwater and air (ODEQ 2003) for the site. The study found seven receptor/exposure scenarios of concern for the site. Of these seven scenarios, three were not recommended for remedial action based on groundwater and air monitoring activities performed subsequent to the pollution event. The scenarios recommended for remedial action include:

- Residential ingestion and inhalation from tap water
- Occupational ingestion and inhalation of tap water
- Residential vapor intrusion into buildings
- Residential inhalation (ambient air).

The approved remedial action to address the remaining exposure pathways for benzene concentrations included performing long-term groundwater monitoring and the implementation of deed restrictions in the form of an E&ES (Freestone 2007).

Deed restrictions were required to 1) preclude use of the groundwater as a potable water source within the boundary of the three effected properties, and 2) preclude future residential land use of properties located on Tax Lots 200 (Vern's Apartment) and 100 (Jackson Oil). Restriction of residential use of Tax Lot 201 (Four-Plex) was not deemed necessary due to the low concentrations of benzene found in monitoring wells located on the property, which have shown concentrations consistently below 160 ug/L since 2003.

With the filing of the E&ES discussed in Section 2.5, both residential and occupational ingestion and inhalation of tap water exposure pathways have been controlled. Additionally, the residential vapor intrusion into buildings pathway for applicable tax lots has also been controlled. With the control of residential pathways, the applicable RBC for vapor intrusion into buildings reverts to the occupational RBC, listed in ODEQ (2008) as 2700 ug/L. As can be seen in Table 1 and Figure 5, benzene concentrations in all monitored wells fall well below the occupational RBC, and therefore risk levels for impact to human health are within acceptable limits.

Given the filing of the E&ES documents and the results of long-term groundwater monitoring at the Jackson Oil site, the ODEQ-approved remedial actions have been completed. Also, with the emplacement of institutional controls (i.e., groundwater withdrawal and residential use restrictions) promulgated by the E&ES documents and the decline in groundwater COC concentrations to below RBCs, the risks associated with the contaminant plume have been mitigated. It is therefore the recommendation of this report that ODEQ grants a No-Further Action status for the site (LUST# 12-00-0027).

4.0 PLANNED ACTIVITIES

Further monitoring activities and/or decommissioning (removal) of the monitoring wells located on the Warren property is contingent upon the determination of ODEQ to issue a letter of no further action or require continued groundwater monitoring.

5.0 REFERENCES

Freestone. 2006a. *October 2006 Data Summary Report for the Jackson Oil Bulk Storage Facility Groundwater Cleanup, Canyon City, Oregon*. Freestone Environmental Services, Inc. Richland, Washington.

Freestone. 2006b. *Amendment to the Risk-Based Corrective Action Plan Jackson Oil Bulk Storage Facility, Canyon City, Oregon*. Freestone Environmental Services, Inc. Richland, Washington.

Freestone. 2007. *April 2007 Data Summary Report for the Jackson Oil Bulk Storage Facility Groundwater Cleanup, Canyon City, Oregon*. Freestone Environmental Services, Inc. Richland, Washington.

ODEQ. 2003. *Risk-Based Decision making for the Remediation of Petroleum-Contaminated Sites*. Appendix A. Oregon Department of Environmental Quality. Portland, Oregon.

Table 1: Analytical Summary of Ground Water Samples¹
Jackson Oil Bulk Storage Facility
Canyon City, Oregon

Sample Number	Date Sampled	Gasoline-range Hydrocarbons (Method NWTTPH-Gx) (µg/l)	BETX and MTBE ² (EPA Method 8021B) (µg/l)					Dissolved Lead (EPA Method 6000/7000) (µg/l)	Polynuclear Aromatic Hydrocarbons (EPA Method 8270-SIM) (µg/l)	Diesel-range Hydrocarbons (Method NWTTPH-Dx) (mg/L)	Oil-range Hydrocarbons (Method NWTTPH-Dx) (mg/L)
			B	E	T	X	MTBE				
MW-1	12/01/00	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--
	12/06/00	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--
	12/28/00	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	--	--	--	--
	04/30/01	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	<1.0	<0.20	--	--
	02/20/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	<0.25	<0.5
	05/17/02	Well Not Sampled on This Date									
	08/24/02	Well Not Sampled on This Date									
	11/25/02	Well Not Sampled on This Date									
	03/12/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/11/03	Well Not Sampled on This Date									
	10/02/03	Well Not Sampled on This Date									
	12/19/03	Well Not Sampled on This Date									
	02/27/04	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/17/04	Well Not Sampled on This Date									
	09/24/04	Well Not Sampled on This Date									
	04/07/05	Well Not Sampled on This Date									
	07/07/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	10/26/05	Well Not Sampled on This Date									
	5/16/06	Well Not Sampled on This Date									
	10/12/06	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
04/12/07	Well Not Sampled on This Date										
10/07/08 ⁷	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
MW-2	12/01/00 ¹	9,410	<5.00	22.1	24.0	52.8	<20.0	--	--	--	--
	12/06/00	888	<0.500	1.6	2.3	3.3	<2.00	--	--	--	--
	12/28/00	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	--	--	--	--
	04/30/01	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	<1.0	<0.20	--	--
	02/20/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	<0.25	<0.5
	05/17/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	08/24/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	11/25/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	03/12/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/11/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	10/02/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	12/19/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	02/27/04	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/17/04	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	09/24/04	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	04/07/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	07/07/05	Well Not Sampled on This Date									
10/26/05	Well Decommissioned										
MW-3	12/02/00 ¹	42,900	6,230	712	4,760	1,430	<200	--	--	--	--
	12/06/00	16,100	2,740	<100	1,710	1,120	<200	--	--	--	--
	12/28/00	61,800	8,440	1,310	11,500	7,660	<400	--	--	--	--
	04/30/01	61,800	2,980	1,080	4,820	6,880	<400	1.41	Naphthalene = 237 Phenanthrene = 16.8	--	--
	02/21/02	9,990	564	247	115	1,370	--	--	Acenaphthene = 4.45 Fluorene = 8.92 Naphthalene = 79.8 Phenanthrene = 15.1 Pyrene = 1.90	22	3
	05/17/02	1,940	63.3	32.7	13.0	123	--	--	--	--	--
	08/24/02	1,040	85.5	36.2	4.8	53.0	--	--	--	--	--
	11/25/02	2,070	73.2	33.5	11.8	161	--	--	--	--	--
	03/12/03	4,750	465	128	70.1	875	--	--	--	--	--
	06/11/02	11,700	901	268	600	1,940	--	--	--	--	--
	10/02/03	3,790	125	131	29.1	532	--	--	--	--	--
	12/19/03	1,380	91.4	50.3	43.5	156	--	--	--	--	--
	02/27/04	3,830	196	157	373	753	--	--	--	--	--
	06/17/04	3,080	344	73.3	138	381	--	--	--	--	--
	09/24/04	2,570	114	134	58.9	399	--	--	--	--	--
	04/07/05	1,220	60.3	68.0	46.3	317	--	--	--	--	--
	07/07/05	3,070	218	175	19.9	552	--	--	--	--	--
10/26/05	308.00	6.41	13.50	0.84	52.50	--	--	--	--	--	
5/16/06	4530	164	188	69.8	769	--	--	--	--	--	
10/12/06	2510	280	199	38.8	555	--	--	--	--	--	
04/12/07	927	75.6	48.1	11.8	209	--	--	--	--	--	
10/07/08 ⁷	1160	38.2	45.3	3.19	114	--	--	--	--	--	

Notes appear on page 6 of 6.

Table 1: Analytical Summary of Ground Water Samples¹
Jackson Oil Bulk Storage Facility
Canyon City, Oregon

Sample Number	Date Sampled	Gasoline-range Hydrocarbons (Method NWTPH-Gx) (µg/l)	BETX and MTBE ² (EPA Method 8021B) (µg/l)					Dissolved Lead (EPA Method 6000/7000) (µg/l)	Polynuclear Aromatic Hydrocarbons (EPA Method 8270-SIM) (µg/l)	Diesel-range Hydrocarbons (Method NWTPH-Dx) (mg/L)	Oil-range Hydrocarbons (Method NWTPH-Dx) (mg/L)
			B	E	T	X	MTBE				
MW-4	12/02/00	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--
	12/06/00	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--
	12/28/00	87.9	<0.500	<0.500	<0.500	<1.00	<2.00	--	--	--	--
	04/30/01	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	<1.0	<0.20	--	--
	02/20/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	<0.25	<0.5
	05/17/02	Well Not Sampled on This Date									
	08/24/02	Well Not Sampled on This Date									
	11/25/02	Well Not Sampled on This Date									
	03/12/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/11/03	Well Not Sampled on This Date									
	10/02/03	Well Not Sampled on This Date									
	12/19/03	Well Not Sampled on This Date									
	02/27/04	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/17/04	Well Not Sampled on This Date									
	09/24/04	Well Not Sampled on This Date									
	04/07/05	Well Not Sampled on This Date									
07/07/05	Well Not Sampled on This Date										
10/26/05	Well Decommissioned										
MW-5	12/02/00	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--
	12/28/00	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	--	--	--	--
	04/30/01	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	<1.0	<0.20	--	--
	02/20/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	<0.25	<0.5
	05/17/02	Well Not Sampled on This Date									
	08/24/02	Well Not Sampled on This Date									
	11/25/02	Well Not Sampled on This Date									
	03/12/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/11/03	Well Not Sampled on This Date									
	10/02/03	Well Not Sampled on This Date									
	12/19/03	Well Not Sampled on This Date									
	02/27/04	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/17/04	Well Not Sampled on This Date									
	09/24/04	Well Not Sampled on This Date									
	04/07/05	Well Not Sampled on This Date									
	07/07/05	Well Not Sampled on This Date									
10/26/05	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--	
5/16/06	Well Not Sampled on This Date										
10/12/06	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
04/12/07	Well Not Sampled on This Date										
10/07/08 ⁷	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
MW-6	12/03/00	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--
	12/06/00	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--
	12/28/00	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	--	--	--	--
	04/30/01	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	<1.0	<0.20	--	--
	02/20/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	<0.25	<0.5
	05/17/02	Well Not Sampled on This Date									
	08/24/02	Well Not Sampled on This Date									
	11/25/02	Well Not Sampled on This Date									
	03/12/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/11/03	Well Not Sampled on This Date									
	10/02/03	Well Not Sampled on This Date									
	12/19/03	Well Not Sampled on This Date									
	02/27/04	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/17/04	Well Not Sampled on This Date									
	09/24/04	Well Not Sampled on This Date									
	04/07/05	Well Not Sampled on This Date									
07/07/05	Well Not Sampled on This Date										
10/26/05	Well Decommissioned										

Notes appear on page 6 of 6.

Table 1: Analytical Summary of Ground Water Samples¹
Jackson Oil Bulk Storage Facility
Canyon City, Oregon

Sample Number	Date Sampled	Gasoline-range Hydrocarbons (Method NWTPH-Gx) (µg/l)	BETX and MTBE ² (EPA Method 8021B) (µg/l)					Dissolved Lead (EPA Method 6000/7000) (µg/l)	Polynuclear Aromatic Hydrocarbons (EPA Method 8270-SIM) (µg/l)	Diesel-range Hydrocarbons (Method NWTPH-Dx) (mg/L)	Oil-range Hydrocarbons (Method NWTPH-Dx) (mg/L)	
			B	E	T	X	MTBE					
MW-7	12/03/00	<100	0.680	<1.00	<1.00	1.18	<2.00	--	--	--	--	
	12/06/00	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--	
	12/28/00	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	--	--	--	--	
	04/30/01	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	<1.0	<0.20	--	--	
	02/21/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	<0.25	<0.5	
	05/17/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	08/24/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	11/25/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	03/12/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	06/11/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	10/02/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	12/19/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	02/27/04	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	06/17/04	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	09/24/04	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	04/07/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	07/07/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	10/26/05	Well Not Sampled on This Date										
5/16/06	Well Not Sampled on This Date											
10/12/06	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--		
04/12/07	Well Not Sampled on This Date											
10/07/08 ⁷	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--		
MW-8	12/05/00	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--	
	12/06/00	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--	
	12/28/00	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	--	--	--	--	
	04/30/01	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	<1.0	<0.20	--	--	
	02/20/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	<0.25	<0.5	
	05/17/02	Well Not Sampled on This Date										
	08/24/02	Well Not Sampled on This Date										
	11/25/02	Well Not Sampled on This Date										
	03/12/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	06/11/03	Well Not Sampled on This Date										
	10/02/03	Well Not Sampled on This Date										
	12/19/03	Well Not Sampled on This Date										
	02/27/04	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	06/17/04	Well Not Sampled on This Date										
	09/24/04	Well Not Sampled on This Date										
04/07/05	Well Not Sampled on This Date											
07/07/05	Well Not Sampled on This Date											
10/26/05	Well Decommissioned											
MW-9	12/05/00 ⁵	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--	
	12/06/00	<100	<0.500	<1.00	<1.00	<1.00	<2.00	--	--	--	--	
	12/28/00	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	--	--	--	--	
	04/30/01	<80.0	<0.500	<0.500	<0.500	<1.00	<2.00	<1.0	Naphthalene = 1.02	--	--	
	02/20/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	<0.25	<0.5	
	05/17/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	08/24/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	11/25/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	03/12/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	06/11/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	10/02/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	12/19/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	02/27/04	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	06/17/04	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
	09/24/04	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
04/07/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--		
07/07/05	Well Not Sampled on This Date											
10/26/05	Well Decommissioned											

Notes appear on page 6 of 6.

Table 1: Analytical Summary of Ground Water Samples¹
Jackson Oil Bulk Storage Facility
Canyon City, Oregon

Sample Number	Date Sampled	Gasoline-range Hydrocarbons (Method NWTPH-Gx) (µg/l)	BETX and MTBE ² (EPA Method 8021B) (µg/l)					Dissolved Lead (EPA Method 6000/7000) (µg/l)	Polynuclear Aromatic Hydrocarbons (EPA Method 8270-SIM) (µg/l)	Diesel-range Hydrocarbons (Method NWTPH-Dx) (mg/L)	Oil-range Hydrocarbons (Method NWTPH-Dx) (mg/L)
			B	E	T	X	MTBE				
MW-10	12/28/00	12,700	3,970	<50.0	659	873	<200	--	--	--	--
	04/30/01	64,800	5,930	907	9,070	6,070	<200	<1.0	Acenaphthalene = 0.204 Fluorene = 0.305 Naphthalene = 130 Phenanthrene = 0.102	--	--
	2/21/02 ⁶	6,090	465	134	19.6	411	--	--	Naphthalene = 68.2	<0.25	<0.5
	05/17/02	6,560	595	162	161	449	--	--	--	--	--
	08/24/02	1,230	150	41.7	6.6	31.8	--	--	--	--	--
	11/25/02	2,850	161	108	145	190	--	--	--	--	--
	03/12/03	1,080	92.0	93.3	7.0	45.5	--	--	--	--	--
	06/11/03	1,600	184	61.0	102	138	--	--	--	--	--
	10/02/03	699	12.0	74.6	2.9	7.6	--	--	--	--	--
	12/19/03	526	7.4	49.4	5.9	35.4	--	--	--	--	--
	02/27/04	153	4.2	10.5	<0.500	1.4	--	--	--	--	--
	06/17/04	230	28.1	28.5	1.6	14.4	--	--	--	--	--
	09/24/04	145	26.4	<0.500	<0.500	<1.00	--	--	--	--	--
	04/07/05	<80.0	3.5	<0.500	<0.500	<1.00	--	--	--	--	--
	07/07/05	127	60.5	<0.500	<0.500	<1.00	--	--	--	--	--
	10/26/05	<80.0	9.4	<0.500	<0.500	<1.00	--	--	--	--	--
	5/16/06	<50	3.47	<0.500	<0.500	<1.00	--	--	--	--	--
10/12/06	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
04/12/07	<80.0	2.32	<0.500	<0.500	<1.00	--	--	--	--	--	
10/07/08 ⁷	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
MW-11	05/02/01	--	<0.500	<0.500	<0.500	<1.00	<2.00	<1.0	<0.20	--	--
	02/20/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	<0.25	<0.5
	05/17/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	08/24/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	11/25/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	03/12/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/11/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	10/02/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	12/19/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	02/27/04	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/17/04	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	09/24/04	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	04/07/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	07/07/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	10/26/05	Well Not Sampled on This Date									
	5/16/06	Well Not Sampled on This Date									
	10/12/06	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
04/12/07	Well Not Sampled on This Date										
10/07/08 ⁷	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
MW-12	05/03/01	--	181	32	268	270	<10	<1.0	Naphthalene = 4.93	--	--
	2/20/02 ⁶	1,570	202	56.1	7.2	81.1	--	--	Naphthalene = 20.9	<0.25	<0.5
	05/17/02	<80.0	2.6	0.5	<0.500	<1.00	--	--	--	--	--
	08/24/02	<80.0	0.7	<0.500	<0.500	<1.00	--	--	--	--	--
	11/25/02	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	03/12/03	<80.0	3.6	1.6	<0.500	<1.00	--	--	--	--	--
	06/11/03	434	38.2	17.3	7.5	8.3	--	--	--	--	--
	10/02/03	<80.0	1.0	1.1	0.6	2.0	--	--	--	--	--
	12/19/03	<80.0	<0.500	0.60	<0.500	<1.00	--	--	--	--	--
	02/27/04	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/17/04	<80.0	6.6	7.8	<0.500	2.3	--	--	--	--	--
	09/24/04	<80.0	1.9	<0.500	<0.500	<1.00	--	--	--	--	--
	04/07/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	07/07/05	<80.0	8.0	<0.500	<0.500	<1.00	--	--	--	--	--
	10/26/05	<80.0	1.3	<0.500	<0.500	<1.00	--	--	--	--	--
	5/16/06	<50.0	0.669	<0.500	<0.500	<1.00	--	--	--	--	--
	10/12/06	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
04/12/07	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
10/07/08 ⁷	Well Not Sampled on This Date										

Notes appear on page 6 of 6.

Table 1: Analytical Summary of Ground Water Samples¹
Jackson Oil Bulk Storage Facility
Canyon City, Oregon

Sample Number	Date Sampled	Gasoline-range Hydrocarbons (Method NWTTPH-Gx) (µg/l)	BETX and MTBE ² (EPA Method 8021B) (µg/l)					Dissolved Lead (EPA Method 6000/7000) (µg/l)	Polynuclear Aromatic Hydrocarbons (EPA Method 8270-SIM) (µg/l)	Diesel-range Hydrocarbons (Method NWTTPH-Dx) (mg/L)	Oil-range Hydrocarbons (Method NWTTPH-Dx) (mg/L)
			B	E	T	X	MTBE				
MW-13	05/03/01	--	2,060	113	662	1,360	<100	<1.0	Fluorene = 1.18 Naphthalene = 43.7	--	--
	02/20/02	2,730	463	13.8	5.4	16.4	--	--	Naphthalene = 7.02	2	<0.5
	05/17/02	807	72.1	5.4	3.5	4.8	--	--	--	--	--
	08/24/02	576	75.5	3.8	0.8	<1.00	--	--	--	--	--
	11/25/02	1,640	4.6	1.4	1.1	4.21	--	--	--	--	--
	03/12/03	780	5.4	1.5	<0.500	<1.00	--	--	--	--	--
	06/11/03	575	104	0.9	<0.500	3.6	--	--	--	--	--
	10/02/03	165	1	<0.500	<0.500	1.4	--	--	--	--	--
	12/19/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	02/27/04	118	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/17/04	<80.0	4.3	<0.500	<0.500	<1.00	--	--	--	--	--
	09/24/04	<80.0	6.6	<0.500	<0.500	<1.00	--	--	--	--	--
	04/07/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	07/07/05	190	73.1	<0.500	<0.500	<1.00	--	--	--	--	--
	10/26/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	5/16/06	175	16.7	<0.500	0.559	9.87	--	--	--	--	--
	10/12/06	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
04/12/07	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
10/07/08 ⁷	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
MW-14	02/21/02	141	55.3	<0.500	<0.500	<1.00	--	--	<0.20	1	<0.5
	05/17/02	<80.0	1.7	<0.500	<0.500	<1.00	--	--	--	--	--
	08/24/02	<80.0	0.5	<0.500	<0.500	<1.00	--	--	--	--	--
	11/25/02	<80.0	17.8	<0.500	<0.500	<1.00	--	--	--	--	--
	03/12/03	<80.0	17.8	<0.500	<0.500	<1.00	--	--	--	--	--
	06/11/03	<80.0	1.4	<0.500	<0.500	<1.00	--	--	--	--	--
	10/02/03	657	263	<2.500	<2.500	<5.00	--	--	--	--	--
	12/19/03	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	02/27/04	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	06/17/04	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	09/24/04	<80.0	27.80	<0.500	<0.500	<1.00	--	--	--	--	--
	04/07/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	07/07/05	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	10/26/05	<80.0	20.20	<0.500	<0.500	<1.00	--	--	--	--	--
	5/16/06	<50.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	10/12/06	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
	04/12/07	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--
10/07/08 ⁷	<80.0	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	
RW-2	2/21/02 ⁶	5,910	1,310	171	45.9	338	--	--	Naphthalene = 57.6	<0.25	<0.5
	05/17/02	3,980	485	114	72.8	253	--	--	--	--	--
	08/24/02	1,120	223	38.4	4.9	9.7	--	--	--	--	--
	11/25/02	1,470	138	49.6	46.8	60.2	--	--	--	--	--
	03/12/03	1,360	214	48.7	5.1	16.5	--	--	--	--	--
	06/11/03	2,150	751	47.8	21.7	39.2	--	--	--	--	--
	10/02/03	447	60.6	28.5	<0.500	1.4	--	--	--	--	--
	12/19/03	416	60.6	23.6	2.4	16.5	--	--	--	--	--
	02/27/04	277	80.1	10.9	0.5	1.8	--	--	--	--	--
	06/17/04	409	286	29.3	9.1	22.5	--	--	--	--	--
	09/24/04	627	268	5.5	<1.00	<2.00	--	--	--	--	--
	04/07/05	235	119	<0.500	<0.500	<1.00	--	--	--	--	--
	07/07/05	1,000	502	38.3	3.1	6.8	--	--	--	--	--
	10/26/05	364	170	<0.500	<0.500	<1.00	--	--	--	--	--
	05/16/06	417	142	1.23	<0.500	<1.00	--	--	--	--	--
	10/12/06	<80.0	0.51	<0.500	<0.500	<1.00	--	--	--	--	--
	04/12/07	809	325	13.10	<2.50	5.10	--	--	--	--	--
10/07/08 ⁷	231	80.1	<0.500	<0.500	<1.00	--	--	--	--	--	

Notes appear on page 6 of 6.

Table 1: Analytical Summary of Ground Water Samples¹
Jackson Oil Bulk Storage Facility
Canyon City, Oregon

Sample Number	Date Sampled	Gasoline-range Hydrocarbons (Method NWTTPH-Gx) (µg/l)	BETX and MTBE ² (EPA Method 8021B) (µg/l)					Dissolved Lead (EPA Method 6000/7000) (µg/l)	Polynuclear Aromatic Hydrocarbons (EPA Method 8270-SIM) (µg/l)	Diesel-range Hydrocarbons (Method NWTTPH-Dx) (mg/L)	Oil-range Hydrocarbons (Method NWTTPH-Dx) (mg/L)
			B	E	T	X	MTBE				
RW-3	02/21/02	22,400	1,920	552	2,670	3,370	--	--	Acenaphthalene = 0.271 Fluorene = 0.518 Naphthalene = 72.6 Phenanthrene = 0.370	3	<0.5
	05/17/02	6,780	814	151	348	764	--	--	--	--	--
	08/24/02	1,590	272	49.2	51.2	148	--	--	--	--	--
	11/25/02	820	148	20.0	73.9	89.6	--	--	--	--	--
	03/12/03	8,340	1,860	281	1,000	1,580	--	--	--	--	--
	06/11/03	5,350	1,180	97.5	159	387	--	--	--	--	--
	10/02/03	10,700	1,200	338	497	1,410	--	--	--	--	--
	12/19/03	10,400	1,250	319	828	1,430	--	--	--	--	--
	02/27/04	1,430	248	55	128	268	--	--	--	--	--
	06/17/04	13,300	1,450	355	877	2,120	--	--	--	--	--
	09/24/04	7,580	1,320	330	268	1,320	--	--	--	--	--
	04/07/05	3,770	996	112	200	656	--	--	--	--	--
	07/07/05	8,350	1,540	397	257	1,700	--	--	--	--	--
	10/26/05	8,780	1,490	337	217	1,420	--	--	--	--	--
	5/16/06	1430	184	38.9	37.7	200	--	--	--	--	--
	10/12/06	17,700	3,580	614	1,180	3,110	--	--	--	--	--
04/12/07	6,530	1,020	211	182	1,210	--	--	--	--	--	
10/07/08 ⁷	3,870	508	190	<5.00	655	--	--	--	--	--	

Notes:

¹Chemical analyses were performed by North Creek Analytical, Inc. of Beaverton, Oregon

²B = benzene, E = ethylbenzene, T = toluene, X = xylenes and MTBE = methyl-tert-butyl eth

³Sample was also analyzed for a full list of volatile organic compounds by EPA Method 8260B. The following analytes and concentrations were detected: sec-butylbenzene = 2.04 µg/l, n-propylbenzene = 2.37 µg/l, 1,2,4-trimethylbenzene = 9.67 µg/l and 1,3,5-trimethylbenzene = 4.97 µg/l.

⁴Sample was also analyzed for a full list of volatile organic compounds by EPA Method 8260B. The following analytes and concentrations were detected: benzene = 6,310 µg/l, ethylbenzene = 901 µg/l, MTBE = 160 µg/l, naphthalene = 208 µg/l, n-propylbenzene = 132 µg/l, toluene = 5,430 µg/l, 1,2,4-trimethylbenzene = 1,090 µg/l, 1,3,5-trimethylbenzene = 281 µg/l and total xylenes = 6,070 µg/l.

⁵Sample was also analyzed for a full list of volatile organic compounds by EPA Method 8260B. Method analytes were not detected in the sample

⁶Naphthalene value derived using EPA Method 8021B

⁷Benzene data biased either 0.3% or 0.4% low, depending on sequence associated, due to laboratory CCV standard difficulty

µg/l = micrograms per liter (parts per billion)

mg/l = milligrams per liter (parts per million)

-- = not analyzed or measured

NE = not established

NA = not applicable

NS = not sampled

Table 2 - Summary of Ground Water and Surface Water Elevations

Monitoring Point	Date Measured	Datum Elevation (ft MSL)	Depth-to-Water (ft below top of casing)	Groundwater/Surface Water Elevation (ft MSL)	Measurable Thickness of Free Product (inches)		
MW-1	05/02/02	3171.21	11.02	3160.19	0		
	05/17/02		11.01	3160.20	0		
	08/24/02		11.49	3159.72	0		
	11/25/02		10.51	3160.70	0		
	12/27/02		10.56	3160.65	0		
	01/28/03		10.32	3160.89	0		
	03/12/03		11.02	3160.19	0		
	04/27/03		10.32	3160.89	0		
	06/11/03		11.23	3159.98	0		
	08/01/03		11.24	3159.97	0		
	10/02/03		11.15	3160.06	0		
	12/19/03		10.96	3160.25	0		
	02/27/04		11.17	3160.04	0		
	06/18/04		11.38	3159.83	0		
	09/24/04		11.12	3160.09	0		
	04/07/05		10.67	3160.54	0		
	07/07/05		11.57	3159.64	0		
	10/26/05		11.33	3159.88	0		
	05/16/06		9.71	3161.5	0		
	10/12/06		11.38	3159.83	0		
04/12/07	10.63	3160.58	0				
10/07/08	11.32	3159.89	0				
MW-2	05/02/02	3173.10	12.00	3161.10	0		
	05/17/02		12.04	3161.06	0		
	08/24/02		13.30	3159.80	0		
	11/25/02		11.74	3161.36	0		
	12/27/02		11.84	3161.26	0		
	01/28/03		11.28	3161.82	0		
	03/12/03		12.28	3160.82	0		
	04/27/03		11.73	3161.37	0		
	06/11/03		12.29	3160.81	0		
	08/01/03		12.57	3160.53	0		
	10/02/03		12.64	3160.46	0		
	12/19/03		12.11	3160.99	0		
	02/27/04		11.94	3161.16	0		
	06/18/04		12.41	3160.69	0		
	09/24/04		12.52	3160.58	0		
	04/07/05		11.13	3161.97	0		
	07/07/05		13.01	3160.09	0		
	10/26/05		Decommissioned		N/A		
	MW-3		05/02/02	3166.45	8.59	3157.86	0
			05/17/02		8.07	3158.38	0
08/24/02		9.02	3157.43		0		
11/25/02		7.54	3158.91		0		
12/27/02		7.54	3158.91		0		
01/28/03		7.08	3159.37		0		
03/12/03		8.02	3158.43		0		
04/27/03		7.37	3159.08		0		
06/11/03		8.22	3158.23		0		
08/01/03		8.30	3158.15		0		
10/02/03		8.33	3158.12		0		
12/19/03		7.92	3158.53		0		
02/27/04		7.85	3158.60		0		
06/18/04		8.31	3158.14		0		
09/24/04		8.24	3158.21		0		
04/07/05		7.14	3159.31		0		
07/07/05		9.15	3157.30		0		
10/26/05		8.93	3157.52		0		
05/16/06		6.60	3159.85		0		
10/12/06		9.05	3157.4		0		
04/12/07	7.8	3158.65	0				
10/07/08	9.18	3157.27	0				

Table 2 - Summary of Ground Water and Surface Water Elevations

Monitoring Point	Date Measured	Datum Elevation (ft MSL)	Depth-to-Water (ft below top of casing)	Groundwater/Surface Water Elevation (ft MSL)	Measurable Thickness of Free Product (inches)		
MW-4	05/02/02	3175.66	12.56	3163.10	0		
	05/17/02		12.53	3163.13	0		
	08/24/02		13.06	3162.60	0		
	11/25/02		12.02	3163.64	0		
	12/27/02		12.06	3163.60	0		
	01/28/03		11.89	3163.77	0		
	03/12/03		12.52	3163.14	0		
	04/27/03		11.90	3163.76	0		
	06/11/03		12.77	3162.89	0		
	08/01/03		12.77	3162.89	0		
	10/02/03		12.65	3163.01	0		
	12/19/03		12.47	3163.19	0		
	02/27/04		12.73	3162.93	0		
	06/18/04		12.98	3162.68	0		
	09/24/04		12.67	3162.99	0		
	04/07/05		12.39	3163.27	0		
	07/07/05		13.17	3162.49	0		
10/26/05	Decommissioned			N/A			
MW-5	05/02/02	3172.13	13.16	3158.97	0		
	05/17/02		13.20	3158.93	0		
	08/24/02		14.26	3157.87	0		
	11/25/02		12.81	3159.32	0		
	12/27/02		12.90	3159.23	0		
	01/28/03		12.41	3159.72	0		
	03/12/03		13.41	3158.72	0		
	04/27/03		12.36	3159.77	0		
	06/11/03		13.42	3158.71	0		
	08/01/03		13.65	3158.48	0		
	10/02/03		13.66	3158.47	0		
	12/19/03		13.25	3158.88	0		
	02/27/04		13.08	3159.05	0		
	06/18/04		13.62	3158.51	0		
	09/24/04		13.64	3158.49	0		
	04/07/05		12.23	3159.90	0		
	07/07/05		14.16	3157.97	0		
	10/26/05		13.98	3158.15	0		
	05/16/06		No Measurement			--	0
	10/12/06		14.28	3157.85	0		
04/12/07	12.82	3159.31	0				
10/07/08	14.34	3157.79	0				
MW-6	05/02/02	3172.00	14.23	3157.77	0		
	05/17/02		14.26	3157.74	0		
	08/24/02		15.25	3156.75	0		
	11/25/02		13.89	3158.11	0		
	12/27/02		13.98	3158.02	0		
	01/28/03		13.49	3158.51	0		
	03/12/03		14.45	3157.55	0		
	04/27/03		13.48	3158.52	0		
	06/11/03		14.46	3157.54	0		
	08/01/03		14.60	3157.40	0		
	10/02/03		14.60	3157.40	0		
	12/19/03		14.28	3157.72	0		
	02/27/04		13.97	3158.03	0		
	06/18/04		14.72	3157.28	0		
	09/24/04		14.68	3157.32	0		
	04/07/05		11.46	3160.54	0		
	07/07/05		15.25	3156.75	0		
10/26/05	Decommissioned			N/A			

Table 2 - Summary of Ground Water and Surface Water Elevations

Monitoring Point	Date Measured	Datum Elevation (ft MSL)	Depth-to-Water (ft below top of casing)	Groundwater/Surface Water Elevation (ft MSL)	Measurable Thickness of Free Product (inches)		
MW-7	05/02/02	3172.23	15.80	3156.43	0		
	05/17/02		15.80	3156.43	0		
	08/24/02		16.64	3155.59	0		
	11/25/02		15.20	3157.03	0		
	12/27/02		15.29	3156.94	0		
	01/28/03		14.83	3157.40	0		
	03/12/03		15.85	3156.38	0		
	04/27/03		14.82	3157.41	0		
	06/11/03		16.04	3156.19	0		
	08/01/03		16.06	3156.17	0		
	10/02/03		15.98	3156.25	0		
	12/19/03		15.66	3156.57	0		
	02/27/04		15.67	3156.56	0		
	06/18/04		16.18	3156.05	0		
	09/24/04		15.91	3156.32	0		
	04/07/05		14.79	3157.44	0		
	07/07/05		16.54	3155.69	0		
	10/26/05		16.28	3155.95	0		
	05/16/06		13.90	3158.30	0		
	10/12/06		16.73	3155.5	0		
04/12/07	15.26	3156.97	0				
10/07/08	16.41	3155.82	0				
MW-8	05/02/02	3171.32	16.92	3154.40	0		
	05/17/02		16.93	3154.39	0		
	08/24/02		18.25	3153.07	0		
	11/25/02		16.64	3154.68	0		
	12/27/02		16.67	3154.65	0		
	01/28/03		15.96	3155.36	0		
	03/12/03		17.19	3154.13	0		
	04/27/03		15.94	3155.38	0		
	06/11/03		17.14	3154.18	0		
	08/01/03		17.39	3153.93	0		
	10/02/03		17.47	3153.85	0		
	12/19/03		17.08	3154.24	0		
	02/27/04		16.77	3154.55	0		
	06/18/04		17.30	3154.02	0		
	09/24/04		17.27	3154.05	0		
	04/07/05		15.61	3155.71	0		
	07/07/05		17.71	3153.61	0		
	10/26/05		Decommissioned			N/A	
	MW-9		05/02/02	3171.23	17.02	3154.21	0
			05/17/02		17.02	3154.21	0
08/24/02		17.89	3153.34		0		
11/25/02		16.40	3154.83		0		
12/27/02		16.49	3154.74		0		
01/28/03		16.01	3155.22		0		
03/12/03		17.08	3154.15		0		
04/27/03		16.00	3155.23		0		
06/11/03		17.28	3153.95		0		
08/01/03		17.35	3153.88		0		
10/02/03		17.26	3153.97		0		
12/19/03		16.91	3154.32		0		
02/27/04		16.94	3154.29		0		
06/18/04		17.50	3153.73		0		
09/24/04		17.20	3154.03		0		
04/07/05		15.93	3155.30		0		
07/07/05		17.89	3153.34		0		
10/26/05		Decommissioned			N/A		

Table 2 - Summary of Ground Water and Surface Water Elevations

Monitoring Point	Date Measured	Datum Elevation (ft MSL)	Depth-to-Water (ft below top of casing)	Groundwater/Surface Water Elevation (ft MSL)	Measurable Thickness of Free Product (inches)
MW-10	05/02/02	3172.09	14.63	3157.46	0
	05/17/02		14.38	3157.71	0
	08/24/02		15.28	3156.81	0
	11/25/02		13.75	3158.34	0
	12/27/02		no measurement	--	0
	01/28/03		13.31	3158.78	0
	03/12/03		14.28	3157.81	0
	04/27/03		13.34	3158.75	0
	06/11/03		14.54	3157.55	0
	08/01/03		14.61	3157.48	0
	10/02/03		14.58	3157.51	0
	12/19/03		14.17	3157.92	0
	02/27/04		14.20	3157.89	0
	06/18/04		14.60	3157.49	0
	09/24/04		14.38	3157.71	0
	04/07/05		13.33	3158.76	0
	07/07/05		14.88	3157.21	0
	10/26/05		15.63	3156.46	0
	05/16/06		12.36	3159.73	0
	10/12/06		14.55	3157.54	0
04/12/06	13.54	3158.55	0		
10/07/08	14.82	3157.27	0		
MW-11	05/02/02	3172.00	13.22	3158.78	0
	05/17/02		13.23	3158.77	0
	08/24/02		13.90	3158.10	0
	11/25/02		12.71	3159.29	0
	12/27/02		12.78	3159.22	0
	01/28/03		12.47	3159.53	0
	03/12/03		13.29	3158.71	0
	04/27/03		12.48	3159.52	0
	06/11/03		13.47	3158.53	0
	08/01/03		13.51	3158.49	0
	10/02/03		13.44	3158.56	0
	12/19/03		13.20	3158.80	0
	02/27/04		13.34	3158.66	0
	06/18/04		13.72	3158.28	0
	09/24/04		13.42	3158.58	0
	04/07/05		12.72	3159.28	0
	07/07/05		13.93	3158.07	0
	10/26/05		13.63	3158.37	0
	05/16/06		11.82	3160.18	0
	10/12/06		13.72	3158.28	0
04/12/07	12.91	3159.09	0		
10/07/08	13.64	3158.36	0		
MW-12	05/02/02	3172.25	14.96	3157.29	0
	05/17/02		14.96	3157.29	0
	08/24/02		15.86	3156.39	0
	11/25/02		14.30	3157.95	0
	12/27/02		14.37	3157.88	0
	01/28/03		13.93	3158.32	0
	03/12/03		15.02	3157.23	0
	04/27/03		13.93	3158.32	0
	06/11/03		15.27	3156.98	0
	08/01/03		15.31	3156.94	0
	10/02/03		15.21	3157.04	0
	12/19/03		14.85	3157.40	0
	02/27/04		14.92	3157.33	0
	06/18/04		15.50	3156.75	0
	09/24/04		15.18	3157.07	0
	04/07/05		14.02	3158.23	0
	07/07/05		15.90	3156.35	0
	10/26/05		15.56	3156.69	0
	05/16/06		13.16	3159.06	0
	10/12/06		15.7	3156.55	0
04/12/07	14.42	3157.83	0		
10/07/08	no measurement	--	0		

Table 2 - Summary of Ground Water and Surface Water Elevations

Monitoring Point	Date Measured	Datum Elevation (ft MSL)	Depth-to-Water (ft below top of casing)	Groundwater/Surface Water Elevation (ft MSL)	Measurable Thickness of Free Product (inches)
MW-13	05/02/02	3172.06	15.28	3156.78	0
	05/17/02		15.27	3156.79	0
	08/24/02		no measurement	--	0
	11/25/02		14.61	3157.45	0
	12/27/02		14.69	3157.37	0
	01/28/03		14.27	3157.79	0
	03/12/03		15.29	3156.77	0
	04/27/03		14.25	3157.81	0
	06/11/03		15.51	3156.55	0
	08/01/03		15.55	3156.51	0
	10/02/03		15.46	3156.60	0
	12/19/03		15.11	3156.95	0
	02/27/04		15.18	3156.88	0
	06/18/04		15.71	3156.35	0
	09/24/04		15.41	3156.65	0
	04/07/05		14.25	3157.81	0
	07/07/05		16.08	3155.98	0
	10/26/05		15.76	1356.30	0
	05/16/06		13.37	3158.69	0
	10/12/06		15.91	3156.15	0
04/12/07	14.67	3157.39	0		
10/07/08	15.87	3156.19	0		
MW-14	05/02/02	3183.47	25.44	3158.03	0
	05/17/02		25.28	3158.19	0
	08/24/02		26.25	3157.22	0
	11/25/02		24.84	3158.63	0
	12/27/02		24.71	3158.76	0
	01/28/03		24.25	3159.22	0
	03/12/03		25.21	3158.26	0
	04/27/03		24.20	3159.27	0
	06/11/03		25.02	3158.45	0
	08/01/03		25.48	3157.99	0
	10/02/03		25.55	3157.92	0
	12/19/03		24.87	3158.60	0
	02/27/04		24.86	3158.61	0
	06/18/04		25.08	3158.39	0
	09/24/04		25.32	3158.15	0
	04/07/05		24.30	3159.17	0
	07/07/05		25.69	3157.78	0
	10/26/05		25.65	3157.82	0
	05/16/06		23.43	3160.04	0
	10/12/06		25.62	3157.85	0
04/12/07	24.35	3159.12	0		
10/07/08	25.93	3157.54	0		
RW-2	05/02/02	3171.60	14.81	3156.79	0
	05/17/02		13.96	3157.64	0
	08/24/02		14.82	3156.78	0
	11/25/02		13.28	3158.32	0
	12/27/02		13.33	3158.27	0
	01/28/03		12.85	3158.75	0
	03/12/03		13.84	3157.76	0
	04/27/03		12.90	3158.70	0
	06/11/03		14.07	3157.53	0
	08/01/03		14.16	3157.44	0
	10/02/03		14.12	3157.48	0
	12/19/03		13.72	3157.88	0
	02/27/04		13.79	3157.81	0
	06/18/04		14.18	3157.42	0
	09/24/04		13.96	3157.64	0
	04/07/05		12.94	3158.66	0
	07/07/05		14.49	3157.11	0
	10/26/05		14.27	3157.33	0
	05/16/06		11.91	3159.69	0
	10/12/06		14.11	3157.49	0
04/12/07	13.03	3158.57	0		
10/07/08	14.25	3157.35	0		

Table 2 - Summary of Ground Water and Surface Water Elevations

Monitoring Point	Date Measured	Datum Elevation (ft MSL)	Depth-to-Water (ft below top of casing)	Groundwater/Surface Water Elevation (ft MSL)	Measurable Thickness of Free Product (inches)
RW-3	05/02/02	3171.72	14.46	3157.26	0
	05/17/02		13.49	3158.23	0
	08/24/02		14.43	3157.29	0
	11/25/02		12.93	3158.79	0
	12/27/02		12.90	3158.82	0
	01/28/03		12.44	3159.28	0
	03/12/03		13.38	3158.34	0
	04/27/03		12.51	3159.21	0
	06/11/03		13.60	3158.12	0
	08/01/03		13.66	3158.06	0
	10/02/03		13.69	3158.03	0
	12/19/03		13.29	3158.43	0
	02/27/04		13.20	3158.52	0
	06/18/04		13.70	3158.02	0
	09/24/04		13.57	3158.15	0
	04/07/05		12.48	3159.24	0
	07/07/05		14.10	3157.62	0
	10/26/05		13.85	3157.87	0
	05/16/06		11.54	3160.18	0
	10/12/06		14.02	3157.7	0
04/12/07	12.72	3159.00	0		
10/07/08	14.15	3157.57	0		
Portal Lane Bridge	05/02/02	3175.26	6.37	3168.89	0
	05/17/02		6.50	3168.76	0
	08/24/02		7.78	3167.48	0
	11/25/02		7.56	3167.70	0
	12/27/02		7.30	3167.96	0
	01/28/03		6.89	3168.37	0
	03/12/03		7.08	3168.18	0
	04/27/03		6.30	3168.96	0
	06/11/03		6.91	3168.35	0
	08/01/03		7.44	3167.82	0
	10/02/03		7.55	3167.71	0
	12/19/03		7.23	3168.03	0
	02/27/04		6.97	3168.29	0
	06/18/04		6.70	3168.56	0
	09/24/04		7.43	3167.83	0
	04/07/05		6.51	3168.75	0
	07/07/05		7.23	3168.03	0
	10/26/05		7.35	3167.91	0
	05/16/06		5.54	3169.72	0
	10/12/06		7.29	3167.97	0
04/12/07	6.27	3168.99	0		
10/07/08	7.28	3167.98	0		
Nugget Street Bridge	05/02/02	3158.13	4.95	3153.18	0
	05/17/02		5.30	3152.83	0
	08/24/02		6.52	3151.61	0
	11/25/02		8.71	3149.42	0
	12/27/02		5.49	3152.64	0
	01/28/03		5.27	3152.86	0
	03/12/03		5.81	3152.32	0
	04/27/03		4.92	3153.21	0
	06/11/03		5.50	3152.63	0
	08/01/03		6.25	3151.88	0
	10/02/03		6.45	3151.68	0
	12/19/03		5.82	3152.31	0
	02/27/04		5.54	3152.59	0
	06/18/04		5.40	3152.73	0
	09/24/04		5.95	3152.18	0
	04/07/05		5.00	3153.13	0
	07/07/05		6.25	3151.88	0
	10/26/05		5.45	3152.68	0
	05/16/06		4.00	3154.13	0
	10/12/06		5.9	3152.23	0
04/12/07	5.1	3153.03	0		
10/07/08	5.76	3152.37	0		

Table 2 - Summary of Ground Water and Surface Water Elevations

Monitoring Point	Date Measured	Datum Elevation (ft MSL)	Depth-to-Water (ft below top of casing)	Groundwater/Surface Water Elevation (ft MSL)	Measurable Thickness of Free Product (inches)
Inland Street Bridge	05/02/02	3147.67	6.25	3141.42	0
	05/17/02		6.32	3141.35	0
	08/24/02		7.68	3139.99	0
	11/25/02		7.50	3140.17	0
	12/27/02		7.06	3140.61	0
	01/28/03		6.47	3141.20	0
	03/12/03		6.78	3140.89	0
	04/27/03		5.03	3142.64	0
	06/11/03		6.37	3141.30	0
	08/01/03		7.25	3140.42	0
	10/02/03		7.42	3140.25	0
	12/19/03		7.21	3140.46	0
	02/27/04		6.70	3140.97	0
	06/18/04		6.70	3140.97	0
	09/24/04		7.35	3140.32	0
	04/07/05		6.39	3141.28	0
	07/07/05		7.00	3140.67	0
	10/26/05		7.15	3140.52	0
	05/16/06		4.70	3142.97	0
	10/12/06		7.04	3140.63	0
04/12/07	6.03	3141.64	0		
10/07/08	6.95	3140.72	0		

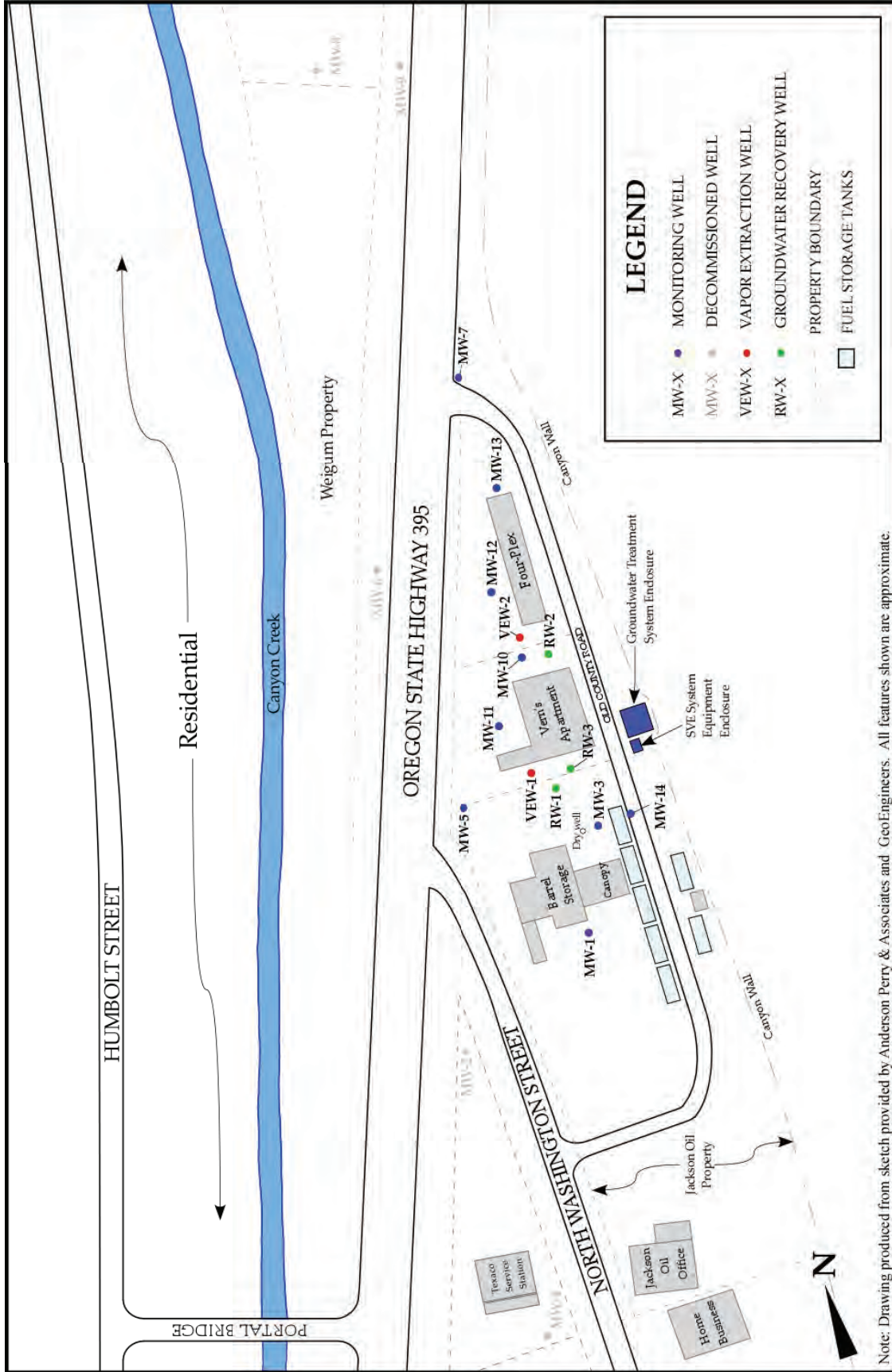


Source: Google Earth Pro

Jackson Oil Bulk Storage Facility Site Canyon City, Oregon

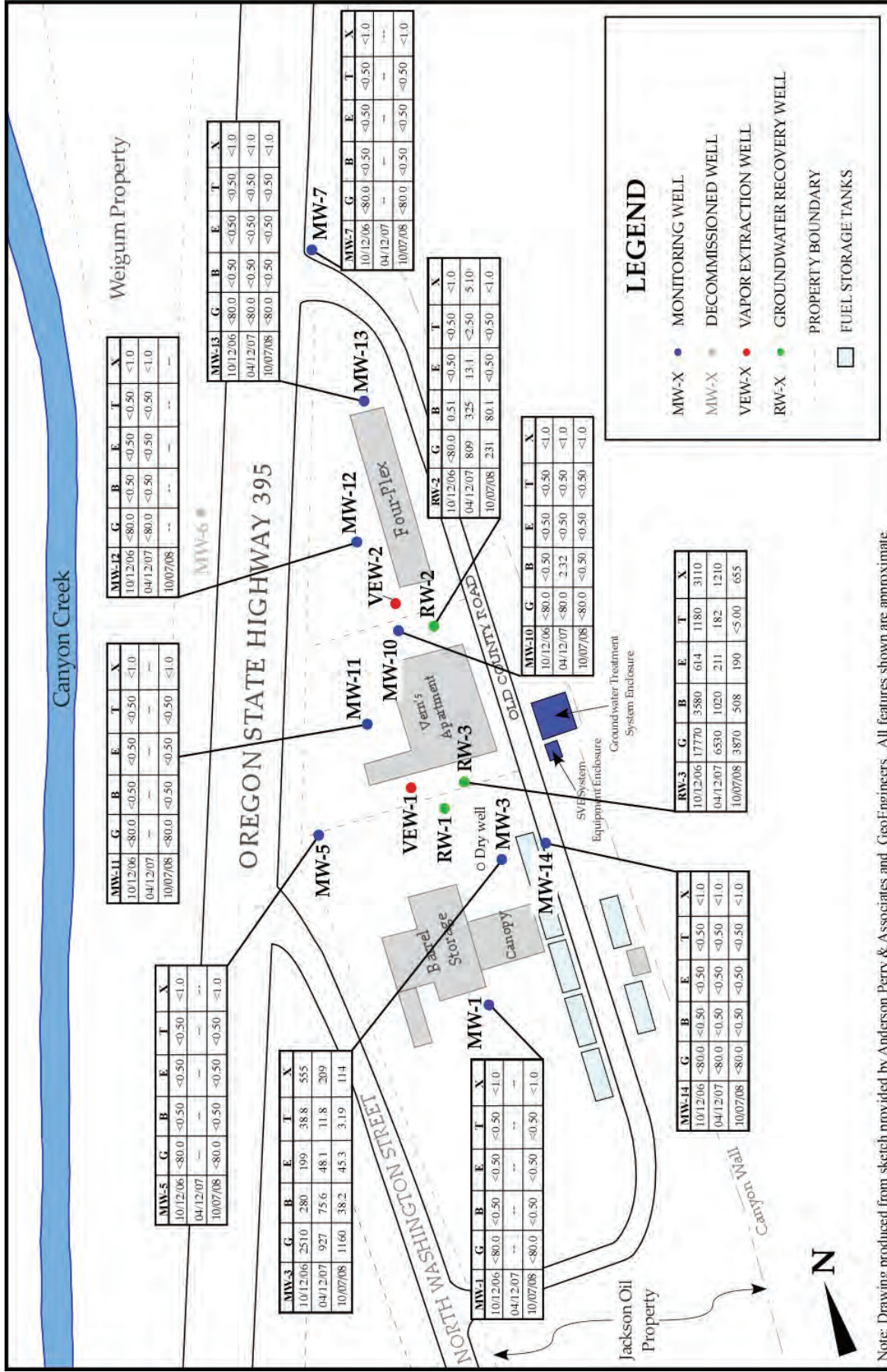
Figure 1: Aerial Overview of Site





Note: Drawing produced from sketch provided by Anderson Perry & Associates and GeoEngineers. All features shown are approximate.

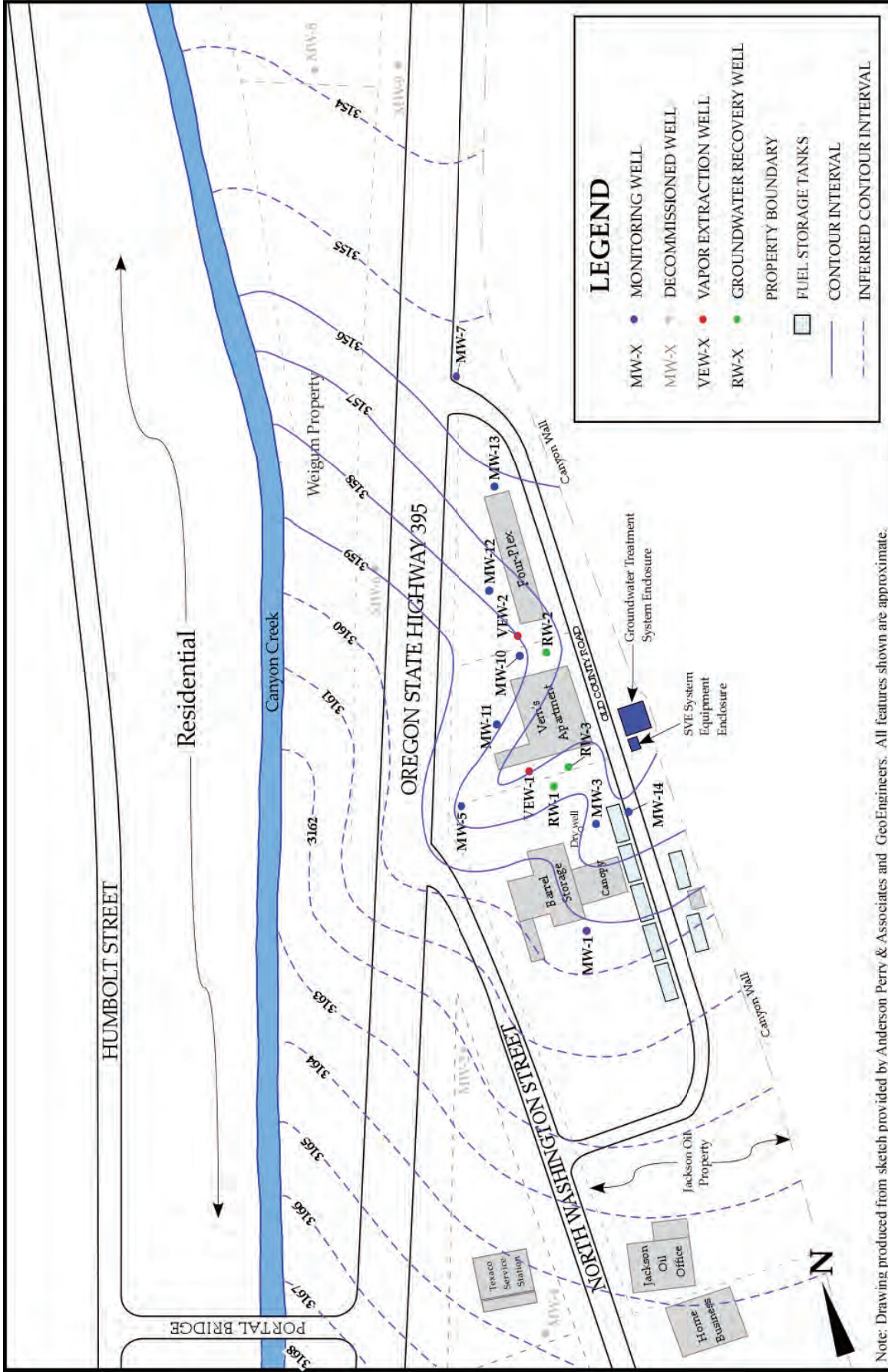
Figure 2: Site Layout and Well Locations



Note: Drawing produced from sketch provided by Anderson Perry & Associates and GeoEngineers. All features shown are approximate.



Figure 3: Petroleum Hydrocarbon and BTEX Concentrations in Groundwater



Note: Drawing produced from sketch provided by Anderson Perry & Associates and GeoEngineers. All features shown are approximate.

Figure 4: Groundwater Elevations, October 7 2008.

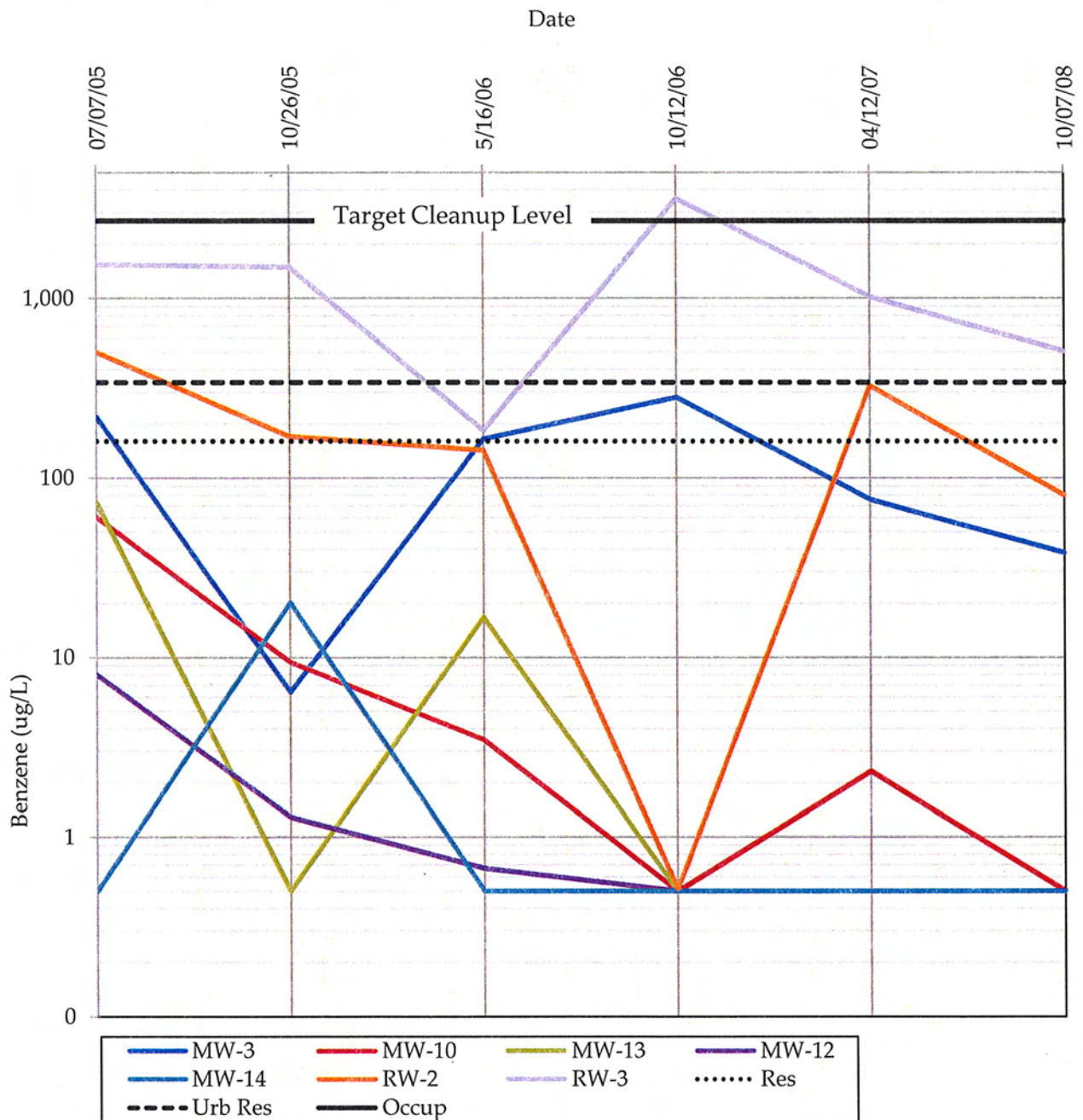
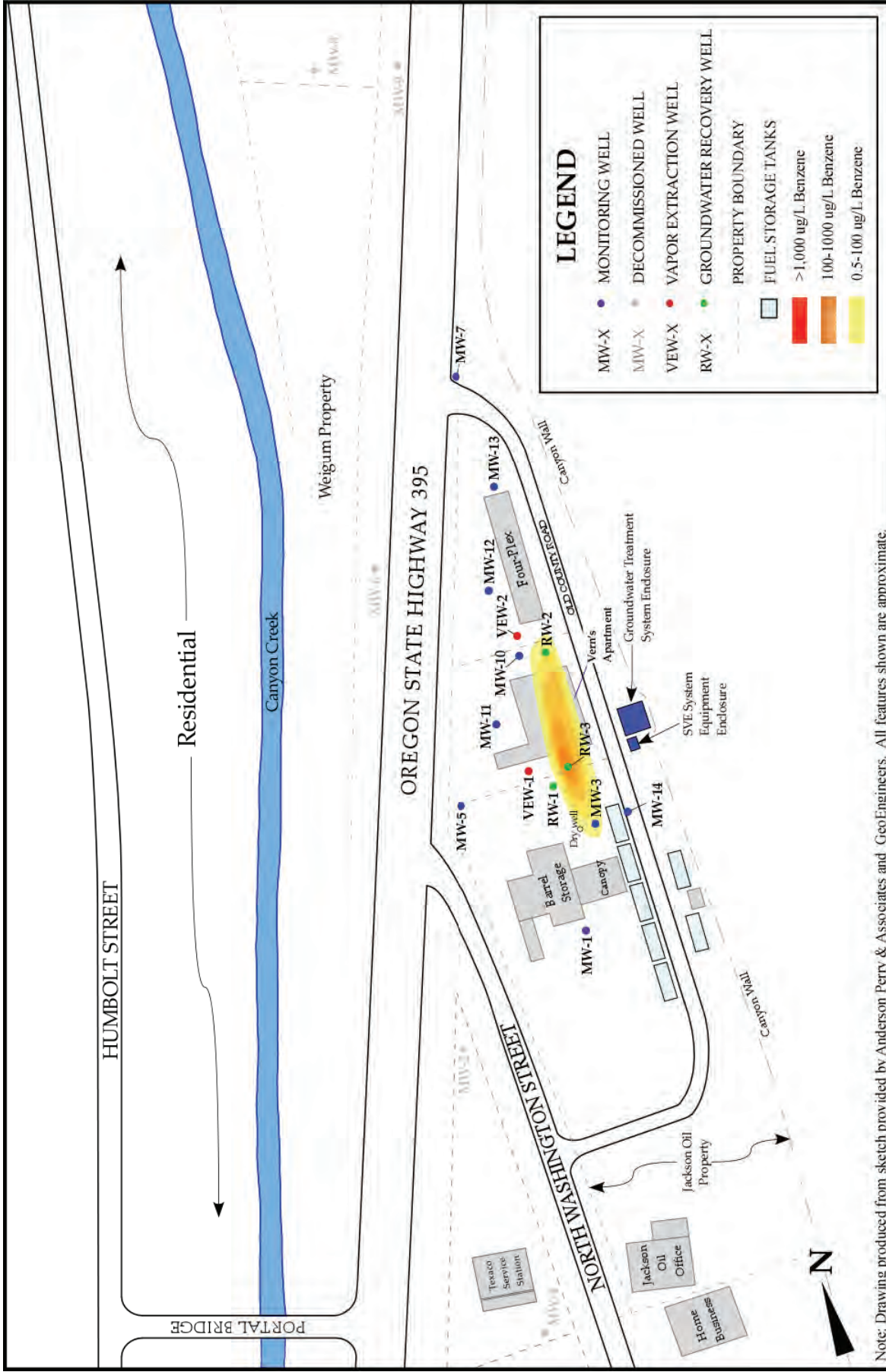


Figure 5: Change in Benzene Concentration of Selected Wells, 2005 - 2008



Note: Drawing produced from sketch provided by Anderson Perry & Associates and GeoEngineers. All features shown are approximate.

Figure 6: Dissolved Benzene Plume Map

APPENDIX B
BORING LOGS

GUIDE TO BOREHOLE LOGS**

MAJOR DIVISIONS	SYMBOLS	TYPICAL NAMES	
COARSE GRAINED SOILS <small>(more than 1/2 of soil >No. 200 sieve size)</small>	GW	Well-graded gravels or gravel-sand mixtures, little to no fines.	
	GRAVELS <small>more than 50% coarse fraction > no.4 sieve</small>	GP	Poorly-graded gravels or gravel-sand mixtures, little to no fines.
		GM	Silty gravels, gravel-sand-silt mixtures.
		GC	Clayey gravels or gravel-sand-clay mixtures
	SANDS <small>less than 50% coarse fraction > no.4 sieve</small>	SW	Well-sorted sands or gravelly sands, little to no fines.
		SP	Poorly-sorted sands or gravelly sands, little to no fines.
		SM	Silty sands, sand-silt mixtures.
		SC	Clayey sands, sand-clay mixtures.
FINED GRAINED SOILS <small>(more than 1/2 of soil < No. 200 sieve size)</small>	SILTS & CLAYS <small>Liquid Limit* less than 50%</small>	ML	Inorganic silts and very fine sands, silty or clayey fine sands or clayey silts with slight plasticity.
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy or silty clays, lean clays.
		OL	Organic silts and organic silty clays of low plasticity.
	SILTS & CLAYS <small>Liquid Limit* greater than 50%</small>	MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils, elastic silts.
		CH	Inorganic clays of high plasticity, fat clays.
		OH	Organic clays of medium to high plasticity, organic silty clay, organic silts.
HIGHLY ORGANIC SOILS	Pt	Peat or other highly organic soils.	
	Conc	Concrete	
	Fill	Fill	
	Asph	Asphalt	

* Liquid Limit represents the moisture content (in percent) of a soil at which point the soil no longer behaves like a plastic and starts to behave like a liquid.

BORING LOG SYMBOLS

- SAMPLE LOCATION
- SAMPLE INTERVAL
- SAMPLE RECOVERY
- GROUNDWATER, FIRST OBSERVED

SAMPLE TYPES:

- SS - Split Spoon
- G - Grab
- ST - Shelby Tube
- GS - Geoprobe Sampler

SHEEN TYPES:

- NS - No Sheen observed
- SS - Slight Sheen observed (Spotty coverage of sheen pan, no iridescence)
- MS - Moderate Sheen (full coverage of sheen pan, no iridescence) pan, iridescent)
- HS - Heavy Sheen (full coverage of sheen

PERCENTAGES:

- Trace - Particles are present but estimated to be less than 5% Few - 5 to 10%
- Little - 15 to 25%
- Some - 30 to 45%
- Mostly - 50 to 100%

SAMPLE PLASTICITY (FINE-GRAINED SOILS):

- Nonplastic - Cannot be rolled at any moisture content
- Low - Barely rolled, lump cannot be formed when drier than plastic limit
- Medium - Easily rolled, lump crumbles when drier than plastic limit
- High - Easily rolled yet takes considerable time to reach the plastic limit, molded shape can be formed without crumbling when drier than the plastic limit

PARTICLE SIZE RANGE (COARSE-GRAINED SOILS):

- Gravel - Fine, Coarse
- Sand - Fine, Medium, Coarse

SAMPLE MOISTURE:

- Dry - No moisture, dry to touch
- Moist - Damp but no visible moisture
- Wet - Visible free water

**Based on Unified Soil Classification System and ASTM Standard D2487 and D2488

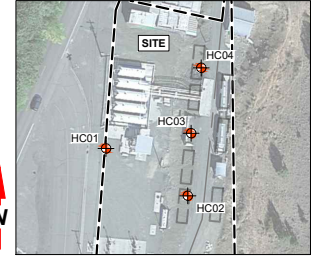


3925 NE 72nd Avenue, Suite 103
 Vancouver, WA 98661
 Phone: 360-703-6079

WELL/BORING NUMBER **HC01**

PROJECT NAME: ES&S - Canyon City Bulk Plant
 PROJECT NUMBER: 10044-006
 PROJECT LOCATION: 131 Washington Street, Canyon City, OR
 LOGGED BY: M. Whitson
 REVIEWED BY: C. Daschel
 DATE: 12/19/2023

LOCATION MAP



DESCRIPTION <small>(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)</small>	DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLE/WELL CONSTRUCTION DETAILS
SANDY GRAVEL (GW) , Dark brown, 70% fine to very coarse angular to sub-angular gravel, 30% fine to coarse-grained sand, some cobbles, trace low-plasticity fines, slightly moist to moist, loose, no odor or sheen.	0 5				0.0 0.0			
GRAVELLY SAND (SP) , Dark brown, 75% very fine to coarse-grained sand, 25% fine to medium sub-angular gravel, little to no fines, damp, loose, no odor or sheen.	10			HC01-12.0	0.0	12.45' 		
GRAVEL WITH SAND (GP) , Dark brown, 90% fine to medium sub-rounded to sub-angular gravel, 10% fine to coarse-grained sand, wet/saturated, loose, no odor or sheen.	15				0.0			
<p>BOTTOM OF BORING AT 20.0' B.G.S.</p> <p><i>Note: Groundwater sample HC01-W collected from temporary monitoring well constructed in borehole screened from 15.0' to 20.0' bgs.</i></p> <p>BORING BACKFILLED WITH HYDRATED BENTONITE AND FINISHED AT SURFACE WITH GRAVEL UPON COMPLETION.</p>	20 25 30				0.0			<p>LEGEND:</p> <ul style="list-style-type: none"> FILTER PACK BENTONITE CEMENT GROUT CUTTINGS/BACKFILL WATER LEVEL DURING DRILLING WATER LEVEL AFTER DRILLING FINAL WATER LEVEL

DRILLING CONTRACTOR: Anderson Environmental Contracting (AEC)
 DRILLING METHOD: Mini-Sonic (Track-Mounted)
 BOREHOLE DIAMETER: 7.0"
 SAMPLING METHOD: Continuous Cuttings (Bagged)
 START CARD NUMBER: N/A

CASING ELEVATION: NR
 GROUND SURFACE ELEVATION: NR
 LOCATION: See Above

PAGE 1 OF 1

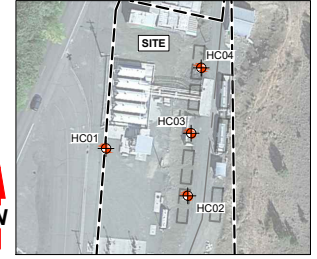


3925 NE 72nd Avenue, Suite 103
 Vancouver, WA 98661
 Phone: 360-703-6079

WELL/BORING NUMBER **HC02**

PROJECT NAME: ES&S - Canyon City Bulk Plant
 PROJECT NUMBER: 10044-006
 PROJECT LOCATION: 131 Washington Street, Canyon City, OR
 LOGGED BY: M. Whitson
 REVIEWED BY: C. Daschel
 DATE: 12/19/2023

LOCATION MAP



DESCRIPTION

(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)

DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLEWELL CONSTRUCTION DETAILS
0							
0 - 4.5				0.0			
4.5 - 9.5			HC02-5.0	0.0			
9.5 - 15.0				0.0			
15.0 - 15.5			HC02-15.0	0.0			
15.5 - 30.0				0.0			

SANDY SILT WITH GRAVEL (ML), Gray, 60% low-plasticity fines, 30% fine- to coarse-grained sand, 10% fine to coarse sub-angular gravel, moist, loose, no odor or sheen.

GRAVELLY SILT WITH SAND (ML), Dark gray-brown, 60% low-plasticity fines, 30% fine to coarse sub-angular gravel, 10% fine- to coarse-grained sand, moist, loose, no odor or sheen.

SANDY GRAVEL WITH SILT (GW), Light grayish brown, 50% fine to coarse sub-angular gravel, 40% fine- to coarse-grained sand, 10% low-plasticity fines, some cobbles, damp, loose, no odor or sheen.

Silt increases, becomes moist at 12.5' bgs.

BOTTOM OF BORING AT 15.0' B.G.S.

BORING BACKFILLED WITH HYDRATED BENTONITE AND FINISHED AT SURFACE WITH GRAVEL UPON COMPLETION.

LEGEND:

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS/BACKFILL
- WATER LEVEL DURING DRILLING
- WATER LEVEL AFTER DRILLING
- FINAL WATER LEVEL

DRILLING CONTRACTOR: Anderson Environmental Contracting (AEC)
 DRILLING METHOD: Mini-Sonic (Track-Mounted)
 BOREHOLE DIAMETER: 7.0"
 SAMPLING METHOD: Continuous Cuttings (Bagged)
 START CARD NUMBER: N/A

CASING ELEVATION: NR
 GROUND SURFACE ELEVATION: NR
 LOCATION: See Above



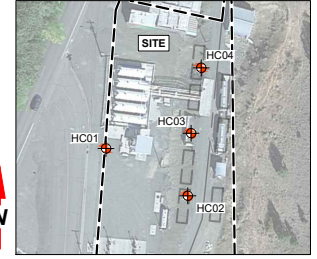
An ACC Environmental Consultants, Inc. Company

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 Vancouver, WA 98661
 Phone: 360-703-6079

WELL/BORING NUMBER **HC03**

PROJECT NAME: ES&S - Canyon City Bulk Plant
 PROJECT NUMBER: 10044-006
 PROJECT LOCATION: 131 Washington Street, Canyon City, OR
 LOGGED BY: M. Whitson
 REVIEWED BY: C. Daschel
 DATE: 12/20/2023

LOCATION MAP



DESCRIPTION

(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)

DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLEWELL CONSTRUCTION DETAILS
0							
0 - 3.5				0.0			
3.5 - 15.0			HC03-5.0	0.0			
15.0			HC03-15.0	0.0			
15.0 - 30.0							

CONCRETE, 3-4-inches at surface.

GRAVELLY SILT (ML), Dark brown, 60% low-plasticity fines, 40% fine to coarse sub-angular gravel, moist, loose, no odor or sheen.

SANDY GRAVEL WITH SILT (GW), Brownish gray, 50% fine to coarse sub-angular gravel, 40% fine- to coarse-grained sand, 10% low-plasticity fines, moist, loose, no odor or sheen.

Becomes light yellowish brown at 7.5' bgs.

Silt increases, becomes moist to almost wet at 13.0' bgs.

BOTTOM OF BORING AT 15.0' B.G.S.

BORING BACKFILLED WITH HYDRATED BENTONITE AND FINISHED AT SURFACE WITH GRAVEL UPON COMPLETION.

LEGEND:

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS/BACKFILL
- WATER LEVEL DURING DRILLING
- WATER LEVEL AFTER DRILLING
- FINAL WATER LEVEL

DRILLING CONTRACTOR: Anderson Environmental Contracting (AEC)
 DRILLING METHOD: Mini-Sonic (Track-Mounted)
 BOREHOLE DIAMETER: 7.0"
 SAMPLING METHOD: Continuous Cuttings (Bagged)
 START CARD NUMBER: N/A

CASING ELEVATION: NR
 GROUND SURFACE ELEVATION: NR
 LOCATION: See Above

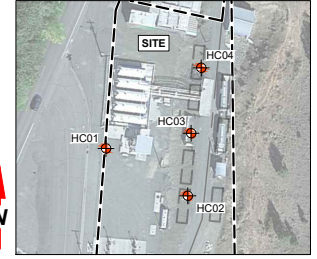


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 Vancouver, WA 98661
 Phone: 360-703-6079

WELL/BORING NUMBER **HC04**

PROJECT NAME: ES&S - Canyon City Bulk Plant
 PROJECT NUMBER: 10044-006
 PROJECT LOCATION: 131 Washington Street, Canyon City, OR
 LOGGED BY: M. Whitson
 REVIEWED BY: C. Daschel
 DATE: 12/20/2023

LOCATION MAP



DESCRIPTION

(USCS Classification, Depth Interval, Color, Grain Size, Plasticity, Shapes, Mineral Composition, Density or Consistency, Moisture, Odor, Geological Interpretation)

DEPTH (FT.)	SYMBOL	WELL DETAILS	SAMPLE ID	PID	FIRST WATER	BLOW COUNTS	BOREHOLEWELL CONSTRUCTION DETAILS
0							
0 - 5				0.0			
5 - 10			HC04-5.0	0.0			
10 - 15				0.0			
15 - 30			HC04-15.0	0.0			
30 - 35							

SANDY SILT WITH GRAVEL (ML), Gray, 60% low-plasticity fines, 30% fine- to coarse-grained sand, 10% fine to coarse sub-angular to angular gravel, moist, loose, no odor or sheen.

GRAVELLY SILT WITH SAND (ML), Dark gray-brown, 60% low-plasticity fines, 30% fine to coarse sub-angular gravel, 10% fine- to coarse-grained sand, moist, loose, no odor or sheen.

SANDY GRAVEL WITH SILT (GW), Light grayish brown, 50% fine to coarse sub-angular gravel, 40% fine- to coarse-grained sand, 10% low-plasticity fines, some cobbles, damp, loose, no odor or sheen.

Silt increases, becomes moist at 12.5' bgs.

BOTTOM OF BORING AT 15.0' B.G.S.

BORING BACKFILLED WITH HYDRATED BENTONITE AND FINISHED AT SURFACE WITH GRAVEL UPON COMPLETION.

LEGEND:

- FILTER PACK
- BENTONITE
- CEMENT GROUT
- CUTTINGS/BACKFILL
- WATER LEVEL DURING DRILLING
- WATER LEVEL AFTER DRILLING
- FINAL WATER LEVEL

DRILLING CONTRACTOR: Anderson Environmental Contracting (AEC)
 DRILLING METHOD: Mini-Sonic (Track-Mounted)
 BOREHOLE DIAMETER: 7.0"
 SAMPLING METHOD: Continuous Cuttings (Bagged)
 START CARD NUMBER: N/A

CASING ELEVATION: NR
 GROUND SURFACE ELEVATION: NR
 LOCATION: See Above

APPENDIX C
LABORATORY REPORTS AND CHAIN-OF-CUSTODY
DOCUMENTATION



ANALYTICAL REPORT

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Thursday, January 4, 2024
Chris Daschel
HydroCon LLC
3925 NE 72nd Ave. Suite 103
Vancouver, WA 98661

RE: A3L1564 - Canyon City Bulk Plant - 10044-006

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A3L1564, which was received by the laboratory on 12/21/2023 at 11:55:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: cobrien@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information		
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>		
(See Cooler Receipt Form for details)		
Default Cooler	0.1	degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report. All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Cameron O'Brien, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1564 - 01 04 24 1825
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HC01-12.0	A3L1564-01	Soil	12/19/23 14:45	12/21/23 11:55
HC02-5.0	A3L1564-02	Soil	12/19/23 16:30	12/21/23 11:55
HC03-5.0	A3L1564-04	Soil	12/20/23 08:10	12/21/23 11:55
HC03-15.0	A3L1564-05	Soil	12/20/23 08:15	12/21/23 11:55
HC04-5.0	A3L1564-06	Soil	12/20/23 08:45	12/21/23 11:55

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document(s) and updated by any subsequent written communications. This analytical report must be reproduced in its entirety.

Cameron O'Brien, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1564 - 01 04 24 1825
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ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC01-12.0 (A3L1564-01RE1)				Matrix: Soil		Batch: 23L0977		
Diesel	ND	---	18.8	mg/kg dry	1	12/29/23 09:17	NWTPH-Dx	
Oil	ND	---	37.6	mg/kg dry	1	12/29/23 09:17	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 98 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/29/23 09:17</i>	<i>NWTPH-Dx</i>	
HC02-5.0 (A3L1564-02RE1)				Matrix: Soil		Batch: 23L0977		
Diesel	38.4	---	19.8	mg/kg dry	1	12/29/23 09:50	NWTPH-Dx	F-11
Oil	ND	---	39.6	mg/kg dry	1	12/29/23 09:50	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 87 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/29/23 09:50</i>	<i>NWTPH-Dx</i>	
HC03-5.0 (A3L1564-04)				Matrix: Soil		Batch: 23L0977		
Diesel	417	---	19.4	mg/kg dry	1	12/28/23 06:55	NWTPH-Dx	
Oil	ND	---	38.8	mg/kg dry	1	12/28/23 06:55	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 89 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/28/23 06:55</i>	<i>NWTPH-Dx</i>	
HC03-15.0 (A3L1564-05)				Matrix: Soil		Batch: 24A0048		
Diesel	ND	---	20.7	mg/kg dry	1	01/03/24 05:39	NWTPH-Dx	
Oil	ND	---	41.4	mg/kg dry	1	01/03/24 05:39	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 77 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>01/03/24 05:39</i>	<i>NWTPH-Dx</i>	
HC04-5.0 (A3L1564-06)				Matrix: Soil		Batch: 23L0977		
Diesel	47.6	---	20.9	mg/kg dry	1	12/28/23 07:28	NWTPH-Dx	F-11
Oil	ND	---	41.8	mg/kg dry	1	12/28/23 07:28	NWTPH-Dx	
<i>Surrogate: o-Terphenyl (Surr)</i>			<i>Recovery: 76 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/28/23 07:28</i>	<i>NWTPH-Dx</i>	

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1564 - 01 04 24 1825
---	---	---

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC01-12.0 (A3L1564-01)				Matrix: Soil		Batch: 23L0904		
Gasoline Range Organics	ND	---	4.39	mg/kg dry	50	12/22/23 15:12	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery:</i>	<i>105 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/22/23 15:12</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>102 %</i>	<i>50-150 %</i>	<i>1</i>	<i>12/22/23 15:12</i>	<i>NWTPH-Gx (MS)</i>	
HC02-5.0 (A3L1564-02)				Matrix: Soil		Batch: 23L0904		
Gasoline Range Organics	ND	---	4.60	mg/kg dry	50	12/22/23 16:04	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery:</i>	<i>110 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/22/23 16:04</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>102 %</i>	<i>50-150 %</i>	<i>1</i>	<i>12/22/23 16:04</i>	<i>NWTPH-Gx (MS)</i>	
HC03-5.0 (A3L1564-04)				Matrix: Soil		Batch: 23L0904		
Gasoline Range Organics	ND	---	6.05	mg/kg dry	50	12/22/23 16:29	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery:</i>	<i>103 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/22/23 16:29</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>101 %</i>	<i>50-150 %</i>	<i>1</i>	<i>12/22/23 16:29</i>	<i>NWTPH-Gx (MS)</i>	
HC04-5.0 (A3L1564-06)				Matrix: Soil		Batch: 23L0904		
Gasoline Range Organics	ND	---	5.30	mg/kg dry	50	12/22/23 16:55	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery:</i>	<i>104 %</i>	<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/22/23 16:55</i>	<i>NWTPH-Gx (MS)</i>	
<i>1,4-Difluorobenzene (Sur)</i>			<i>102 %</i>	<i>50-150 %</i>	<i>1</i>	<i>12/22/23 16:55</i>	<i>NWTPH-Gx (MS)</i>	

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ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC01-12.0 (A3L1564-01)				Matrix: Soil		Batch: 23L0904		
Benzene	ND	---	0.00878	mg/kg dry	50	12/22/23 15:12	5035A/8260D	
Toluene	ND	---	0.0439	mg/kg dry	50	12/22/23 15:12	5035A/8260D	
Ethylbenzene	ND	---	0.0220	mg/kg dry	50	12/22/23 15:12	5035A/8260D	
Xylenes, total	ND	---	0.0659	mg/kg dry	50	12/22/23 15:12	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0439	mg/kg dry	50	12/22/23 15:12	5035A/8260D	
Naphthalene	ND	---	0.0878	mg/kg dry	50	12/22/23 15:12	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0439	mg/kg dry	50	12/22/23 15:12	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0220	mg/kg dry	50	12/22/23 15:12	5035A/8260D	
Isopropylbenzene	ND	---	0.0439	mg/kg dry	50	12/22/23 15:12	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.0439	mg/kg dry	50	12/22/23 15:12	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.0439	mg/kg dry	50	12/22/23 15:12	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 106 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/22/23 15:12</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>80-120 %</i>	<i>1</i>	<i>12/22/23 15:12</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>79-120 %</i>	<i>1</i>	<i>12/22/23 15:12</i>	<i>5035A/8260D</i>	

HC02-5.0 (A3L1564-02)				Matrix: Soil		Batch: 23L0904		
Benzene	ND	---	0.00920	mg/kg dry	50	12/22/23 16:04	5035A/8260D	
Toluene	ND	---	0.0460	mg/kg dry	50	12/22/23 16:04	5035A/8260D	
Ethylbenzene	ND	---	0.0230	mg/kg dry	50	12/22/23 16:04	5035A/8260D	
Xylenes, total	ND	---	0.0690	mg/kg dry	50	12/22/23 16:04	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0460	mg/kg dry	50	12/22/23 16:04	5035A/8260D	
Naphthalene	ND	---	0.0920	mg/kg dry	50	12/22/23 16:04	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0460	mg/kg dry	50	12/22/23 16:04	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0230	mg/kg dry	50	12/22/23 16:04	5035A/8260D	
Isopropylbenzene	ND	---	0.0460	mg/kg dry	50	12/22/23 16:04	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.0460	mg/kg dry	50	12/22/23 16:04	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.0460	mg/kg dry	50	12/22/23 16:04	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 107 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/22/23 16:04</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>94 %</i>	<i>80-120 %</i>	<i>1</i>	<i>12/22/23 16:04</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>79-120 %</i>	<i>1</i>	<i>12/22/23 16:04</i>	<i>5035A/8260D</i>	

HC03-5.0 (A3L1564-04)				Matrix: Soil		Batch: 23L0904		
Benzene	ND	---	0.0121	mg/kg dry	50	12/22/23 16:29	5035A/8260D	
Toluene	ND	---	0.0605	mg/kg dry	50	12/22/23 16:29	5035A/8260D	
Ethylbenzene	ND	---	0.0303	mg/kg dry	50	12/22/23 16:29	5035A/8260D	
Xylenes, total	ND	---	0.0908	mg/kg dry	50	12/22/23 16:29	5035A/8260D	

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ANALYTICAL REPORT

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ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1564 - 01 04 24 1825
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ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC03-5.0 (A3L1564-04)			Matrix: Soil		Batch: 23L0904			
Methyl tert-butyl ether (MTBE)	ND	---	0.0605	mg/kg dry	50	12/22/23 16:29	5035A/8260D	
Naphthalene	ND	---	0.121	mg/kg dry	50	12/22/23 16:29	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0605	mg/kg dry	50	12/22/23 16:29	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0303	mg/kg dry	50	12/22/23 16:29	5035A/8260D	
Isopropylbenzene	ND	---	0.0605	mg/kg dry	50	12/22/23 16:29	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.0605	mg/kg dry	50	12/22/23 16:29	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.0605	mg/kg dry	50	12/22/23 16:29	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 106 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/22/23 16:29</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>95 %</i>	<i>80-120 %</i>	<i>1</i>	<i>12/22/23 16:29</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>96 %</i>	<i>79-120 %</i>	<i>1</i>	<i>12/22/23 16:29</i>	<i>5035A/8260D</i>	
HC03-15.0 (A3L1564-05)			Matrix: Soil		Batch: 24A0018			
Benzene	ND	---	0.0111	mg/kg dry	50	01/02/24 17:44	5035A/8260D	
Toluene	ND	---	0.0557	mg/kg dry	50	01/02/24 17:44	5035A/8260D	
Ethylbenzene	ND	---	0.0279	mg/kg dry	50	01/02/24 17:44	5035A/8260D	
Xylenes, total	ND	---	0.0836	mg/kg dry	50	01/02/24 17:44	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0557	mg/kg dry	50	01/02/24 17:44	5035A/8260D	
Naphthalene	ND	---	0.111	mg/kg dry	50	01/02/24 17:44	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0557	mg/kg dry	50	01/02/24 17:44	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0279	mg/kg dry	50	01/02/24 17:44	5035A/8260D	
Isopropylbenzene	ND	---	0.0557	mg/kg dry	50	01/02/24 17:44	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.0557	mg/kg dry	50	01/02/24 17:44	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.0557	mg/kg dry	50	01/02/24 17:44	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 109 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>01/02/24 17:44</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>92 %</i>	<i>80-120 %</i>	<i>1</i>	<i>01/02/24 17:44</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>98 %</i>	<i>79-120 %</i>	<i>1</i>	<i>01/02/24 17:44</i>	<i>5035A/8260D</i>	
HC04-5.0 (A3L1564-06)			Matrix: Soil		Batch: 23L0904			
Benzene	ND	---	0.0106	mg/kg dry	50	12/22/23 16:55	5035A/8260D	
Toluene	ND	---	0.0530	mg/kg dry	50	12/22/23 16:55	5035A/8260D	
Ethylbenzene	ND	---	0.0265	mg/kg dry	50	12/22/23 16:55	5035A/8260D	
Xylenes, total	ND	---	0.0795	mg/kg dry	50	12/22/23 16:55	5035A/8260D	
Methyl tert-butyl ether (MTBE)	ND	---	0.0530	mg/kg dry	50	12/22/23 16:55	5035A/8260D	
Naphthalene	ND	---	0.106	mg/kg dry	50	12/22/23 16:55	5035A/8260D	
1,2-Dibromoethane (EDB)	ND	---	0.0530	mg/kg dry	50	12/22/23 16:55	5035A/8260D	
1,2-Dichloroethane (EDC)	ND	---	0.0265	mg/kg dry	50	12/22/23 16:55	5035A/8260D	

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Cameron O'Brien, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1564 - 01 04 24 1825
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ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC04-5.0 (A3L1564-06)				Matrix: Soil		Batch: 23L0904		
Isopropylbenzene	ND	---	0.0530	mg/kg dry	50	12/22/23 16:55	5035A/8260D	
1,2,4-Trimethylbenzene	ND	---	0.0530	mg/kg dry	50	12/22/23 16:55	5035A/8260D	
1,3,5-Trimethylbenzene	ND	---	0.0530	mg/kg dry	50	12/22/23 16:55	5035A/8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 107 %</i>	<i>Limits: 80-120 %</i>	<i>1</i>	<i>12/22/23 16:55</i>	<i>5035A/8260D</i>	
<i>Toluene-d8 (Surr)</i>			<i>96 %</i>	<i>80-120 %</i>	<i>1</i>	<i>12/22/23 16:55</i>	<i>5035A/8260D</i>	
<i>4-Bromofluorobenzene (Surr)</i>			<i>97 %</i>	<i>79-120 %</i>	<i>1</i>	<i>12/22/23 16:55</i>	<i>5035A/8260D</i>	

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Cameron O'Brien, Project Manager



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ANALYTICAL SAMPLE RESULTS

Percent Dry Weight

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC01-12.0 (A3L1564-01)				Matrix: Soil		Batch: 23L0949		
% Solids	95.8	---	1.00	%	1	12/27/23 06:49	EPA 8000D	
HC02-5.0 (A3L1564-02)				Matrix: Soil		Batch: 23L0949		
% Solids	88.7	---	1.00	%	1	12/27/23 06:49	EPA 8000D	
HC03-5.0 (A3L1564-04)				Matrix: Soil		Batch: 23L0949		
% Solids	91.2	---	1.00	%	1	12/27/23 06:49	EPA 8000D	
HC03-15.0 (A3L1564-05)				Matrix: Soil		Batch: 24A0010		
% Solids	84.0	---	1.00	%	1	01/03/24 06:40	EPA 8000D	
HC04-5.0 (A3L1564-06)				Matrix: Soil		Batch: 23L0949		
% Solids	86.2	---	1.00	%	1	12/27/23 06:49	EPA 8000D	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23L0977 - EPA 3546 (Fuels)						Soil						
Blank (23L0977-BLK1)		Prepared: 12/27/23 04:59 Analyzed: 12/27/23 19:44										
NWTPH-Dx												
Diesel	ND	---	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	40.0	mg/kg wet	1	---	---	---	---	---	---	
Mineral Oil	ND	---	40.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 91 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

LCS (23L0977-BS1)		Prepared: 12/27/23 04:59 Analyzed: 12/27/23 20:04										
NWTPH-Dx												
Diesel	106	---	20.0	mg/kg wet	1	125	---	84	38 - 132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 93 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

Batch 24A0048 - EPA 3546 (Fuels)						Soil						
Blank (24A0048-BLK1)		Prepared: 01/02/24 13:59 Analyzed: 01/03/24 03:14										
NWTPH-Dx												
Diesel	ND	---	20.0	mg/kg wet	1	---	---	---	---	---	---	
Oil	ND	---	40.0	mg/kg wet	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 92 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (24A0048-BS1)		Prepared: 01/02/24 13:59 Analyzed: 01/03/24 03:35										
NWTPH-Dx												
Diesel	121	---	20.0	mg/kg wet	1	125	---	97	38 - 132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 88 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23L0904 - EPA 5035A						Soil						
Blank (23L0904-BLK1)		Prepared: 12/22/23 08:00 Analyzed: 12/22/23 13:30										
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	---	5.00	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 101 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>100 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (23L0904-BS2)		Prepared: 12/22/23 08:00 Analyzed: 12/22/23 12:13										
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	23.1	---	5.00	mg/kg wet	50	25.0	---	93	80 - 120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 102 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>98 %</i>		<i>50-150 %</i>		<i>"</i>						
Duplicate (23L0904-DUP1)		Prepared: 12/19/23 14:45 Analyzed: 12/22/23 15:38										
<u>QC Source Sample: HC01-12.0 (A3L1564-01)</u>												
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	---	4.39	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 108 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>102 %</i>		<i>50-150 %</i>		<i>"</i>						

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ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1564 - 01 04 24 1825
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QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23L0904 - EPA 5035A												
Soil												
Blank (23L0904-BLK1)												
Prepared: 12/22/23 08:00 Analyzed: 12/22/23 13:30												
<u>5035A/8260D</u>												
Benzene	ND	---	0.0100	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	---	0.0750	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr) Recovery: 105 % Limits: 80-120 % Dilution: 1x</i>												
<i>Toluene-d8 (Surr) 97 % 80-120 % "</i>												
<i>4-Bromofluorobenzene (Surr) 97 % 79-120 % "</i>												

LCS (23L0904-BS1)												
Prepared: 12/22/23 08:00 Analyzed: 12/22/23 11:47												
<u>5035A/8260D</u>												
Benzene	1.06	---	0.0100	mg/kg wet	50	1.00	---	106	80 - 120%	---	---	
Toluene	0.982	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
Ethylbenzene	0.920	---	0.0250	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
Xylenes, total	2.91	---	0.0750	mg/kg wet	50	3.00	---	97	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	1.07	---	0.0500	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
Naphthalene	0.886	---	0.100	mg/kg wet	50	1.00	---	89	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	1.05	---	0.0500	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
1,2-Dichloroethane (EDC)	1.05	---	0.0250	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
Isopropylbenzene	1.01	---	0.0500	mg/kg wet	50	1.00	---	101	80 - 120%	---	---	
1,2,4-Trimethylbenzene	1.04	---	0.0500	mg/kg wet	50	1.00	---	104	80 - 120%	---	---	
1,3,5-Trimethylbenzene	1.03	---	0.0500	mg/kg wet	50	1.00	---	103	80 - 120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr) Recovery: 104 % Limits: 80-120 % Dilution: 1x</i>												
<i>Toluene-d8 (Surr) 96 % 80-120 % "</i>												
<i>4-Bromofluorobenzene (Surr) 98 % 79-120 % "</i>												

Duplicate (23L0904-DUP1)												
Prepared: 12/19/23 14:45 Analyzed: 12/22/23 15:38												

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Cameron O'Brien, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1564 - 01 04 24 1825
---	---	---

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23L0904 - EPA 5035A						Soil						
Duplicate (23L0904-DUP1)			Prepared: 12/19/23 14:45 Analyzed: 12/22/23 15:38									
QC Source Sample: HC01-12.0 (A3L1564-01)												
5035A/8260D												
Benzene	ND	---	0.00878	mg/kg dry	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.0439	mg/kg dry	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0220	mg/kg dry	50	---	ND	---	---	---	30%	
Xylenes, total	ND	---	0.0659	mg/kg dry	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	0.0439	mg/kg dry	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	0.0878	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.0439	mg/kg dry	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.0220	mg/kg dry	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.0439	mg/kg dry	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	0.0439	mg/kg dry	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	0.0439	mg/kg dry	50	---	ND	---	---	---	30%	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 106 %</i>		<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>		<i>94 %</i>		<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>		<i>98 %</i>		<i>79-120 %</i>		<i>"</i>						

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ORELAP ID: OR100062

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---	---	---

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24A0018 - EPA 5035A						Soil						
Blank (24A0018-BLK1)			Prepared: 01/02/24 09:00 Analyzed: 01/02/24 11:46									
<u>5035A/8260D</u>												
Benzene	ND	---	0.0100	mg/kg wet	50	---	---	---	---	---	---	
Toluene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Xylenes, total	ND	---	0.0750	mg/kg wet	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.100	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0250	mg/kg wet	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0500	mg/kg wet	50	---	---	---	---	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 105 %</i>	<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>			<i>93 %</i>	<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>			<i>99 %</i>	<i>79-120 %</i>		<i>"</i>						

LCS (24A0018-BS1)						Prepared: 01/02/24 09:00 Analyzed: 01/02/24 10:55						
<u>5035A/8260D</u>												
Benzene	1.09	---	0.0100	mg/kg wet	50	1.00	---	109	80 - 120%	---	---	
Toluene	1.00	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
Ethylbenzene	0.916	---	0.0250	mg/kg wet	50	1.00	---	92	80 - 120%	---	---	
Xylenes, total	2.94	---	0.0750	mg/kg wet	50	3.00	---	98	80 - 120%	---	---	
Methyl tert-butyl ether (MTBE)	1.12	---	0.0500	mg/kg wet	50	1.00	---	112	80 - 120%	---	---	
Naphthalene	0.897	---	0.100	mg/kg wet	50	1.00	---	90	80 - 120%	---	---	
1,2-Dibromoethane (EDB)	1.07	---	0.0500	mg/kg wet	50	1.00	---	107	80 - 120%	---	---	
1,2-Dichloroethane (EDC)	1.05	---	0.0250	mg/kg wet	50	1.00	---	105	80 - 120%	---	---	
Isopropylbenzene	1.00	---	0.0500	mg/kg wet	50	1.00	---	100	80 - 120%	---	---	
1,2,4-Trimethylbenzene	0.984	---	0.0500	mg/kg wet	50	1.00	---	98	80 - 120%	---	---	
1,3,5-Trimethylbenzene	0.968	---	0.0500	mg/kg wet	50	1.00	---	97	80 - 120%	---	---	
<i>Surr: 1,4-Difluorobenzene (Surr)</i>			<i>Recovery: 105 %</i>	<i>Limits: 80-120 %</i>		<i>Dilution: 1x</i>						
<i>Toluene-d8 (Surr)</i>			<i>94 %</i>	<i>80-120 %</i>		<i>"</i>						
<i>4-Bromofluorobenzene (Surr)</i>			<i>97 %</i>	<i>79-120 %</i>		<i>"</i>						

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Cameron O'Brien, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1564 - 01 04 24 1825
---	---	---

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 5035A/8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
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No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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---	---	---

QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23L0949 - Total Solids (Dry Weight) - 2022						Soil						

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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QUALITY CONTROL (QC) SAMPLE RESULTS

Percent Dry Weight

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 24A0010 - Total Solids (Dry Weight) - 2022						Soil						

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3546 (Fuels)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23L0977</u>							
A3L1564-01RE1	Soil	NWTPH-Dx	12/19/23 14:45	12/27/23 04:59	11.11g/5mL	10g/5mL	0.90
A3L1564-02RE1	Soil	NWTPH-Dx	12/19/23 16:30	12/27/23 04:59	11.38g/5mL	10g/5mL	0.88
A3L1564-04	Soil	NWTPH-Dx	12/20/23 08:10	12/27/23 04:59	11.3g/5mL	10g/5mL	0.89
A3L1564-06	Soil	NWTPH-Dx	12/20/23 08:45	12/27/23 04:59	11.11g/5mL	10g/5mL	0.90
<u>Batch: 24A0048</u>							
A3L1564-05	Soil	NWTPH-Dx	12/20/23 08:15	01/02/24 13:59	11.51g/5mL	10g/5mL	0.87

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23L0904</u>							
A3L1564-01	Soil	NWTPH-Gx (MS)	12/19/23 14:45	12/19/23 14:45	6.26g/5mL	5g/5mL	0.80
A3L1564-02	Soil	NWTPH-Gx (MS)	12/19/23 16:30	12/19/23 16:30	7.11g/5mL	5g/5mL	0.70
A3L1564-04	Soil	NWTPH-Gx (MS)	12/20/23 08:10	12/20/23 08:10	4.92g/5mL	5g/5mL	1.02
A3L1564-06	Soil	NWTPH-Gx (MS)	12/20/23 08:45	12/20/23 08:45	6.44g/5mL	5g/5mL	0.78

Selected Volatile Organic Compounds by EPA 5035A/8260D

Prep: EPA 5035A					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23L0904</u>							
A3L1564-01	Soil	5035A/8260D	12/19/23 14:45	12/19/23 14:45	6.26g/5mL	5g/5mL	0.80
A3L1564-02	Soil	5035A/8260D	12/19/23 16:30	12/19/23 16:30	7.11g/5mL	5g/5mL	0.70
A3L1564-04	Soil	5035A/8260D	12/20/23 08:10	12/20/23 08:10	4.92g/5mL	5g/5mL	1.02
A3L1564-06	Soil	5035A/8260D	12/20/23 08:45	12/20/23 08:45	6.44g/5mL	5g/5mL	0.78
<u>Batch: 24A0018</u>							
A3L1564-05	Soil	5035A/8260D	12/20/23 08:15	12/20/23 08:15	6.44g/5mL	5g/5mL	0.78

Percent Dry Weight

Prep: Total Solids (Dry Weight) - 2022					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23L0949</u>							
A3L1564-01	Soil	EPA 8000D	12/19/23 14:45	12/26/23 09:36			NA

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Cameron O'Brien, Project Manager



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ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1564 - 01 04 24 1825
---	---	---

SAMPLE PREPARATION INFORMATION

Percent Dry Weight

Prep: Total Solids (Dry Weight) - 2022

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A3L1564-02	Soil	EPA 8000D	12/19/23 16:30	12/26/23 09:36			NA
A3L1564-04	Soil	EPA 8000D	12/20/23 08:10	12/26/23 09:36			NA
A3L1564-06	Soil	EPA 8000D	12/20/23 08:45	12/26/23 09:36			NA
<u>Batch: 24A0010</u>							
A3L1564-05	Soil	EPA 8000D	12/20/23 08:15	01/02/24 18:29			NA

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

F-11 The hydrocarbon pattern indicates possible weathered diesel, mineral oil, or a contribution from a related component.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported.
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or "" (blank) designation.
- "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
- "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
- " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to 1/2 the Reporting Limit (RL).
-For Blank hits falling between 1/2 the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

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Cameron O'Brien, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1564 - 01 04 24 1825
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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

Apex Laboratories

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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation)

EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
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All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Company: **HYDROCON** Project Mgr: **CHRIS DASCHEL** Phone: _____
 Address: **3925 NE 72ND AVE STE 103 VANCOUVER WA** Project Name: **CANYON CITY BULK PLANT** Project #: **10044-006**
 Stamped by: **NICHOLE WHITSON** Email: _____
 Site Location: _____

State: OR County: CLATSOP

SAMPLE ID	DATE	TIME	MATRIX	# OF CONTAINERS	ANALYSIS REQUEST										Priority Metals (13)	AL, SB, AS, BA, BE, CA, CR, CU, FE, NI, K, HG, MR, MN, MO, NL, Pb, Se, Ag, Na, TI, V, Zn	TOTAL DISS. TCLP	TCLP Metals (8)	Hold Sample	Frozen Archive
					8260 RBDM VOCs	8260 Halo VOCs	8260 VOCs Full List	8270 SIM PAHs	8270 Semi-Vols Full List	8082 PCBs	8081 Pesticides	RCRA Metals (9)	8081 Pesticides	8082 PCBs						
HCO1-12.0	12/19	1145	S	3	NWTPH-EX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HCO2-5.0	↓	1630	S	6	NWTPH-EX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HCO3-15.0	↓	1445	S	3	NWTPH-DX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HCO3-5.0	12/20	0810	S	3	NWTPH-HCID	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HCO3-15.0	↓	0815	S	3	NWTPH-EX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HCO4-5.0	↓	0845	S	3	NWTPH-EX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HCO4-15.0	↓	0100	S	3	NWTPH-EX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle) 1 Day 2 Day 3 Day 5 Day Standard Other: HDE

SPECIAL INSTRUCTIONS:

RELINQUISHED BY: Signature: [Signature] Date: 12/21/23
 Printed Name: NICHOLE WHITSON Time: 11:55
 Company: Apex

RECEIVED BY: Signature: [Signature] Date: _____
 Printed Name: _____ Time: _____
 Company: _____

Form Y-002 R-00

Apex Laboratories

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C. O'Brien

Cameron O'Brien, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1564 - 01 04 24 1825
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APEXLABS COOLER RECEIPT FORM

Client: Hydrocon Element WO#: A3 L1564

Project/Project #: Canyon City Bulk Plant 10044-006

Delivery Info:

Date/time received: 12/21/23 @ 11:55 By: APW

Delivered by: Apex Client ESS FedEx UPS Radio Morgan SDS Evergreen Other

Cooler Inspection Date/time inspected: 12/21/23 @ 11:55 By: APW

Chain of Custody included? Yes No

Signed/dated by client? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>0.1</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>In</u>						

Cooler out of temp? (Y/N) Possible reason why: _____

Green dots applied to out of temperature samples? Yes/No No

Out of temperature samples form initiated? Yes/No No

Sample Inspection: Date/time inspected: 12/21/23 @ 16:16 By: Jam

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: _____

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: _____

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA pH ID: _____

Comments: _____

Additional information: _____

Labeled by: Jam

Witness: APW

Cooler Inspected by: Jam

Form Y-003 R-01

Apex Laboratories

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CABri

Cameron O'Brien, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

Friday, December 29, 2023

Chris Daschel
HydroCon LLC
3925 NE 72nd Ave. Suite 103
Vancouver, WA 98661

RE: A3L1567 - Canyon City Bulk Plant - 10044-006

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A3L1567, which was received by the laboratory on 12/21/2023 at 11:55:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: cobrien@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information		
<u>Acceptable Receipt Temperature is less than, or equal to, 6 degC (not frozen), or received on ice the same day as sampling.</u>		
(See Cooler Receipt Form for details)		
Default Cooler	0.1	degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report. All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.



Apex Laboratories

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Cameron O'Brien, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

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503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1567 - 12 29 23 1243
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ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
HC01-W	A3L1567-01	Water	12/19/23 15:15	12/21/23 11:55

Apex Laboratories

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Cameron O'Brien, Project Manager



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---	---	---

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC01-W (A3L1567-01)				Matrix: Water		Batch: 23L1055		
Diesel	ND	---	83.3	ug/L	1	12/28/23 23:59	NWTPH-Dx LL	
Oil	ND	---	167	ug/L	1	12/28/23 23:59	NWTPH-Dx LL	
<i>Surrogate: o-Terphenyl (Surr)</i>		<i>Recovery: 74 %</i>		<i>Limits: 50-150 %</i>	<i>1</i>	<i>12/28/23 23:59</i>	<i>NWTPH-Dx LL</i>	

Apex Laboratories

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Cameron O'Brien, Project Manager



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503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1567 - 12 29 23 1243
---	---	---

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC01-W (A3L1567-01RE1)				Matrix: Water		Batch: 23L1016		
Gasoline Range Organics	ND	---	100	ug/L	1	12/28/23 00:28	NWTPH-Gx (MS)	
<i>Surrogate: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery:</i>	<i>112 %</i>	<i>Limits:</i>	<i>50-150 %</i>	<i>1</i>	<i>12/28/23 00:28</i>	<i>NWTPH-Gx (MS)</i>
<i>1,4-Difluorobenzene (Sur)</i>			<i>103 %</i>	<i>50-150 %</i>	<i>1</i>	<i>12/28/23 00:28</i>	<i>NWTPH-Gx (MS)</i>	

Apex Laboratories

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Cameron O'Brien, Project Manager



ANALYTICAL REPORT

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ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1567 - 12 29 23 1243
---	---	---

ANALYTICAL SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 8260D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
HC01-W (A3L1567-01)				Matrix: Water		Batch: 23L0918		
Benzene	ND	---	0.200	ug/L	1	12/23/23 14:27	EPA 8260D	
Toluene	1.38	---	1.00	ug/L	1	12/23/23 14:27	EPA 8260D	
Ethylbenzene	ND	---	0.500	ug/L	1	12/23/23 14:27	EPA 8260D	
Xylenes, total	ND	---	1.50	ug/L	1	12/23/23 14:27	EPA 8260D	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	12/23/23 14:27	EPA 8260D	
Naphthalene	ND	---	5.00	ug/L	1	12/23/23 14:27	EPA 8260D	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	12/23/23 14:27	EPA 8260D	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	12/23/23 14:27	EPA 8260D	
Isopropylbenzene	ND	---	1.00	ug/L	1	12/23/23 14:27	EPA 8260D	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	12/23/23 14:27	EPA 8260D	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	12/23/23 14:27	EPA 8260D	
<i>Surrogate: 1,4-Difluorobenzene (Surr)</i>		<i>Recovery: 98 %</i>		<i>Limits: 80-120 %</i>		<i>1</i>	<i>12/23/23 14:27</i>	<i>EPA 8260D</i>
<i>Toluene-d8 (Surr)</i>		<i>96 %</i>		<i>80-120 %</i>		<i>1</i>	<i>12/23/23 14:27</i>	<i>EPA 8260D</i>
<i>4-Bromofluorobenzene (Surr)</i>		<i>100 %</i>		<i>80-120 %</i>		<i>1</i>	<i>12/23/23 14:27</i>	<i>EPA 8260D</i>

Apex Laboratories

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Cameron O'Brien, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1567 - 12 29 23 1243
---	---	---

QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23L1055 - EPA 3510C (Fuels/Acid Ext.)						Water						
Blank (23L1055-BLK1)		Prepared: 12/28/23 10:58 Analyzed: 12/28/23 19:11										
<u>NWTPH-Dx LL</u>												
Diesel	ND	---	80.0	ug/L	1	---	---	---	---	---	---	
Oil	ND	---	160	ug/L	1	---	---	---	---	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 78 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS (23L1055-BS1)		Prepared: 12/28/23 10:58 Analyzed: 12/28/23 19:31										
<u>NWTPH-Dx LL</u>												
Diesel	252	---	80.0	ug/L	1	500	---	50	36 - 132%	---	---	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 75 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
LCS Dup (23L1055-BSD1)		Prepared: 12/28/23 10:58 Analyzed: 12/28/23 19:52 Q-19										
<u>NWTPH-Dx LL</u>												
Diesel	259	---	80.0	ug/L	1	500	---	52	36 - 132%	3	30%	
<i>Surr: o-Terphenyl (Surr)</i>		<i>Recovery: 77 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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---	---	---

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 23L1016 - EPA 5030C						Water						
Blank (23L1016-BLK1)		Prepared: 12/27/23 13:56 Analyzed: 12/27/23 17:13										
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	ND	---	100	ug/L	1	---	---	---	---	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 107 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>100 %</i>		<i>50-150 %</i>		<i>"</i>						
LCS (23L1016-BS2)		Prepared: 12/27/23 13:56 Analyzed: 12/27/23 16:46										
<u>NWTPH-Gx (MS)</u>												
Gasoline Range Organics	482	---	100	ug/L	1	500	---	96	80 - 120%	---	---	
<i>Surr: 4-Bromofluorobenzene (Sur)</i>		<i>Recovery: 101 %</i>		<i>Limits: 50-150 %</i>		<i>Dilution: 1x</i>						
<i>1,4-Difluorobenzene (Sur)</i>		<i>92 %</i>		<i>50-150 %</i>		<i>"</i>						

No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1567 - 12 29 23 1243
---	---	---

QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
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Batch 23L0918 - EPA 5030C

Water

Blank (23L0918-BLK1) Prepared: 12/22/23 13:34 Analyzed: 12/23/23 06:46

<u>EPA 8260D</u>												
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	---
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
Xylenes, total	ND	---	1.50	ug/L	1	---	---	---	---	---	---	---
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
Naphthalene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	---
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	---
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	---
Isopropylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr) Recovery: 98 % Limits: 80-120 % Dilution: 1x</i>												
<i>Toluene-d8 (Surr) 96 % 80-120 % "</i>												
<i>4-Bromofluorobenzene (Surr) 101 % 80-120 % "</i>												

LCS (23L0918-BS1)

Prepared: 12/22/23 13:34 Analyzed: 12/23/23 05:52

<u>EPA 8260D</u>												
Benzene	17.2	---	0.200	ug/L	1	20.0	---	86	80 - 120%	---	---	---
Toluene	19.1	---	1.00	ug/L	1	20.0	---	96	80 - 120%	---	---	---
Ethylbenzene	20.8	---	0.500	ug/L	1	20.0	---	104	80 - 120%	---	---	---
Xylenes, total	65.6	---	1.50	ug/L	1	60.0	---	109	80 - 120%	---	---	---
Methyl tert-butyl ether (MTBE)	23.2	---	1.00	ug/L	1	20.0	---	116	80 - 120%	---	---	---
Naphthalene	16.6	---	5.00	ug/L	1	20.0	---	83	80 - 120%	---	---	---
1,2-Dibromoethane (EDB)	21.8	---	0.500	ug/L	1	20.0	---	109	80 - 120%	---	---	---
1,2-Dichloroethane (EDC)	19.9	---	0.400	ug/L	1	20.0	---	100	80 - 120%	---	---	---
Isopropylbenzene	20.1	---	1.00	ug/L	1	20.0	---	101	80 - 120%	---	---	---
1,2,4-Trimethylbenzene	19.4	---	1.00	ug/L	1	20.0	---	97	80 - 120%	---	---	---
1,3,5-Trimethylbenzene	21.6	---	1.00	ug/L	1	20.0	---	108	80 - 120%	---	---	---
<i>Surr: 1,4-Difluorobenzene (Surr) Recovery: 90 % Limits: 80-120 % Dilution: 1x</i>												
<i>Toluene-d8 (Surr) 96 % 80-120 % "</i>												
<i>4-Bromofluorobenzene (Surr) 101 % 80-120 % "</i>												

Apex Laboratories

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Cameron O'Brien, Project Manager



ANALYTICAL REPORT

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
ORELAP ID: OR100062

HydroCon LLC 3925 NE 72nd Ave. Suite 103 Vancouver, WA 98661	Project: Canyon City Bulk Plant Project Number: 10044-006 Project Manager: Chris Daschel	Report ID: A3L1567 - 12 29 23 1243
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QUALITY CONTROL (QC) SAMPLE RESULTS

Selected Volatile Organic Compounds by EPA 8260D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
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No Client related Batch QC samples analyzed for this batch. See notes page for more information.

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SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3510C (Fuels/Acid Ext.)					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23L1055</u>							
A3L1567-01	Water	NWTPH-Dx LL	12/19/23 15:15	12/28/23 10:58	960mL/2mL	1000mL/2mL	1.04

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5030C					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23L1016</u>							
A3L1567-01RE1	Water	NWTPH-Gx (MS)	12/19/23 15:15	12/27/23 17:00	5mL/5mL	5mL/5mL	1.00

Selected Volatile Organic Compounds by EPA 8260D

Prep: EPA 5030C					Sample	Default	RL Prep
Lab Number	Matrix	Method	Sampled	Prepared	Initial/Final	Initial/Final	Factor
<u>Batch: 23L0918</u>							
A3L1567-01	Water	EPA 8260D	12/19/23 15:15	12/22/23 13:34	5mL/5mL	5mL/5mL	1.00

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

Q-19 Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

- DET Analyte DETECTED at or above the detection or reporting limit.
- ND Analyte NOT DETECTED at or above the detection or reporting limit.
- NR Result Not Reported.
- RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

- Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as "dry", "wet", or " " (blank) designation.
 - "dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.
 - "wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.
 - " " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) are not included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

- " --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.
- " *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to 1/2 the Reporting Limit (RL).
-For Blank hits falling between 1/2 the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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LABORATORY ACCREDITATION INFORMATION

ORELAP Certification ID: OR100062 (Primary Accreditation)
EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
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All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation. Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provided by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

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APEX LABS
6700 SW Sandburg St., Tigard, OR 97223 Ph: 503-718-2323

CHAIN OF CUSTODY

Lab # A3L1567 coc 1 of 1

Company: HYDROCON Project Mgr: CHRIS DASCHEL Project Name: CANYON CITY BULK PLANT Project #: 10044-006

Address: 3925 NE 72ND AVE STE 103 VANCOUVER WA Phone: _____ Email: _____

Sampled by: MICHAEL WATSON

Site Location: _____

State: OR County: CLATSOP

SAMPLE ID: HCO1-W DATE: 12/19/15 TIME: _____

MATRIX: _____ # OF CONTAINERS: 9

	1 Day	2 Day	3 Day	Other: <u>HCE</u>
8260 RBDM VOCs				<u>X</u>
8260 Halo VOCs				
8260 VOCs Full List				
8270 SIM PAHs				
8270 Semi-Vols Full List				
8082 PCBs				
8081 Pesticides				
RCRA Metals (8)				
Priority Metals (13)				
Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Hg, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Ti, V, Zn, TCIP				
TCIP Metals (8)				
Hold Sample				
Frozen Archive				

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:
NO PAH EXTRACTION NECESSARY

Standard Turn Around Time (TAT) = 10 Business Days

TAT Requested (circle): 1 Day 2 Day 3 Day Standard Other: _____

SAMPLES ARE HELD FOR 30 DAYS

RELINQUISHED BY: Signature: <u>[Signature]</u> Date: <u>12/21</u>	RECEIVED BY: Signature: <u>[Signature]</u> Date: <u>12/19/15</u>
Printed Name: <u>MICHAEL WATSON</u> Time: <u>11:55</u>	Printed Name: <u>ANSEL WILSON</u> Time: <u>11:55</u>
Company: <u>HCE</u>	Company: <u>Apex</u>

Form Y-002 R-00

Apex Laboratories

CASBri

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APEXLABS COOLER RECEIPT FORM

Client: Hydrocon Element WO#: A3 4567

Project/Project #: Canyon City Bulk Plant 10044-006

Delivery Info:

Date/time received: 12/21/23 @ 11:55 By: APW

Delivered by: Apex Client ESS FedEx UPS Radio Morgan SDS Evergreen Other

Cooler Inspection Date/time inspected: 12/21/23 @ 11:55 By: APW

Chain of Custody included? Yes No

Signed/dated by client? Yes No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	<u>0.1</u>						
Custody seals? (Y/N)	<u>N</u>						
Received on ice? (Y/N)	<u>Y</u>						
Temp. blanks? (Y/N)	<u>N</u>						
Ice type: (Gel/Real/Other)	<u>Real</u>						
Condition (In/Out):	<u>In</u>						

Cooler out of temp? (Y/N) Possible reason why: (N)

Green dots applied to out of temperature samples? Yes No

Out of temperature samples form initiated? Yes No

Sample Inspection: Date/time inspected: 12/21/23 @ 17:14 By: APW

All samples intact? Yes No Comments: _____

Bottle labels/COCs agree? Yes No Comments: _____

COC/container discrepancies form initiated? Yes No

Containers/volumes received appropriate for analysis? Yes No Comments: _____

Do VOA vials have visible headspace? Yes No NA

Comments: 3/3 VOAs have seal

Water samples: pH checked: Yes No NA pH appropriate? Yes No NA pH ID: AP31572

Comments: _____

Additional information:

Labeled by: APW Witness: AKW Cooler Inspected by: APW
Form Y-003 R-01

Cameron O'Brien