ASSOCIATED ENVIRONMENTAL GROUP, LLC

Subsurface Investigation

Conducted on:
Holt's Quik Chek
400 North Pacific Avenue
Kelso, Washington 98626-3516

Prepared for:
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AEG Project #: 14-174
Date of Report: July 31, 2015

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1.0 INTRODUCTION

Associated Environmental Group, LLC (AEG) has completed a Subsurface Investigation (SI) at Holt's Quik Chek, located at 400 North Pacific Avenue, in Kelso, Washington (the Subject Site/Site). On June 17, 2015, AEG advanced four borings in the west of the parking lot near the underground storage tanks (UST) at the Subject Site property and one further west, downgradient, on North 1st Avenue, which was subsequently developed into monitoring well MW-7. On July 16, 2015, AEG completed a groundwater monitoring and sampling event of all seven existing wells at the Site. Soil and water samples were collected from each boring and laboratory analyzed for diesel-range total petroleum hydrocarbons (TPH), lube oil-range TPH, gasoline-range TPH, benzene, toluene, ethylbenzene, and total xylenes (BTEX). This Subsurface Investigation was performed to establish the extent of groundwater contamination downgradient of the Subject Site property.

1.1 Site and Vicinity Area Background

The Site is located at the intersection of North Pacific Avenue and Cowlitz Way, and is positioned on roughly 0.22 acres. The Site is developed as a gas station with a 3,075 square foot convenience store and two associated fueling islands. The Subject Site property has operated as a retail gasoline service or automotive repair station since the 1960s. Holt's Quik Chek has operated a retail gasoline station and convenience store at the Site since 1981. A petroleum release was discovered by the Subject Site property owner in 1997. Since then, subsurface investigations have been performed in the vicinity of the UST pad, fuel dispenser area, and in portions of Cowlitz Way and North Pacific Avenue. The immediate vicinity of the Site is residential. Figure 1, *Vicinity Map*, presents the general vicinity of the Site. The Site's current layout and features can be seen in Figure 2, *Site Map*. For a more detailed view of the Subject Site property, refer to Figure 3, *Subject Site Property Map*.

1.2 Previous Environmental Work Summary

Phase II Environmental Site Assessments, AGI and EMCON – 1997

In 1997, AGI Technologies, Inc. (AGI) advanced 12 borings, and EMCON installed six monitoring wells at the Site. Soil samples were collected at various depths, along with groundwater samples, and revealed gasoline-range TPH and benzene concentrations above the Washington State Department of Ecology (Ecology) Model Toxics Control Act (MTCA) Method A cleanup levels for both soil and groundwater in the southwest quarter of the Site.

Cleanup Actions, Hart Crowser and Farallon - 2003

In 2003, Hart Crowser installed a biosparging system at the Site. The system consisted of sparging air at about 0.1 cubic feet per minute in each of the eight sparge wells. Air was sparged into the subsurface water to raise dissolved oxygen levels to enhance the natural biodegradation processes.

The biosparge system was operated until September 2005 when Farallon Consulting, LLC. (Farallon) completed an in-situ chemical oxidation remediation using activated sodium persulfate. Two-hundred gallons of 5 percent sodium persulfate catalyzed with 10 percent hydrogen peroxide was injected into monitoring wells MW-2, MW-4, and MW-5. Approximately 50 gallons of the activated sodium persulfate solution was injected into the eight sparge wells. According to Farallon, in the *Site Closure Report* dated March 9, 2007:

> "*The chemical oxidation was successful in removing the residual soil contamination that was impacting groundwater based on the analytical results obtained from four subsequent quarters of groundwater monitoring.*"

Voluntary Cleanup Program, Farallon – 2007

In 2007, Farallon submitted a No Further Action request letter to Ecology. Ecology determined that Further Action was needed at the Site under WAC 173-340-515(5) in order to fully characterize the Site. From Ecology's Charles Cline's opinion letter dated June 18, 2007:

> "*…if soil remains above MTCA Method A cleanup levels on the Holt's Quik Chek Market property, it is possible that a restrictive covenant could be filed with the Cowlitz County Auditor's office.*"

> "*If no contamination is present west of the monitoring well MW-5 and contamination is not present in the soil then the remediation is considered complete and no further action is required.*"

Quarterly Groundwater Monitoring, AEG – October 2014 through April 2015

AEG sampled the five groundwater monitoring wells at the Site from October 2014 to April 2015. During these monitoring events, no constituents of concern were detected above MTCA Method A cleanup levels. Table 3, *Summary of Groundwater Analytical Results*, provides a summary of groundwater analytical results. AEG entered the Site into the Department of Ecology's Voluntary Cleanup Program (VCP) in December of 2014, requesting a "*No Further Action Determination*" based on groundwater sampling results.

1.3 Site Geology and Hydrogeology

The soil at the Subject Site and its vicinity consists of Kelso silt loam, 0 to 8 percent slopes. A typical soil profile consists of very dark grayish brown silt loam from 0 to 11 inches, dark yellowish brown silt loam from 11 to 18 inches, mottled, dark yellowish brown and yellowish brown silty clay loam from 18 to 34 inches, mottled, yellowish brown and grayish brown silty clay loam and silt loam, 34 to 45 inches, and mottled, dark yellowish brown silt loam, 45 to 60 inches below ground surface (bgs). This soil contains areas that vary in drainage from poorly to well drained.

Soils encountered at the Site during the Subsurface Investigation consisted of silt and sand. Sandy silt was encountered on the Subject Site property to a depth of approximately 13 feet bgs, with silty sand being found from approximately 13 feet bgs to approximately 22 feet bgs. Below 22 feet bgs is primarily sand. At the time of drilling, water was encountered on the Subject Site property at approximately 25 feet bgs.

Groundwater at the Site flows to the west towards the Cowlitz River, based on contour maps made from groundwater elevation measurements October 7, 2014 (Figure 4, *October 2014 Groundwater Contour Map*), January 20, 2015 (Figure 5, *January 2015 Groundwater Contour Map*), April 22, 2015 (Figure 6, *April 2015 Groundwater Contour Map*), and July 16, 2015 (Figure 7, *July 2015 Groundwater Contour Map*). Groundwater elevation measurements can be seen in Table 1, *Summary of Groundwater Elevations*. The approximate gradient of groundwater flow to the west is 0.065 feet per foot (ft/ft). Monitoring well MW-6 appears to be cross gradient from the Subject Site property, with the flow direction from MW-6 being to the north at an approximate gradient of 0.118 ft/ft.

2.0 OBJECTIVES AND SCOPE OF WORK

The objective of this Subsurface Investigation at the Site was to establish the extent of groundwater contamination downgradient of the Subject Site property.

Specific tasks performed included:

- Conducting both public and private utilities locates for the Site and vicinity. The public rights of way locates were performed by the Underground Utilities Locate Center; Applied Professional Services, Inc. (APS) provided private utility locates on the Site;
- Advancing four borings at select locations on the Subject Site property to a depth of 35 feet bgs using a Geoprobe® direct-push drilling rig;
- Installing one monitoring well in the eastern sidewalk of North 1st Avenue using an Auger drilling rig;
- Continuously logging the subsurface media during the investigation to observe and document soil lithology, color, moisture content, and sensory evidence of impairment;
- Collecting soil samples for laboratory analyses at various depths based on the field observations;
- Collecting groundwater samples for laboratory analyses;
- Transporting and submitting the selected soil samples and groundwater samples to Environmental Services Network NW, Inc. (ESN), a Washington State certified analytical laboratory, for analyses;
- Completing data analysis of laboratory analytical results and comparing data to the Ecology's MTCA Method A cleanup levels for soil and groundwater;
- Containing investigation-derived-wastes, including soil cuttings and decontamination wash fluids, in 55-gallon steel drums, and storing them onsite awaiting the results of laboratory analyses; and
- Preparing this report presenting final documentation of the field activities and methodologies, and summarizing the analytical results, conclusions, and recommendations.

3.0 FIELD METHODOLOGY

AEG supervised the advancement of monitoring well MW-7 and soil borings B-1 through B-4 at the Site on June 17, 2015. The monitoring well was advanced via an Auger drilling rig operated by ESN of Olympia, Washington, to a total depth of 20 feet bgs. The borings were advanced via a Geoprobe® drilling rig operated by ESN, to a total depth of 35 feet bgs. Soil samples were collected during drilling for field screening and laboratory analyses. The monitoring well was advanced west, downgradient, of monitoring well MW-5. The borings were advanced adjacent to the UST pad to evaluate soil and groundwater contamination on the Subject Site property. The locations of the boreholes and Site features are illustrated in Figure 2, *Site Map*. Photographs from the investigation are presented in Appendix A, *Site Photographs*. On July 16, 2015, AEG obtained depth to water measurements and groundwater samples from seven wells associated with the Site.

3.1 Soil Sampling Procedures

Soil sampling methods for this work followed the protocols established by Ecology and EPA. To minimize volatile organic constituent (VOC) losses, soil sampling and field preservation methods for VOCs followed methods set forth by EPA's Method 5035A, and Ecology's guidance, "*Collecting and Preparing Soil Samples for VOC Analysis*". Soil samples were collected from the boreholes via continuous soil cores in an acetate sleeve inside the drilling rod's core barrel. Soils were observed to document soil lithology, color, moisture content, and sensory evidence of contamination.

Based on the field observations, a total of 27 soil samples were transferred to laboratory-provided pre-weighed 40-milliliter (ml) VOA glass vials for analysis of BTEX. Samples for diesel-range TPH were transferred to laboratory provided pre-weighted 4-ounce glass jars. Nine select soil samples were transported to ESN, a Washington State accredited laboratory, in Olympia, Washington, for analyses following industry standard chain-of-custody procedures.

Boring logs and laboratory analytical results are provided in Appendix B, *Supporting Documents, Boring Logs, Laboratory Datasheets*.

3.2 Groundwater Sampling Procedures

AEG sampled the groundwater from the newly installed well and borings on June 17, 2015, and all seven monitoring wells on July 16, 2015. New, dedicated polyethylene tubing was installed in each of the holes to the total depth. Following the EPA approved low-flow purging and sampling technique, groundwater from each well or boring was purged until the sample was relatively free of sediment. Groundwater from wells was run through a YSI-water quality multi-parameter instrument equipped with a "flow-through" cell in order to continuously monitor "field parameters" of temperature, pH, conductivity, total dissolved solids, salinity, dissolved oxygen, and oxidation reduction potential.

The groundwater samples were collected in laboratory provided 40 ml vials, and analyzed for the gasoline-range TPH and BTEX constituents. Half liter amber jars were used for the collection of groundwater to be analyzed for diesel-range TPH.

3.3 Quality Controls

To ensure that quality information was obtained at the Site:

- All soil and groundwater samples were collected in general accordance with industry protocols for the collection, documentation, and handling of samples;
- Descriptions of soil sampling depths were carefully logged in the field; the driller and Site geologist confirmed sample depths as soil samples were collected;
- Nitrile gloves were used in handling all sampling containers and sampling devices;
- Soil samples were tightly packed into jars to eliminate sample headspace;
- Water samples were filled carefully in the sampling bottles to prevent volatilization;
- Upon sampling, all samples were placed immediately into chilled ice chests; and
- The samples were transported under a chain-of-custody to the ESN analytical laboratory in Olympia, Washington, for analysis.

The laboratory provided standard quality assurance/quality control (QA/QC) which included:

- Surrogate recoveries for each sample;
- Method blank results;
- Duplicate analyses, matrix or blank spiked analyses; and
- Duplicate spiked analyses.

3.4 Investigation Derived Waste

Investigation derived waste for this project consisted of soil cuttings from the subsurface exploration activities, purge-water, and decontamination water from decontamination of the drilling core barrel and associated equipment. These wastes were separated and placed in United States Department of Transportation (DOT) approved 55-gallon drums. The drums were stored onsite for subsequent characterization and disposal.

4.0 ANALYTICAL RESULTS

Selected soil samples were analyzed for:

- Diesel-range TPH and lube oil-range TPH by Method NWTPH-Dx Extended; and
- Gasoline-range TPH, and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by Method NWTPH-Gx/8260.

Selected groundwater samples were analyzed for:

- Diesel-range TPH and lube oil-range TPH by Method NWTPH-Dx Extended; and
- Gasoline-range TPH and BTEX by Method NWTPH-Gx/8260.

All analytical results were compared to Ecology's MTCA Method A cleanup levels. Copies of the laboratory analytical results are provided in Appendix B, *Supporting Documents, Laboratory Datasheets.*

4.1 Soil Results

Analytical results of the soil samples indicated the presence of gasoline-range TPH above the MTCA Method A Cleanup Levels in borings B-1, B-3, and B-4. Ethylbenzene and total xylenes were detected above their respective MTCA Method A cleanup levels in borings B-1 and B-4. A summary of analytical results for each detected constituent is provided below:

- Toluene was detected **below** the MTCA Method A cleanup level of 7 milligrams per kilogram (mg/kg) at a depth of 10 feet bgs in boring B-1, with a concentration of 1.6 mg/kg, and at a depth of 15 feet bgs in boring B-4 with a concentration of 0.53 mg/kg.
- Ethylbenzene was detected **above** the MTCA Method A cleanup level of 6 mg/kg at a depth of 10 feet bgs in boring B-1, with a concentration of 54 mg/kg, and at a depth of 15 feet bgs in boring B-4, with a concentration of 13 mg/kg.
- Ethylbenzene was detected **below** the MTCA method A cleanup level at a depth of 25 feet bgs in boring B-1, with a concentration of 0.17 mg/kg, and at a depth of 15 feet in boring B-2 with a concentration of 0.11 mg/kg.
- Total xylenes were detected **above** the MTCA Method A cleanup level of 9 mg/kg at a depth of 10 feet bgs in boring B-1, with a concentration of 300 mg/kg, and at a depth of 15 feet bgs in boring B-4 with a concentration of 96 mg/kg.
- Total xylenes were detected **below** the MTCA Method A cleanup level in borings B-1 at 25 feet bgs (1.1 mg/kg), B-2 at 15 feet bgs (0.53 mg/kg), and B-2 at 25 feet bgs (0.27 mg/kg).

- Gasoline-range TPH was detected **above** the MTCA Method A cleanup level of 100 mg/kg in borings B-1 at 10 feet bgs (3,800 mg/kg), B-1 at 25 feet bgs (800 mg/kg), B-3 at 25 feet bgs (620 mg/kg), and B-4 at 15 feet bgs (2,700 mg/kg).
- Gasoline-range TPH was detected **below** the MTCA Method A cleanup level in boring B-2, at depths of 15 feet bgs (65 mg/kg), and 25 feet bgs (37 mg/kg).
- Benzene, diesel-range TPH, and heavy oil-range TPH were not detected in any soil sample above laboratory detection limits.

Table 2, *Summary of Soil Analytical Results*, presents analytical results as compared to Ecology's MTCA Method A soil cleanup levels.

4.2 Groundwater Results

Groundwater sampling was performed at each new monitoring well and boring during drilling activities. A summary of analytical results for each detected constituent is provided below:

June 17, 2015

- Toluene was detected **below** the MTCA Method A cleanup level of 1,000 micrograms per liter (µg/l) in boring B-1, with a concentration of 2.5 µg/l.
- Ethylbenzene was detected **below** the MTCA Method A cleanup level of 700 µg/l in borings B-1 and B-4, with concentrations of 36 µg/l, and 2.6 µg/l, respectively.
- Total xylenes were detected **below** the MTCA Method A cleanup level of 1,000 µg/l in boring B-1 with a concentration of 160 µg/l.
- Gasoline-range TPH was detected **above** the MTCA Method A cleanup level of 1,000 µg/l in boring B-1 with a concentration of 1,400 µg/l.
- Diesel-range TPH was detected **above** the MTCA Method A cleanup level of 500 µg/l in borings B-2, and B-3, with concentrations of 540 µg/l, and 1,100 µg/l, respectively.
- Benzene and heavy oil-range TPH were not detected above laboratory reporting limits in any groundwater samples.

July 16, 2015

- Benzene was detected **above** the MTCA Method A cleanup level of 5.0 µg/l in monitoring well MW-6, with a concentration of 45 µg/l.
- Toluene was detected **below** the MTCA Method A cleanup level of 1,000 micrograms per liter (µg/l) in monitoring well MW-6, with a concentration of 3.1 µg/l.

- Gasoline-range TPH was detected **below** the MTCA Method A cleanup level of 1,000 µg/l in monitoring well MW-6, with a concentration of 180 µg/l.

Table 3, *Summary of Groundwater Analytical Results,* presents analytical results as compared to Ecology's MTCA Method A groundwater cleanup levels.

5.0 FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

The findings and conclusions derived during the subsurface assessment activities at the Site are as follows:

5.1 Findings

- Soil and groundwater analytical results from monitoring well MW-7 revealed no detections above laboratory reporting limits.
- Ethylbenzene and total xylenes were detected in soil samples above their respective MTCA Method A cleanup levels in borings B-1 at 10 feet bgs, and in B-4 at 15 feet bgs.
- Gasoline-range TPH was detected in soil samples above the MTCA Method A cleanup level in borings B-1 at 10 feet bgs, B-1 at 25 feet bgs, B-3 at 25 feet bgs, and B-4 at 15 feet bgs.
- Gasoline-range TPH was detected in the groundwater sample from boring B-1 above the MTCA Method A cleanup level.
- Diesel-range TPH was detected in the groundwater samples above the MTCA Method A cleanup level from borings B-2 and B-3.
- Benzene concentration in monitoring well MW-6 is above the MTCA Method A cleanup level.
- Direction of groundwater flow beneath the Site when encountered is west with an approximate gradient of 0.065 ft/ft.

5.2 Conclusions

Based on the results of the samples analyzed and the findings from this investigation, AEG concludes that:

- Groundwater flow at the Site is to the west;
- Monitoring well MW-7, downgradient of the Subject Site property, shows no signs of contamination;
- Monitoring well MW-6 shows signs of groundwater contamination and is cross gradient of the Subject Site property;
- Soil analytical results remain above the MTCA Method A cleanup levels on the Subject Site property; and

- Although groundwater in borings B-1, B-2, and B-3 had detections above MTCA Method A cleanup levels, it is thought that these results are in error; that soil contamination from the borehole was carried down to the groundwater and thus, the groundwater samples were contaminated as part of drilling activities.

5.3 Recommendations

Based on the findings and conclusions of this investigation, it is recommended that:

- A letter be sent to the Washington State Department of Ecology with a request for a "*No Further Action with an Environmental Covenant*" determination.

6.0 LIMITATIONS

This report summarizes the findings of the services authorized under our agreement with Mr. Han Kim. It has been prepared using generally accepted professional practices, related to the nature of the work accomplished. This report was prepared for the exclusive use of Mr. Han Kim and his designated representatives for the specific application to the project purpose.

Recommendations, opinions, site history, and proposed actions contained in this report apply to conditions and information available at the time this report was completed. Since conditions and regulations beyond our control can change at any time after completion of this report, or our proposed work, we are not responsible for any impacts of any changes in conditions, standards, practices, and/or regulations subsequent to our performance of services. We cannot warrant or validate the accuracy of information supplied by others, in whole or part.

7.0 REFERENCES

American Society for Testing and Materials (ASTM) Standard E 1903-97. *Standard Guide Environmental Site Assessments: Phase II Environmental Site Assessment Process*

Farallon Consulting, L.L.C., 2007, *Site Closure Report*

Washington State Department of Ecology, 2004, *Collecting and Preparing Soil Samples for VOC Analysis*, Implementation Memorandum #5

Washington State Department of Ecology, 2007, *Model Toxic Control Act Statute and Regulation – Chapter 173-340 WAC*, Publication number 94-06 (Revised November 2007)

FIGURES

605 11th Ave. SE, Suite 201 • Olympia, WA • 98501
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COWLITZ RIVER

TRAIN TRACKS

TRAIN TRACKS

N FIRST AVE

N PACIFIC AVENUE

CRAWFORD STREET

3RD AVENUE N

COWLITZ WAY

BUILDING

HOLT'S QUIK CHEK

PROJECT SITE– SHADED AREA DENOTES PROPERTY LIMITS

UST

UST

CANOPY

PARKING LOT

NOTES

1. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE
2. THIS DRAWING IS FOR INFORMATION PURPOSES. IT IS INTENDED TO ASSIST IN SHOWING FEATURES DISCUSSED IN AN ATTACHED DOCUMENT.

REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.
VICINITY IMAGE SOURCE: U.S. GEOLOGICAL SURVEY– 2013, 7.5 MINUTE QUADRANGLE MAP KELSO, WASHINGTON

PROJECT LOCATION

VICINITY MAP

0 1,500 3,000
SCALE IN FEET

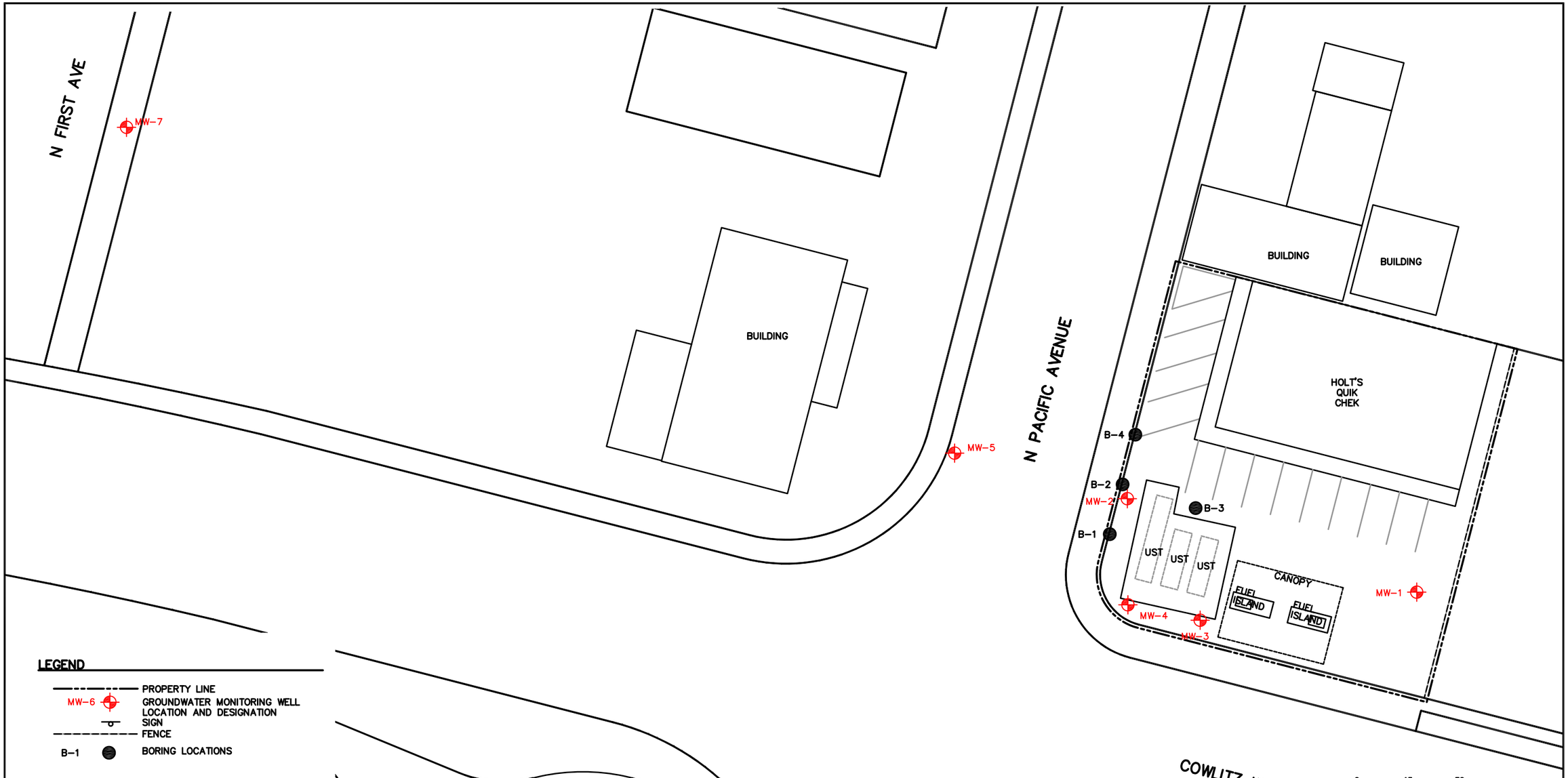
N
W E
S

0 15 30
SCALE IN FEET

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 1
VICINITY MAP

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON



LEGEND

- PROPERTY LINE
- MW-6 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- SIGN
- FENCE
- B-1 — BORING LOCATIONS

NOTES

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REFERENCE

DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.

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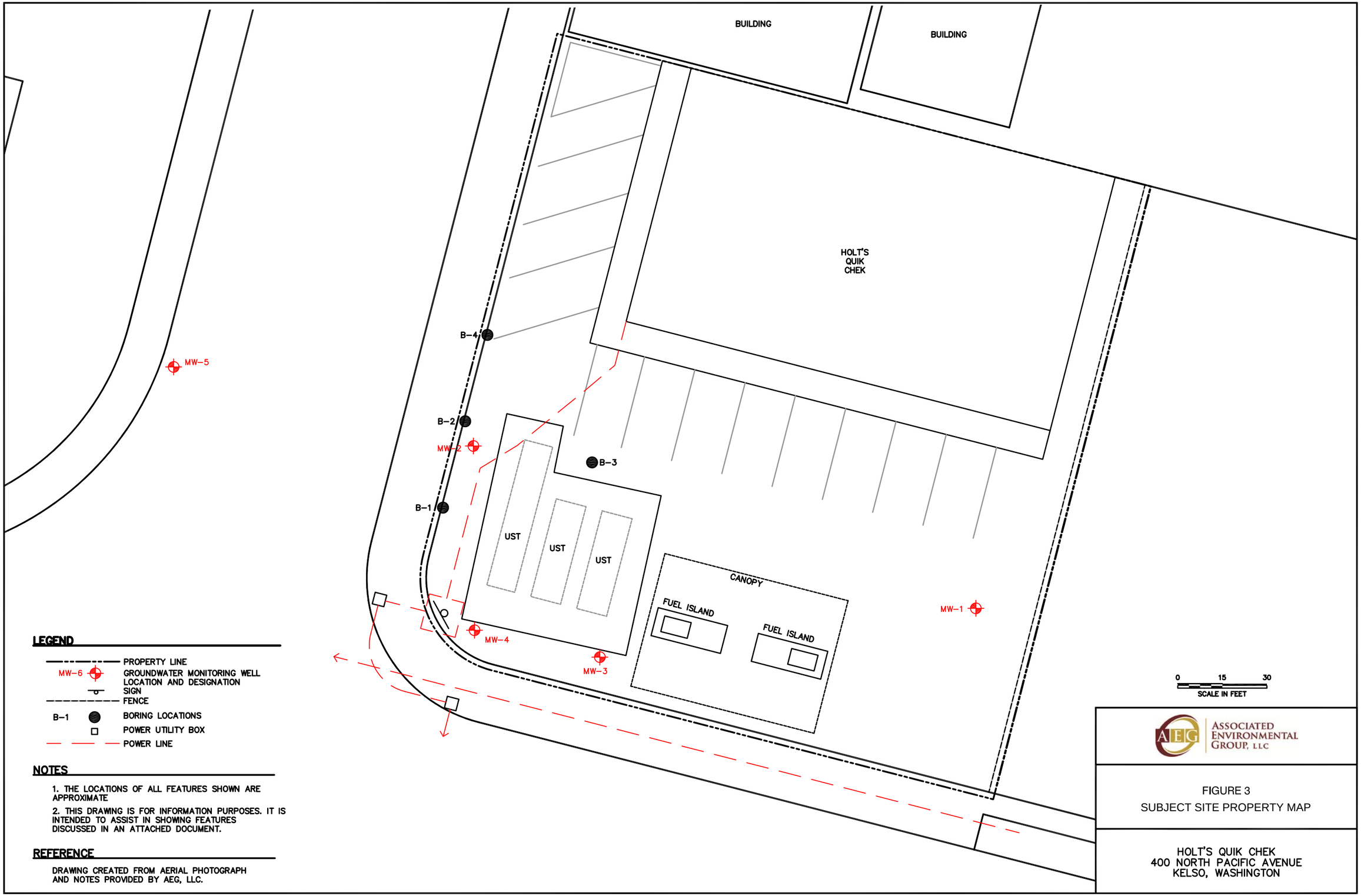
FIGURE 2
SITE MAP

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON



LEGEND

- PROPERTY LINE
- MW-6 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- SIGN
- FENCE
- B-1 — BORING LOCATIONS
- POWER UTILITY BOX
- POWER LINE

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0 15 30
SCALE IN FEET

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 3
SUBJECT SITE PROPERTY MAP

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON

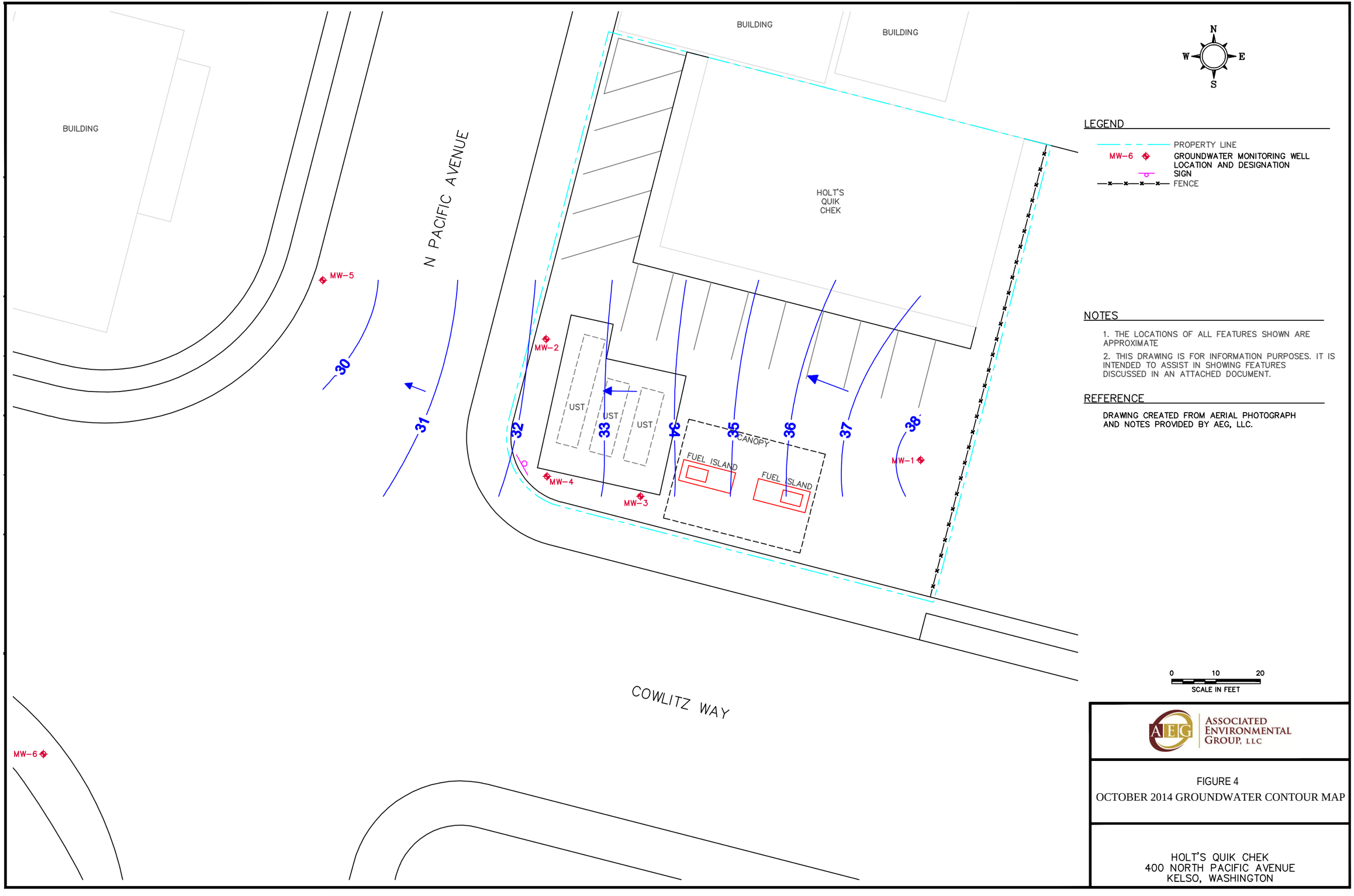

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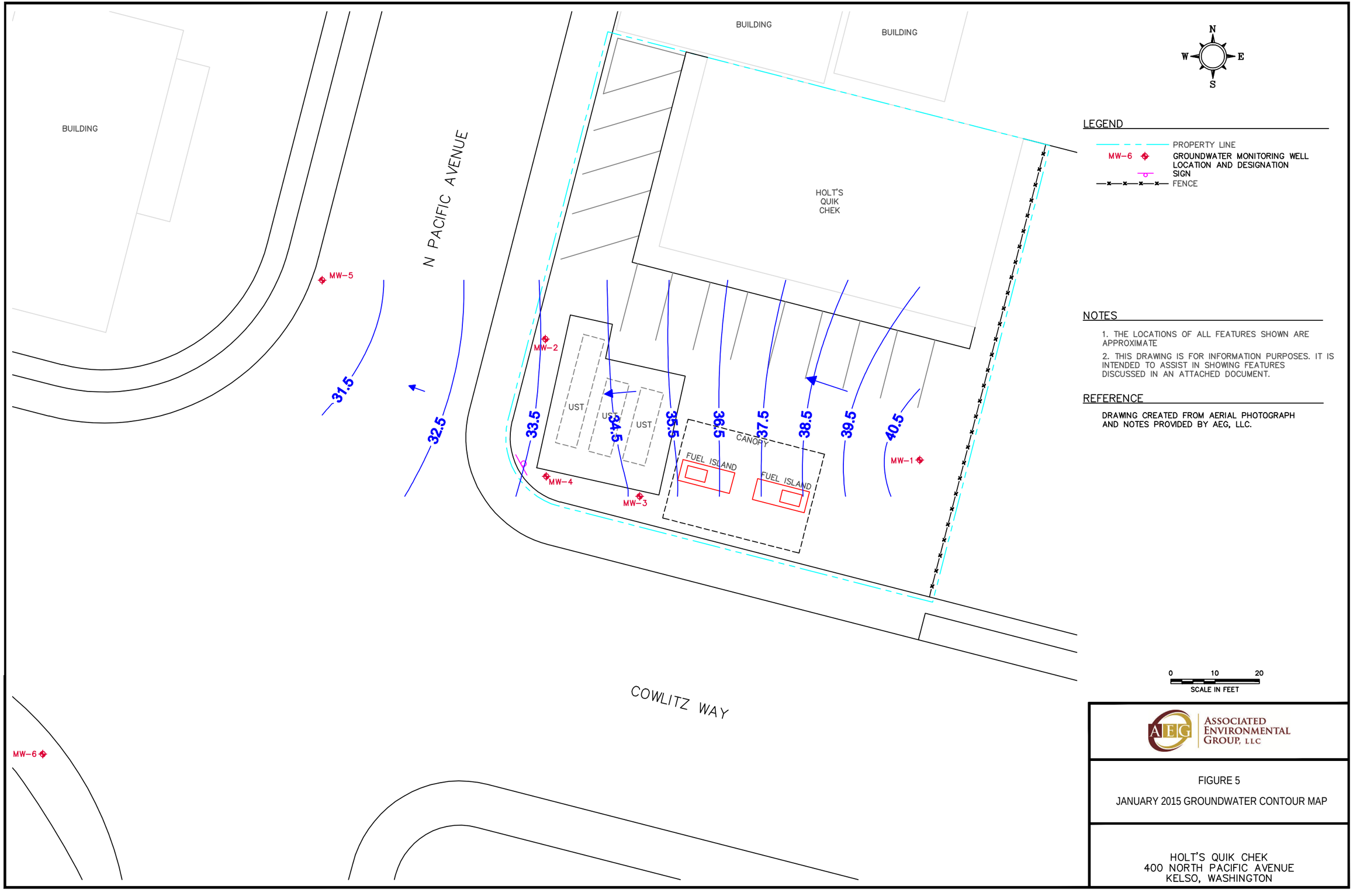
FIGURE 4
OCTOBER 2014 GROUNDWATER CONTOUR MAP

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON



N
W E
S

LEGEND

- PROPERTY LINE
- MW-6 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- SIGN
- FENCE

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0 10 20
SCALE IN FEET

ASSOCIATED ENVIRONMENTAL GROUP, LLC

FIGURE 5

JANUARY 2015 GROUNDWATER CONTOUR MAP

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON

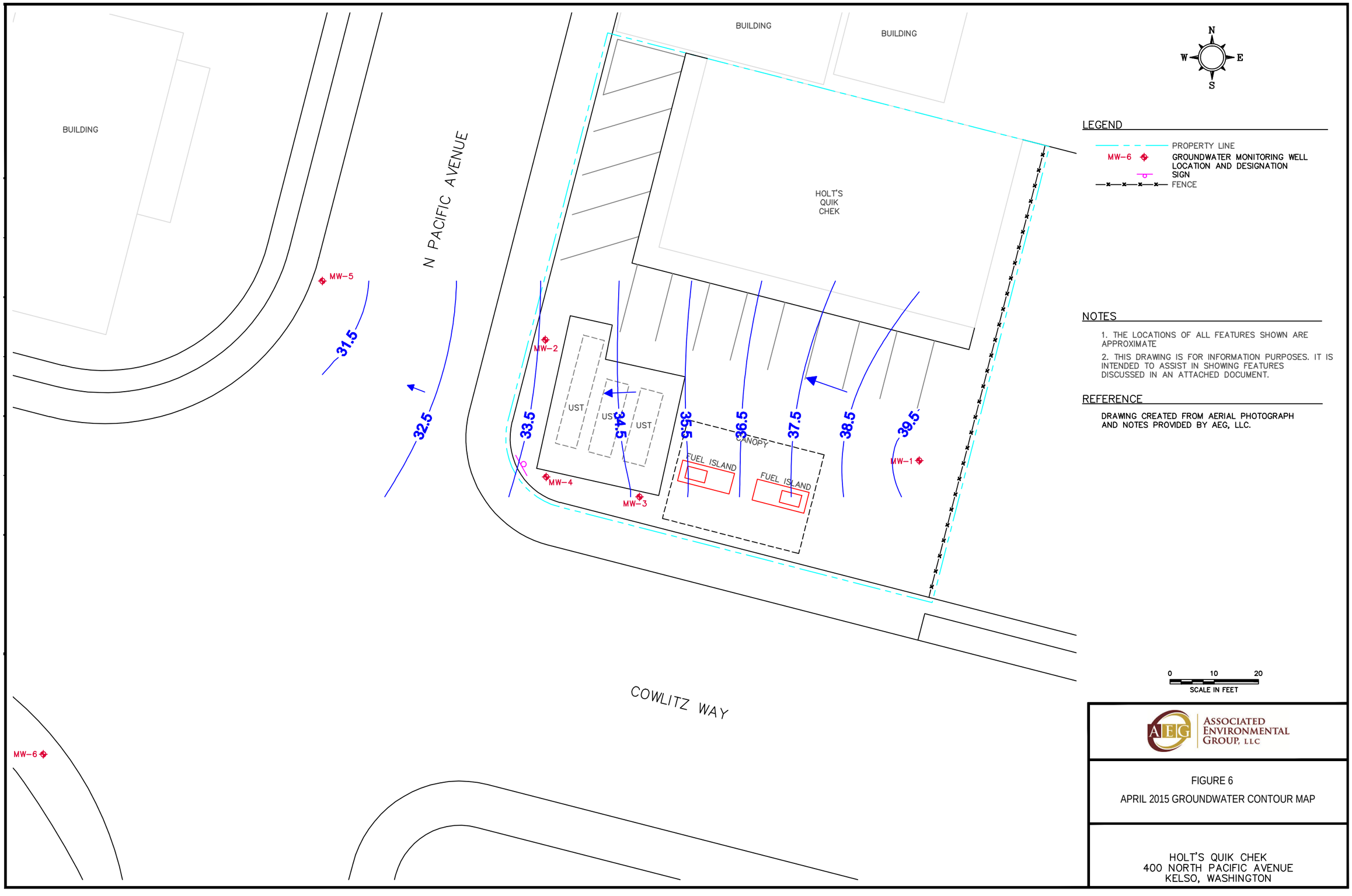

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FIGURE 6

APRIL 2015 GROUNDWATER CONTOUR MAP

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON

N FIRST AVE

MW-7

BUILDING

BUILDING

N PACIFIC AVENUE

MW-5

MW-5

BUILDING

BUILDING

HOLT'S
QUIK
CHEK

B-4

B-2

MW-2

MW-2

B-3

B-1

UST

UST

UST

CANOPY

FUEL
ISLAND

FUEL
ISLAND

MW-4

MW-4

MW-3

MW-3

MW-1

MW-1

31

33

35

37

39

41

43

MW-6

MW-6

COWLITZ WAY

0 15 30
SCALE IN FEET

LEGEND

- PROPERTY LINE
- MW-6 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- SIGN
- FENCE
- B-1 — BORING LOCATIONS

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REFERENCE

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FIGURE 7

JULY 2015 GROUNDWATER CONTOUR MAP

HOLT'S QUIK CHEK
400 NORTH PACIFIC AVENUE
KELSO, WASHINGTON

TABLES

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Table 1 - Summary of Groundwater Elevations
Holt's Quik Chek
Kelso, Washington

Well No./ TOC Elevation (feet)	Date	Depth to Water (feet)	Depth to Free Product (feet)	Free Product Thickness (feet)	Actual Groundwater Elevation (feet)	Change in Elevation (feet)
MW-1	10/7/2014	17.67	--	--	38.45	--
56.12	1/20/2015	14.75	--	--	41.37	2.92
	4/22/2015	16.09	--	--	40.03	-1.34
	7/16/2015	17.30	--	--	38.82	-1.21
MW-2	10/7/2014	23.36	--	--	32.22	--
55.58	1/20/2015	22.02	--	--	33.56	1.34
	4/22/2015	22.00	--	--	33.58	0.02
	7/16/2015	23.15	--	--	32.43	-1.15
MW-3	10/7/2014	22.49	--	--	33.39	--
55.88	1/20/2015	21.28	--	--	34.60	1.21
	4/22/2015	21.31	--	--	34.57	-0.03
	7/16/2015	22.28	--	--	33.60	-0.97
MW-4	10/7/2014	23.36	--	--	32.42	--
55.78	1/20/2015	22.02	--	--	33.76	1.34
	4/22/2015	21.98	--	--	33.80	0.04
	7/16/2015	23.17	--	--	32.61	-1.19
MW-5	10/7/2014	25.75	--	--	29.31	--
55.06	1/20/2015	24.31	--	--	30.75	1.44
	4/22/2015	24.08	--	--	30.98	0.23
	7/16/2015	25.46	--	--	29.60	-1.38
MW-6	7/16/2015	11.37	--	--	44.35	--
55.72						
MW-7	7/16/2015	17.83	--	--	--	--
--						

Notes:
TOC = Top of casing elevation relative to assigned benchmark.
-- = Not measured, not available, or not applicable

Table 2 - Summary of Soil Analytical Results
Holt's Quik Chek
Kelso, Washington

Sample Number	Depth Collected (feet)	Date Collected	Volatile Organic Compounds (mg/kg)				Total Petroleum Hydrocarbons (TPH) (mg/kg)		
			Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Diesel	Heavy Oil
MW-7-15	15.0	6/17/2015	<0.02	<0.05	<0.05	<0.15	<10	<50	<100
B1-10	10.0	6/17/2015	<0.02	**1.6**	**54**	**300**	**3,800**	<50	<100
B1-25	25.0	6/17/2015	<0.02	<0.05	**0.17**	**1.1**	**800**	<50	<100
B2-15	15.0	6/17/2015	<0.02	<0.05	**0.11**	**0.53**	**65**	<50	<100
B2-25	25.0	6/17/2015	<0.02	<0.05	<0.05	**0.27**	**37**	<50	<100
B3-10	10.0	6/17/2015	<0.02	<0.05	<0.05	<0.15	<10	<50	<100
B3-25	25.0	6/17/2015	<0.02	<0.05	<0.05	<0.15	**620**	<50	<100
B4-15	15.0	6/17/2015	<0.02	**0.53**	**13**	**96**	**2,700**	<50	<100
B4-20	20.0	6/17/2015	<0.02	<0.05	<0.05	<0.15	<10	<50	<100
PQL (mg/kg)			0.02	0.05	0.05	0.15	10	50	100
MTCA Method A Cleanup Levels (mg/kg)			0.03	7	6	9	100*	2,000	2,000

Notes:
mg/kg = milligrams per kilogram
-- Not analyzed for constituent
< Not detected at the listed laboratory detection limits
PQL = Practical Quantification Limit (laboratory detection limit)
Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup level
Bold indicates the detected concentration is below Ecology MTCA Method A cleanup levels
* TPH-Gasoline Cleanup Level with no presence of Benzene anywhere at the Site

Table 3 - Summary of Groundwater Analytical Results
Holt's Quik Chek
Kelso, Washington

Sample Number	Date Collected	Volatile Organic Compounds (µg/l)				Total Petroleum Hydrocarbons (TPH) (µg/l)		
		Benzene	Toluene	Ethylbenzene	Xylenes	Gasoline	Diesel	Heavy Oil
MW-1	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100	--	--
	1/20/2015	<1.0	<1.0	<1.0	<3.0	**160**	--	--
	4/22/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	7/16/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
MW-2	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100	--	--
	1/20/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	4/22/2015	<1.0	<1.0	<1.0	<3.0	**140**	--	--
	7/16/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
MW-3	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100	--	--
	1/20/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	4/22/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	7/16/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
MW-4	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100	--	--
	1/20/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	4/22/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	7/16/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
MW-5	10/7/2014	<1.0	<1.0	<1.0	<3.0	<100	--	--
	1/20/2015	<1.0	<1.0	<1.0	<3.0	**180**	--	--
	4/22/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
	7/16/2015	<1.0	<1.0	<1.0	<3.0	<100	--	--
MW-6	7/16/2015	**45**	**3.1**	<1.0	<3.0	**180**	--	--
MW-7	6/17/2015	<1.0	<1.0	<1.0	<1.0	<100	<250	<500
	7/16/2015	<1.0	<1.0	<1.0	<1.0	<100	--	--
B-1	6/17/2015	<1.0	**2.5**	**36**	**160**	**1,400**	<250	<500
B-2	6/17/2015	<1.0	<1.0	<1.0	<3.0	<100	**540**	<500
B-3	6/17/2015	<1.0	<1.0	<1.0	<3.0	<100	**1100**	<500
B-4	6/17/2015	<1.0	<1.0	**2.6**	<3.0	<100	<250	<500
PQL (µg/l)		1.0	1.0	1.0	3.0	100	250	500
MTCA Method A Cleanup Levels (µg/l)		5.0	1,000	700	1,000	1,000*	500	500

Notes:
ug/L= micrograms per liter
-- Not analyzed for constituent
< Not detected at the listed laboratory detection limits
PQL = Practical Quantification Limit (laboratory detection limit)
Red Bold indicates the detected concentration exceeds Ecology MTCA Method A cleanup level
Bold indicates the detected concentration is below Ecology MTCA Method A cleanup levels
* TPH-Gasoline Cleanup Level with no presence of Benzene anywhere at the Site

APPENDIX A

Site Photographs

605 11th Ave. SE, Suite 201 • Olympia, WA • 98501
Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

ASSOCIATED ENVIRONMENTAL GROUP, LLC

SITE PHOTOGRAPHIC RECORD

Project No.: 14-174 **Project Name: Holt's Quik Chek**

				
Photo #1:	Photo looking at soil taken from boring MW-7.		Photo #2:	Photo looking at soil taken from boring B-1.
				
Photo #3:	Photo looking at soil taken from boring B-2.		Photo #4:	Photo looking at soil taken from boring B-3.

605 – 11th Avenue SE, Suite 201 • Olympia, WA • 98501
Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

APPENDIX B

Supporting Documents
Boring Logs
Laboratory Datasheets

605 11th Ave. SE, Suite 201 • Olympia, WA • 98501
Phone: 360-352-9835 • Fax: 360-352-8164 • Email: admin@aegwa.com

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Holt's Quik Chek* **JOB # *14-174*** **Monitoring Well #** *MW-7* **PAGE 1 OF 1**

Location: *400 North Pacific Avenue, Kelso, WA* **Approximate Elevation:** 45 feet amsl

Subcontractor / Driller: ESN/ Brian **Equipment / Drilling Method:** Auger

Date: *June 17, 2015* **Logged By:** *Nicolas Pushckor*

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Monitoring Well Construction
	4 inch concrete surface underlain by; Brown, moist, medium dense; **SANDY SILT**; fine grained	ML					N/A		None	
5					MW-7-5	9:16		0.0		
10	At 9 feet; Brown, moist, medium dense, **SILTY SAND**; fine grained	SM			MW-7-10	9:18		0.0		
	At 12 feet; Brown, moist, medium dense, **SAND**; fine grained	SP								
15	At 14 feet; Wet	▽			MW-7-14	9:21		0.0		
20					MW-7-20	9:25		0.0		
	Total Depth = 20 feet									
25										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- Groundwater level at time of drilling or date of measurement (AT)

Monitoring Well Construction

- Grout/Concrete
- 3/4-inch bentonite chips
- Silica sand
- 2-inch diameter blank PVC casing from
- 2-inch diameter PVC 0.01 slotted screen

Ecology Tag #

BJC 838

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Holt's Quik Chek*	**JOB #** *14-174*	**BORING #** *B-1*	**PAGE 1 OF 2**
Location: *400 North Pacific Avenue, Kelso, WA*	**Approximate Elevation:** 55 feet amsl		
Subcontractor / Driller: ESN / Brian	**Equipment / Drilling Method:** Geoprobe		
Date: *June 17, 2015*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	3 inch asphalt surface underlain by;	ML					N/A		None	
	Dark gray, moist, medium dense, **SANDY SILT**; fine grained									
5					B1-5	10:19		1149		
10					B1-10	10:22		2542		
	At 11 feet; Dark gray, moist, medium dense, **SILTY SAND**; fine grained	SM								
15					B1-15	10:24		1272		
	At 17 feet; brown									
20					B1-20	10:29		951		
	At 22 feet; Light gray, moist, medium dense, **SAND**; fine grained	SP								
25	At 24 feet; Dark gray				B1-25	10:34		420		

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT:	***Holt's Quik Check***	**JOB #** ***14-174***	**BORING #** *B-1*	**PAGE 2 OF 2**
Location:	*400 North Pacific Avenue, Kelso, WA*	**Approximate Elevation:** 55 feet amsl		
Subcontractor / Driller: ESN / Brian		**Equipment / Drilling Method:** Geoprobe		
Date:	*June 17, 2015*	**Logged By:**	*Nicolas Pushckor*	

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	At 26 feet; Wet	▼	26				N/A		None	
	At 27 feet; Brown, wet, medium dense, **GRAVELLY SAND**; fine grained sand coarse grained gravel	SW	27							
			28							
			29		B1-29	10:42		5.7		
30			30							
	Total Depth = 30 feet									
35										
40										
45										
50										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Holt's Quik Chek*	**JOB #** *14-174*	**BORING #** *B-2*	**PAGE 1 OF 2**
Location: *400 North Pacific Avenue, Kelso, WA*	**Approximate Elevation:** 55 feet amsl		
Subcontractor / Driller: ESN / Brian	**Equipment / Drilling Method:** Geoprobe		
Date: *June 17, 2015*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	3 inch asphalt surface underlain by;		1				N/A		None	
			2							
	Brown, dry, medium dense, **SAND**; fine grained	SP	3							
			4							
5	At 3.5 feet; Gray, moist, medium dense, **SANDY SILT**, fine grained	ML	5		B2-5	11:26		506		
			6							
			7							
			8							
			9							
10			10		B2-10	11:30		1050		
			11							
			12							
			13							
	At 13 feet; Gray, moist, medium dense, **SILTY SAND**, fine grained	SM	14							
15			15		B2-15	11:35		1237		
			16							
	At 16 feet; Brown		17							
			18							
			19		B2-19	11:40		107		
20			20							
			21							
			22							
			23							
	At 23 feet; Brown, moist, medium dense, **SAND**; fine grained	SP	24							
25			25		B2-25	11:45		1590		

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT:	***Holt's Quik Chek***	**JOB #** ***14-174***	**BORING #** *B-2* **PAGE 2 OF 2**
Location:	*400 North Pacific Avenue, Kelso, WA*	**Approximate Elevation:** 55 feet amsl	
Subcontractor / Driller: ESN / Brian		**Equipment / Drilling Method:** Auger	
Date:	*June 17, 2015*	**Logged By:**	*Nicolas Pushckor*

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	At 26 feet; Wet	▼	26				N/A		None	
			27					0.0		
			28							
			29		B2-29	11:54				
30			30					0.0		
	Total Depth = 30 feet									
35										
40										
45										
50										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Holt's Quik Chek*	**JOB #** *14-174*	**BORING #** *B-3*	**PAGE 1 OF 2**
Location: *400 North Pacific Avenue, Kelso, WA*	**Approximate Elevation:** 55 feet amsl		
Subcontractor / Driller: ESN / Brian	**Equipment / Drilling Method:** Geoprobe		
Date: *June 17, 2015*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	3 inch asphalt surface underlain by;		1				N/A		None	
	Brown, dry, medium dense, **SAND**; fine grained	SP	2							
			3							
			4							
5			5		B3-5	12:25		0.0		
			6							
	At 6 feet; Gray, moist, medium dense, **SANDY SILT**; fine grained	ML	7							
			8							
	At 8.5 feet; Brown		9							
10			10		B3-10	12:28		449		
			11							
			12							
			13							
			14							
15			15		B3-15	12:32		127		
			16							
	At 16 feet; Gray, moist, medium dense, **SILTY SAND**; fine grained	SM	17							
			18							
			19							
20			20		B3-20	12:38		130		
			21							
			22							
			23							
	At 23 feet; Brown, moist, medium dense, **SAND**; fine grained	SP	24							
25	At 24 feet; Gray		25		B3-25	12:43		672		

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT:	***Holt's Quik Check***	**JOB #** ***14-174***	**BORING #** *B-3* **PAGE 2 OF 2**
Location:	*400 North Pacific Avenue, Kelso, WA*	**Approximate Elevation:** 55 feet amsl	
Subcontractor / Driller: ESN / Brian		**Equipment / Drilling Method:** Geoprobe	
Date:	*June 17, 2015*	**Logged By:**	*Nicolas Pushckor*

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	At 25 feet; Wet		26				N/A		None	
			27							
	At 27.5 feet; Brown, moist, medium dense, **SANDY SILT**; fine grained		28		B3-29	12:51		0.0		
30			29							
			30							
	Total Depth = 30 feet									
35										
40										
45										
50										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT: *Holt's Quik Chek*	**JOB #** *14-174*	**BORING #** *B-4*	**PAGE 1 OF 2**
Location: *400 North Pacific Avenue, Kelso, WA*	**Approximate Elevation:** 55 feet amsl		
Subcontractor / Driller: ESN / Brian	**Equipment / Drilling Method:** Geoprobe		
Date: *June 17, 2015*	**Logged By:** *Nicolas Pushckor*		

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
	3 inch asphalt surface underlain by;		1				N/A		None	
			2							
	Gray, moist, medium dense, **SANDY SILT**; fine grained	ML	3							
			4							
5			5		B4-5	13:16		699		
			6							
			7							
			8							
			9							
10			10		B4-10	13:20		1371		
			11							
			12							
			13							
	At 13 feet; Gray, moist, medium dense, **SILTY SAND**; fine grained	SM	14							
15			15		B4-15	13:23		2112		
	At 15 feet; Brown		16							
			17							
			18							
			19							
20	At 19 feet; Brown, moist, medium dense, **SAND**; fine grained	SP	20		B4-20	13:27		0.0		
			21							
			22							
			23							
		▼	24							
25	At 24 feet; Wet		25		B4-25	13:32		0.0		

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

ASSOCIATED ENVIRONMENTAL GROUP, LLC

LOG OF BOREHOLE

PROJECT:	***Holt's Quik Check***	**JOB # *14-174***	**BORING # *B-4*** **PAGE 2 OF 2**
Location:	*400 North Pacific Avenue, Kelso, WA*	**Approximate Elevation:** 55 feet amsl	
Subcontractor / Driller: ESN / Brian		**Equipment / Drilling Method:** Geoprobe	
Date:	*June 17, 2015*	**Logged By:**	*Nicolas Pushckor*

Boring Depth (feet)	Soil Description	Unified Soil Symbol	Sample Depth	Sample Recovery	Sample Number	Time	Blows/Foot	PID Reading	Sheen	Observations
30			26 27 28 29 30			13:38	N/A	0.0	None	
	Total Depth = 30 feet									
35										
40										
45										
50										

Explanation

- Sample Advance / Recovery
- No Recovery
- Contact located approximately
- ATD — Groundwater level at time of drilling or date of measurement

ESN NORTHWEST
Environmental
Services Network

July 8, 2015

Nicolas Pushckor
Associated Environmental Group, Inc.
605 11th Ave. SE, Suite 201
Olympia, WA 98501

Dear Mr. Pushckor:

Please find enclosed the analytical data report for the Holt's Quik Check Project in Kelso, Washington. Probe services were conducted on June 17, 2015. Soil and water samples were analyzed for Diesel and Oil by NWTPH-Dx/Dx Extended, Gasoline by NWTPH-Gx and BTEX by Method 8260 on June 25 - July 1, 2015.

The results of the analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Associated Environmental Group, Inc. for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A Korosec

Michael A. Korosec
President

1210 Eastside Street SE, Suite 200 ■ Olympia, Washington 98501 ■ 360.459.4670 ■ FAX 360.459.3432

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT HOLT'S QUIK CHECK
PROJECT #14-174
Kelso, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Soil by Method NWTPH-Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (mg/kg)	Lube Oil Range Organics (mg/kg)
Method Blank	6/24/2015	6/25/2015	86	nd	nd
LCS	6/24/2015	6/25/2015	127	93%	---
MW-7-15	6/24/2015	6/25/2015	86	nd	nd
MW-7-15 Duplicate	6/24/2015	6/25/2015	86	nd	nd
B1-10	6/24/2015	6/25/2015	91	nd	nd
B1-25	6/24/2015	6/25/2015	105	nd	nd
B2-15	6/24/2015	6/25/2015	106	nd	nd
B2-25	6/24/2015	6/25/2015	98	nd	nd
B3-10	6/24/2015	6/25/2015	111	nd	nd
B3-25	6/24/2015	6/25/2015	105	nd	nd
B4-15	6/24/2015	6/25/2015	104	nd	nd
B4-20	6/24/2015	6/25/2015	107	nd	nd
Reporting Limits				50	100

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT HOLT'S QUIK CHECK
PROJECT #14-174
Kelso, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
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lab@esnnw.com

Analysis of Diesel Range Organics & Lube Oil Range Organics in Water by Method NWTPH-Dx Extended

Sample Number	Date Prepared	Date Analyzed	Surrogate Recovery (%)	Diesel Range Organics (ug/L)	Lube Oil Range Organics (ug/L)
Method Blank	6/24/2015	6/24/2015	124	nd	nd
LCS	6/24/2015	6/24/2015	127	70%	---
MW-7	6/24/2015	6/24/2015	131	nd	nd
B-1	6/24/2015	6/24/2015	118	nd	nd
B-2	6/24/2015	6/24/2015	140	**540**	nd
B-3	6/24/2015	6/24/2015	114	**1100**	nd
B-4	6/24/2015	6/24/2015	141	nd	nd
Reporting Limits				250	500

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 50% TO 150%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT HOLT'S QUIK CHECK
PROJECT #14-174
Kelso, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Gasoline Range Organics & BTEX in Soil by Method NWTPH-Gx/8260

Sample Number	Date Prepared	Date Analyzed	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	Gasoline Range Organics (mg/kg)	Surrogate Recovery (%)
Method Blank	6/30/2015	6/30/2015	nd	nd	nd	nd	nd	101
LCS	6/30/2015	6/30/2015	75%	73%	79%	74%	82%	104
MW-7-15	6/17/2015	6/30/2015	nd	nd	nd	nd	nd	105
B1-10	6/17/2015	6/30/2015	nd	**1.6**	**54**	**300**	**3800**	96
B1-25	6/17/2015	6/30/2015	nd	nd	**0.17**	**1.1**	**800**	96
B2-15	6/17/2015	6/30/2015	nd	nd	**0.11**	**0.53**	**65**	102
B2-25	6/17/2015	6/30/2015	nd	nd	nd	**0.27**	**37**	105
B3-10	6/17/2015	6/30/2015	nd	nd	nd	nd	nd	109
B3-25	6/17/2015	6/30/2015	nd	nd	nd	nd	**620**	101
B4-15	6/17/2015	6/30/2015	nd	**0.53**	**13**	**96**	**2700**	96
B4-20	6/17/2015	6/30/2015	nd	nd	nd	nd	nd	103
Reporting Limits			0.02	0.05	0.05	0.15	10	

"---" Indicates not tested for component.
"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS : 65% TO 135%

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT HOLT'S QUIK CHECK
PROJECT #14-174
Kelso, Washington

ESN Northwest
1210 Eastside Street SE Suite 200
Olympia, WA 98501
(360) 459-4670 (360) 459-3432 Fax
lab@esnnw.com

Analysis of Gasoline Range Organics & BTEX in Water by Method NWTPH-Gx/8260

Sample Number	Date Analyzed	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline Range Organics (ug/L)	Surrogate Recovery (%)
Method Blank	7/1/2015	nd	nd	nd	nd	nd	105
LCS	7/1/2015	97%	100%	111%	101%	81%	104
MW-7	7/1/2015	nd	nd	nd	nd	nd	103
B-1	7/1/2015	nd	**2.5**	**36**	**160**	**1400**	103
B-2	7/1/2015	nd	nd	nd	nd	nd	104
B-3	7/1/2015	nd	nd	nd	nd	nd	93
B-4	7/1/2015	nd	nd	**2.6**	**11**	nd	100
Reporting Limits		1.0	1.0	1.0	3.0	100	

"nd" Indicates not detected at the listed detection limits.
"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE (Bromoflurorbenzene) & LCS: 65% TO 135%

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: AEG
ADDRESS: 605 11th Ave SE, Suite 201, Olympia, WA
PHONE: 360 352 9835 FAX: 360 352 8164
CLIENT PROJECT #: 14-174 PROJECT MANAGER: Nicolas Pushckor

DATE: 6/17/15 PAGE 1 OF 2
PROJECT NAME: Holt's Quik Chek
LOCATION: 400 North Pacific Ave, Kelso, WA
COLLECTOR: Nicolas Pushckor DATE OF COLLECTION: 6/17/15

Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
1. MW-7-5	5	916	soil	VOA/4oz																		hold		
2. MW-7-10	10	918	"	"																		hold		
3. MW-7-14	14	921	"	"		X	X	X																
4. MW-7-20	20	925	"	"																		hold		
5. MW-7	—	1425	water	VOA/Amber		X	X	X																
6. B1-5	5	1019	Soil	VOA/4oz																		hold		
7. B1-10	10	1022	"	"		X	X	X																
8. B1-15	1024	15	"	"																		hold		
9. B1-20	1027	20	"	"																		hold		
10. B1-25	1034	25	"	"		X	X	X																
11. B1-29	1042	29	"	"																		hold		
12. B-1	1120	—	water	VOA/Amber		X	X	X																
13. B2-5	5	1126	Soil	VOA/Amber																		hold		
14. B2-10	10	1130	"	"																		hold		
15. B2-15	15	1135	"	"		X	X	X																
16. B2-19	19	1140	"	"																		hold		
17. B2-25	25	1145	"	"		X	X	X																
18. B2-29	29	1154	"	"																		hold		

RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME
MH PM	6/17/15 16:12		6.17.15 1612
RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR (5 DAY)

1210 Eastside Street SE, Suite 200
Olympia, Washington 98501
Phone: 360-459-4670
Fax: 360-459-3432
Website: www.esnnw.com
E-Mail: info@esnnw.com

ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

CLIENT: AEG

ADDRESS: 605 11th Ave SE, Suite 201, Olympia, WA

PHONE: 360 352 9835 FAX: 360 352 9164

CLIENT PROJECT #: 14-174 PROJECT MANAGER: Nicolas Pushkar

DATE: 6/17/15 PAGE 2 OF 2

PROJECT NAME: Holt's Quik Chek

LOCATION: 400 North Pacific Ave, Kelso, WA

COLLECTOR: Nicolas Pushkar DATE OF COLLECTION: 6/17/15

Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
1. B-2	—	1220	water	VOA/Amber	X	X	X																	
2. B3-5	5	1225	Soil	VOA/4oz																		hold		
3. B3-10	10	1228	(	(		X	X	X																
4. B3-15	15	1252	)	)																		hold		
5. B3-20	20	1238	)	)																		hold		
6. B3-25	25	1243	)	)		X	X	X																
7. B3-29	29	1251	)	)																		hold		
8. B-3	—	1310	water	VOA/Amber	X	X	X																	
9. B4-5	5	1316	Soil	VOA/4oz																		hold		
10. B4-10	10	1320	(	(																		hold		
11. B4-15	15	1323	)	)		X	X	X																
12. B4-20	20	1327	)	)		X	X	X																
13. B4-25	25	1332	)	)																		hold		
14.																								
15. B-4	—	1350	water	VOA/Amber	X	X	X																	
16.																								
17.																								
18.																								

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RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR 5 DAY

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Fax: 360-459-3432

Website: www.esnnw.com
E-Mail: info@esnnw.com

ESN NORTHWEST
Environmental
Services Network

July 23, 2015

Nicolas Pushckor
Associated Environmental Group, Inc.
605 11th Ave. SE, Suite 201
Olympia, WA 98501

Dear Mr. Pushckor:

Please find enclosed the analytical data report for the Holt's Quick Check Project in Kelso, Washington. Water samples were analyzed for Gasoline by NWTPH-Gx and BTEX by Method 8260 on July 22, 2015.

The results of the analyses are summarized in the attached table. All soil values are reported on a dry weight basis. Applicable detection limits and QA/QC data are included. An invoice for this work is also enclosed.

ESN Northwest appreciates the opportunity to have provided analytical services to Associated Environmental Group, Inc. for this project. If you have any further questions about the data report, please give me a call. It was a pleasure working with you on this project, and we are looking forward to the next opportunity to work together.

Sincerely,

Michael A Korosec

Michael A. Korosec
President

ESN NORTHWEST CHEMISTRY LABORATORY

Associated Environmental Group
PROJECT HOLT'S QUIK CHECK
PROJECT #14-174
Kelso, Washington

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Sample Number	Date Analyzed	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	Gasoline Range Organics (ug/L)	Surrogate Recovery (%)
Method Blank	7/22/2015	nd	nd	nd	nd	nd	104
LCS	7/22/2015	97%	125%	94%	121%	103%	94
LCSD	7/22/2015	109%	123%	109%	107%	---	90
MW-7	7/22/2015	nd	nd	nd	nd	nd	101
MW-1	7/22/2015	nd	nd	nd	nd	nd	100
MW-1 Duplicate	7/22/2015	nd	nd	nd	nd	nd	102
MW-2	7/22/2015	nd	nd	nd	nd	nd	101
MW-6	7/22/2015	**45**	**3.1**	nd	nd	**180**	102
MW-3	7/22/2015	nd	nd	nd	nd	nd	100
MW-4	7/22/2015	nd	nd	nd	nd	nd	103
MW-5	7/22/2015	nd	nd	nd	nd	nd	101
Reporting Limits		1.0	1.0	1.0	3.0	100	

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ESN NORTHWEST, INC. | Environmental Services Network

CHAIN-OF-CUSTODY RECORD

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PHONE: 360 352 9835 FAX: 360 352 8164
CLIENT PROJECT #: 14-174 PROJECT MANAGER: Nicolas Pushckor

DATE: 7/16/15 PAGE 1 OF 1
PROJECT NAME: Holt's Quik Chek
LOCATION: 400 North Pacific Avenue, Kelso, WA
COLLECTOR: Nicolas Pushckor DATE OF COLLECTION: 7/16/15

Sample Number	Depth	Time	Sample Type	Container Type	TPH - HCID	TPH - Diesel & Oil	TPH - Gasoline	BTEX	VOC 8260CL	VOC 8260	SemiVol 8270	PAH's 8270	PCB's 8082	CL Pesticides 8081	RCRA 8 Metals	MTCA 5 Metals	Pb	Asbestos - PLM	GRO Suite	DRO Suite	WO Suite	NOTES	Total Number of Containers	Laboratory Note Number
1. MW-7	—	1142	water	VOA			X	X																
2. MW-1	—	1238																						
3. MW-2	—	1325																						
4. MW-6	—	1415																						
5. MW-3	—	1507																						
6. MW-4	—	1550																						
7. MW-5	—	1651																						
8.																								
9.																								
10.																								
11.																								
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RELINQUISHED BY (Signature)	DATE/TIME	RECEIVED BY (Signature)	DATE/TIME

SAMPLE RECEIPT	
TOTAL NUMBER OF CONTAINERS	
CHAIN OF CUSTODY SEALS Y/N/NA	
SEALS INTACT? Y/N/NA	
RECEIVED GOOD COND./COLD	
NOTES:	

LABORATORY NOTES:

Turn Around Time: 24 HR 48 HR 5 DAY

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