

October 28, 2020

Mr. Sang (Sam) Moon
140 South 3rd Street
McCleary, Washington 98557-9652

RE: ***October 2020 Groundwater Sampling Results Report***
Sam's Food Mart
140 South 3rd Street
McCleary, Washington 98557-9652
Ecology Facility/Site ID: 22576988
Cleanup Site ID: 5705
VCP Project No. SW0922

Dear Mr. Moon,

Associated Environmental Group, LLC (AEG) has prepared the enclosed ***Groundwater Sampling Results Report*** presenting results of groundwater sampling conducted on October 6, 2020, at the above-referenced Site in McCleary, Washington (Figure 1, *Vicinity Map*). Long-term groundwater monitoring is currently being conducted at the Site on an 18-month frequency as required by the No Further Action (NFA) determination, dated January 12, 2016, issued by the Washington State Department of Ecology (Ecology). Figure 2, *10/06/2020 Groundwater Contour Map*, shows the locations of Site features, monitoring wells, and the direction of the groundwater gradient determined at the time of sampling.

WORK PERFORMED [October 2020]:

- Obtained depth to groundwater data in six groundwater wells (MW-1, MW-2R, MW-3, MW-5, MW-6, and MW-7).
- Purged and sampled six groundwater monitoring wells (MW-1, MW-2R, MW-3, MW-5, MW-6, and MW-7).

WORK PROPOSED [April 2022]:

- Obtain depth to groundwater data in six groundwater wells (MW-1, MW-2R, MW-3, MW-5, MW-6, and MW-7).
- Purge and sample six groundwater monitoring wells (MW-1, MW-2R, MW-3, MW-5, MW-6, and MW-7).

SUMMARY:

Sampling Event:	October 2020	Values
Range of Depths to Groundwater:	4.04 to 7.18	Feet below top of well casing (Table 1, <i>Summary of Groundwater Elevations</i>)
Range of Groundwater Elevations:	252.74 to 256.67	Feet above Mean Sea Level (Table 1, <i>Summary of Groundwater Elevations</i>)
Groundwater Gradient: (Direction / Magnitude)	Northeast to northwest / 0.04	Feet per foot (ft/ft)
Measureable NAPL Detected:	No	
Measureable NAPL Thickness:	N/A	
Current Remedial Action:	None	

DISCUSSION:

Constituents of concern were detected in monitoring well MW-6 during the October 2020 sampling event. Detected concentrations are summarized below. Analytical results for this sampling event, and historical analytical results, are presented in the attached Table 2, *Summary of Groundwater Analytical Results*. Full laboratory analytical results for this sampling are presented in the attached Appendix A, Laboratory Datasheets.

October 06, 2020				
Well ID	Gasoline TPH ($\mu\text{g}/\text{L}$)	Benzene ($\mu\text{g}/\text{L}$)	Toluene ($\mu\text{g}/\text{L}$)	Total Xylenes ($\mu\text{g}/\text{L}$)
MW-6	550	21	<2.0	3.2
MTCA Method A Cleanup Levels	800	5.0	1,000	1,000

$\mu\text{g}/\text{L}$ = micrograms per liter

MW-6: Benzene was detected **above** the MTCA Method A cleanup level. Gasoline-range TPH and Total Xylenes were detected **below** their respective MTCA Method A cleanup levels.

The calculated groundwater gradient for the October 2020 sampling event ranges from the northwest to northeast, with an approximate gradient of 0.04 feet per foot (Figure 2, *10/06/2020 Groundwater Contour Map*).

CLOSING:

AEG has completed this monitoring event at the Site. Thank you for the opportunity to provide you with environmental consulting services. Should you have questions or require additional information, please contact our office at 360-352-9835.

Sincerely,

Associated Environmental Group, LLC



John Schenk
Staff Scientist



Scott Rose, L.H.G.
Senior Hydrogeologist



SCOTT I ROSE

cc: Panjini Balaraju – Ecology

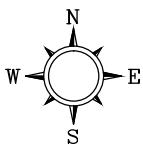
Attachments: Figure 1 – *Vicinity Map*
Figure 2 – *10/06/2020 Groundwater Contour Map*

Table 1 – *Summary of Groundwater Elevations*
Table 2 – *Summary of Groundwater Analytical Results*

Appendix A – Laboratory Datasheets

FIGURES

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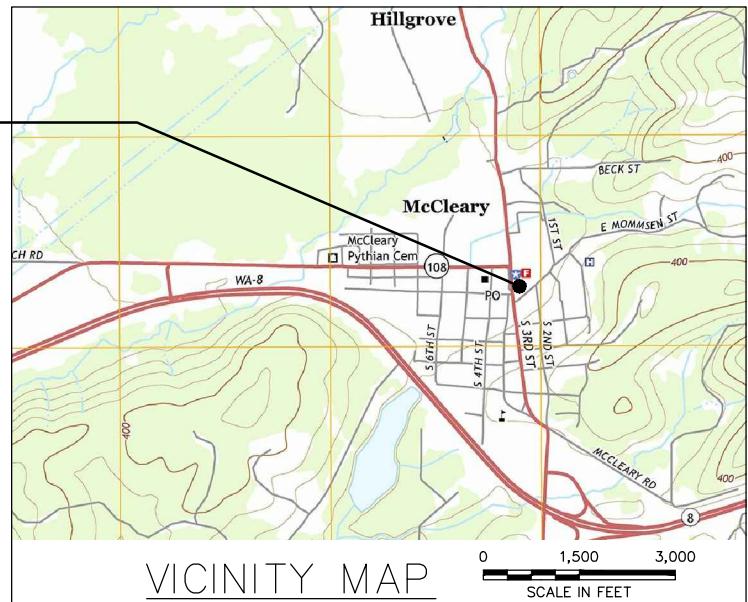
PROJECT
LOCATION

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

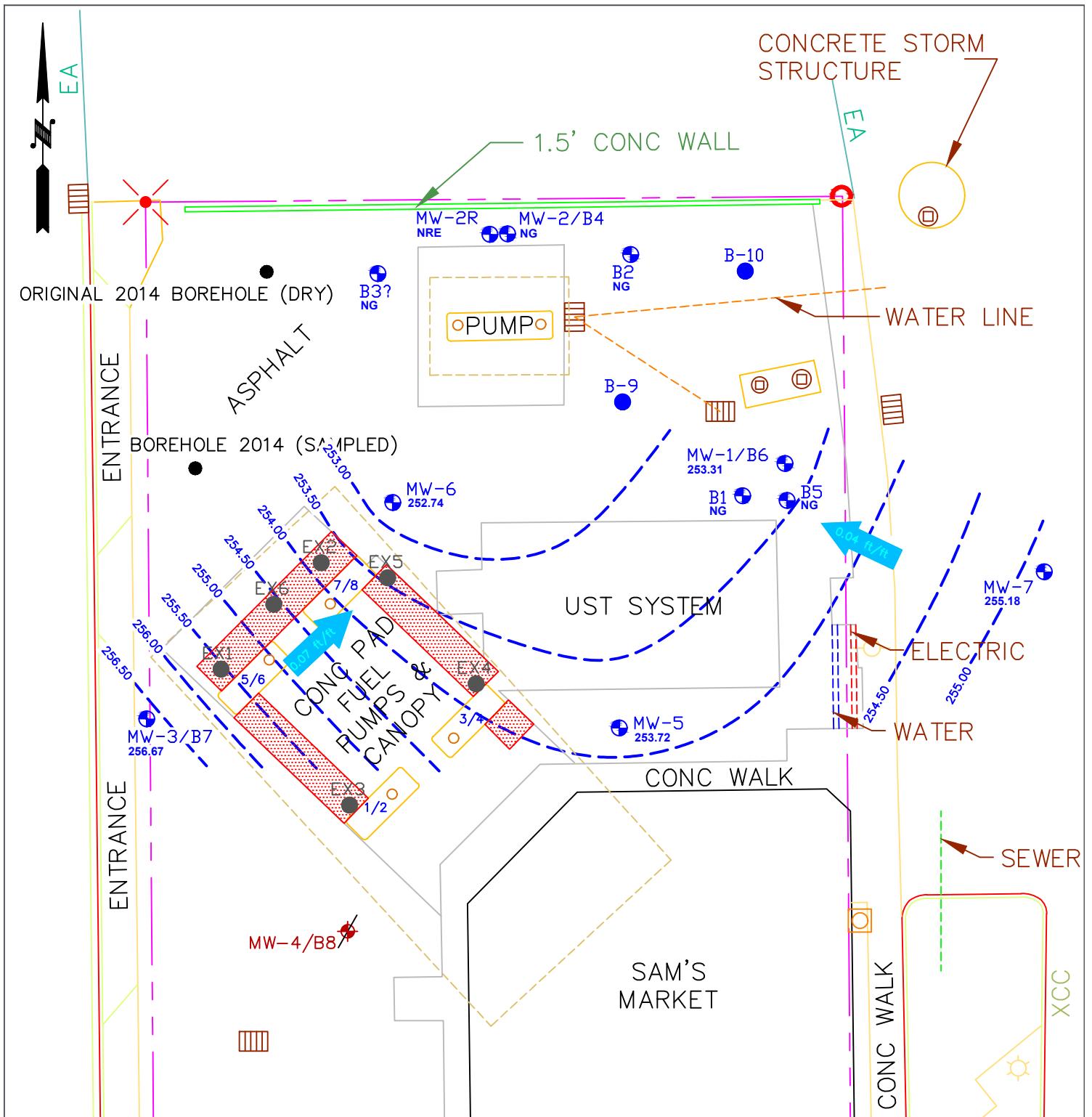
DRAWING CREATED FROM AERIAL PHOTOGRAPH AND NOTES PROVIDED BY AEG, LLC.
VICINITY IMAGE SOURCE: U.S. GEOLOGICAL SURVEY-2013, 7.5 MINUTE QUADRANGLE MAP
McCLEARY, WASHINGTON



Associated
Environmental
Group, LLC

FIGURE 1
VICINITY MAP

SAM'S FOOD MART
140 SOUTH 3RD STREET
McCLEARY, WASHINGTON



LEGEND

- GROUNDWATER MONITORING WELLS
- DESTROYED/PAVED OVER MONITORING WELLS
- SOIL BORING (AEG 2008)

253.72
254.50
0.04 ft/ft
NG
NRE

GROUNDWATER ELEVATION (FEET)
INFERRRED GROUNDWATER
ELEVATION CONTOUR LINE (FEET)
CONTOUR INTERVAL=0.50 FEET
APPROXIMATE GROUNDWATER
GRADIENT DIRECTION (ft/ft)
NOT GAUGED
NO REFERENCE ELEVATION

SCALE: 1"=20 FEET
0 10 20 40



Associated
Environmental
Group, LLC

FIGURE 2 - 10/06/2020
GROUNDWATER CONTOUR MAP

SAM'S FOOD MARKET
140 3RD STREET
MCCLEARY, WA

Project# 07-230	Date: 10/20/20
File: SAM'S	Sheet

TABLES

605 11th Ave. SE, Suite 201 • Olympia, WA • 98501
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Table 1 - Summary of Groundwater Elevations

Sam's Food Mart

McCleary, WA

Well Number/ TOC Elevation	Date of Measurement	Depth to Water	Depth to Free Product	Free Product Thickness	Groundwater Elevation	Change in Elevation
MW-1	2/9/2007	6.17	--	--	253.67	--
259.84	5/1/2008	6.11	--	--	253.73	0.06
	8/29/2008	6.40	--	--	253.44	-0.29
	12/9/2008	6.27	--	--	253.57	0.13
	3/17/2009	5.96	--	--	253.88	0.31
	8/29/2010	--	--	--	--	--
	8/16/2011	--	--	--	--	--
	1/10/2013	--	--	--	--	--
	4/25/2013	5.84	--	--	254.00	0.12
	7/26/2013	6.78	--	--	253.06	-0.94
	10/23/2013	6.54	--	--	253.30	0.24
	1/23/2014	6.09	--	--	253.75	0.45
	4/2/2015	6.96	--	--	252.88	-0.87
	7/12/2017	6.59	--	--	253.25	0.37
	12/28/2018	5.62	--	--	254.22	0.97
	10/6/2020	6.53	--	--	253.31	-0.91
MW-2*	2/9/2007	2.98	--	--	256.48	--
259.46	5/1/2008	2.94	--	--	256.52	0.04
	8/29/2008	2.98	--	--	256.48	-0.04
	12/9/2008	2.43	--	--	257.03	0.55
	3/17/2009	2.67	--	--	256.79	-0.24
	1/10/2013	--	--	--	--	--
	4/25/2013	3.48	--	--	255.98	-0.81
	7/26/2013	3.46	--	--	256.00	0.02
	10/23/2013	2.68	--	--	256.78	0.78
	1/23/2014	2.92	--	--	256.54	-0.24
	4/2/2015	4.41	--	--	255.05	-1.49
MW-2R	4/2/2015	4.80	--	--	--	--
--	7/12/2017	5.39	--	--	--	0.59
	12/28/2018	4.53	--	--	--	-0.86
	10/6/2020	4.93	--	--	--	0.40

Table 1 - Summary of Groundwater Elevations

Sam's Food Mart

McCleary, WA

Well Number/ TOC Elevation	Date of Measurement	Depth to Water	Depth to Free Product	Free Product Thickness	Groundwater Elevation	Change in Elevation
MW-3	2/9/2007	3.95	--	--	256.76	--
260.71	5/1/2008	4.63	--	--	256.08	-0.68
	8/29/2008	4.57	--	--	256.14	0.06
	12/9/2008	4.11	--	--	256.60	0.46
	3/17/2009	4.34	--	--	256.37	-0.23
	1/10/2013	--	--	--	--	--
	4/25/2013	4.24	--	--	256.47	0.10
	7/26/2013	4.51	--	--	256.20	-0.27
	10/23/2013	4.40	--	--	256.31	0.11
	1/23/2014	3.89	--	--	256.82	0.51
	4/2/2015	3.77	--	--	256.94	0.12
	7/12/2017	4.22	--	--	256.49	-0.45
	12/28/2018	3.88	--	--	256.83	0.34
	10/6/2020	4.04	--	--	256.67	-0.16
MW-4*	2/9/2007	2.68	--	--	257.54	--
260.22	5/1/2008	2.51	--	--	257.71	0.17
	8/29/2008	2.71	--	--	257.51	-0.20
	12/9/2008	2.57	--	--	257.65	0.14
	3/17/2009	2.48	--	--	257.74	0.09
	1/10/2013	--	--	--	--	--
	4/25/2013	2.62	--	--	257.60	-0.14
	7/26/2013	2.93	--	--	257.29	0.31
	10/23/2013	2.91	--	--	257.31	0.02
	1/23/2014	2.56	--	--	257.66	0.35
	4/2/2015	3.16	--	--	257.06	-0.60
	7/12/2017				Paved Over	
MW-5	5/1/2008	5.89	--	--	254.32	--
260.21	8/29/2008	6.30	--	--	253.91	-0.41
	12/9/2008	6.10	--	--	254.11	0.20
	3/17/2009	5.63	--	--	254.58	0.47
	1/10/2013	--	--	--	--	--
	4/25/2013	5.55	--	--	254.66	0.08
	7/26/2013	6.77	--	--	253.44	-1.22
	10/23/2013	6.48	--	--	253.73	0.29
	1/23/2014	5.97	--	--	254.24	0.51
	4/2/2015	5.65	--	--	254.56	0.32
	7/12/2017	6.55	--	--	253.66	-0.90
	12/28/2018	5.39	--	--	254.82	1.16
	10/6/2020	6.49	--	--	253.72	-1.10

Table 1 - Summary of Groundwater Elevations

Sam's Food Mart

McCleary, WA

Well Number/ TOC Elevation	Date of Measurement	Depth to Water	Depth to Free Product	Free Product Thickness	Groundwater Elevation	Change in Elevation
MW-6	5/1/2008	7.01	--	--	252.91	--
259.92	8/29/2008	7.26	--	--	252.66	-0.25
	12/9/2008	7.07	--	--	252.85	0.19
	3/17/2009	6.79	--	--	253.13	0.28
	8/29/2010	--	--	--	--	--
	8/16/2011	--	--	--	--	--
	1/10/2013	6.85	--	--	253.07	-0.06
	4/25/2013	6.86	--	--	253.06	-0.01
	7/26/2013	7.27	--	--	252.65	-0.41
	10/23/2013	7.14	--	--	252.78	0.13
	1/23/2014	7.12	--	--	252.80	0.02
	4/2/2015	5.83	--	--	254.09	1.29
	7/12/2017	7.39	--	--	252.53	-1.56
	12/28/2018	6.69	--	--	253.23	0.70
	10/6/2020	7.18	--	--	252.74	-0.49
MW-7	5/1/2008	4.96	--	--	255.71	--
260.67	8/29/2008	5.74	--	--	254.93	-0.78
	12/9/2008	5.38	--	--	255.29	0.36
	3/17/2009	5.79	--	--	254.88	-0.41
	1/10/2013	--	--	--	--	--
	4/25/2013	5.19	--	--	255.48	0.60
	7/26/2013	6.83	--	--	253.84	-1.64
	10/23/2013	5.28	--	--	255.39	1.55
	1/23/2014	4.97	--	--	255.70	0.31
	4/2/2015	4.71	--	--	255.96	0.26
	7/12/2017	5.39	--	--	255.28	-0.68
	12/28/2018	5.18	--	--	255.49	0.21
	10/6/2020	5.49	--	--	255.18	-0.31

Notes

All values reported in feet

TOC = Top of casing elevation relative to assigned benchmark.

-- = Not measured, not available, or not applicable

*No longer sampling this well.

Table 2 - Summary of Groundwater Analytical Results

Sam's Food Mart
McCleary, Washington

Well Numbers	Date Sampled	Total Petroleum Hydrocarbons				Select Volatile Organic Compounds				
		Gasoline	Diesel	Heavy Oil	Mineral Oil	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-1	2/9/2007	9,460	<200	<400	<400	18.6	54.4	89.6	552	--
	5/1/2008	6,540	<200	<400	<400	17	10.7	161	445	--
	8/29/2008	4,880	<200	<400	<400	6	5.3	52.2	280	--
	12/9/2008	5,400	<200	<400	<400	18	8.3	78	200	--
	3/17/2009	1,800	--	--	--	7.8	1.9	8.3	113	--
	8/29/2010	290	--	--	--	13	<1.0	7.2	11.1	<1.0
	8/16/2011	1,000	<250	<500	--	27	<1.0	16	89	--
	1/10/2013	--	--	--	--	--	--	--	--	--
	4/25/2013	<100	--	--	--	<1.0	<2.0	<1.0	<2.0	
	7/26/2013	757	--	--	--	2.8	<2.0	6.5	23.1	--
	10/23/2013	388	--	--	--	1.6	<2.0	6.1	25	--
	1/23/2014	430	--	--	--	1.9	<2.0	7.8	32.4	--
	4/2/2015	545	--	--	--	26.6	7.1	12.5	71.6	<5.0
	7/12/2017	418	--	--	--	87	39	1.9	15	--
MW-2*	12/28/2018	144	--	--	--	33	8.1	<1.0	4.6	--
	10/6/2020	<100	--	--	--	<1.0	<2.0	<1.0	<2.0	--
	2/9/2007	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	5/1/2008	<100	<200	<400	<400	2.5	2.9	<1.0	2.5	--
	8/29/2008	<100	<200	<400	<400	2.2	4.5	<1.0	5.6	--
	12/9/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
MW-2R	8/16/2011	<100	<250	<500	--	<1.0	<1.0	<1.0	<3.0	--
	4/2/2015	<100	--	--	--	<1.0	<1.0	<1.0	<2.0	<5.0
	3/12/2015	<100	<250	<500	--	<1.0	<1.0	<1.0	<3.0	--
	4/2/2015	<100	--	--	--	<1.0	<1.0	<1.0	<2.0	<5.0
	7/12/2017	<100	--	--	--	<1.0	<2.0	<1.0	<2.0	--
MW-3	12/28/2018	<100	--	--	--	<1.0	<2.0	<1.0	<2.0	--
	10/6/2020	<100	--	--	--	<1.0	<2.0	<1.0	<2.0	--
	2/9/2007	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	5/1/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	8/29/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	12/9/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	8/16/2011	<100	<250	<500	--	<1.0	<1.0	<1.0	<3.0	--
	4/2/2015	<100	--	--	--	<1.0	<1.0	<1.0	<2.0	<5.0
	7/12/2017	<100	--	--	--	<1.0	<2.0	<1.0	<2.0	--

Table 2 - Summary of Groundwater Analytical Results

Sam's Food Mart
McCleary, Washington

Well Numbers	Date Sampled	Total Petroleum Hydrocarbons				Select Volatile Organic Compounds				
		Gasoline	Diesel	Heavy Oil	Mineral Oil	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-4*	2/9/2007	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	5/1/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	8/29/2008	<100	<200	<400	<400	<1.0	20.5	<1.0	<3.0	--
	12/9/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	8/16/2011	<100	<250	<500	--	<1.0	4.4	<1.0	<3.0	--
	4/2/2015	<100	--	--	--	<1.0	<1.0	<1.0	<2.0	<5.0
	7/12/2017	Paved Over								
MW-5	5/1/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	8/29/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	12/9/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	3/17/2009	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	8/16/2011	<100	<250	<500	--	<1.0	<1.0	<1.0	<3.0	--
	4/2/2015	<100	--	--	--	<1.0	<1.0	<1.0	<2.0	<5.0
	7/12/2017	<100	--	--	--	6.5	<2.0	<1.0	<2.0	--
	12/28/2018	<100	--	--	--	<1.0	<2.0	<1.0	<2.0	--
	10/6/2020	<100	--	--	--	<1.0	<2.0	<1.0	<2.0	--
MW-6	5/1/2008	17,800	<200	<400	<400	1,430	950	<1.0	2,100	--
	8/29/2008	7,600	<200	<400	<400	548	343	138	582	--
	12/9/2008	17,000	<200	<400	<400	680	270	230	2,000	--
	3/17/2009	16,700	--	--	--	1,300	819	318	1,170	--
	8/29/2010	1,200	--	--	--	380	<1.0	<1.0	52	1.6
	8/16/2011	12,500	<250	<500	--	2,000	34	640	1,500	--
	1/10/2013	396	--	--	--	13.2	7.38	4.03	19.8	--
	4/25/2013	2,380	--	--	--	150	13.2	37.6	52.1	--
	7/26/2013	3,830	--	--	--	149	11	41	50	--
	10/23/2013	651	--	--	--	86	2.2	13	14	--
	1/23/2014	1,370	--	--	--	122	4.3	16.5	20.5	--
	4/2/2015	1,210	--	--	--	65.1	24.2	13.7	46.7	<5.0
	7/12/2017	838	--	--	--	68	2.9	3.0	11.0	--
	12/28/2018	295	--	--	--	6.4	<2.0	<1.0	<2.0	--
	10/6/2020	550	--	--	--	21	<2.0	<1.0	3.2	--

Table 2 - Summary of Groundwater Analytical Results

Sam's Food Mart
McCleary, Washington

Well Numbers	Date Sampled	Total Petroleum Hydrocarbons				Select Volatile Organic Compounds				
		Gasoline	Diesel	Heavy Oil	Mineral Oil	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-7	5/1/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	8/29/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	12/9/2008	<100	<200	<400	<400	<1.0	<2.0	<1.0	<3.0	--
	3/17/2009	<100	--	--	--	<1.0	<2.0	<1.0	<3.0	--
	4/2/2015	<100	--	--	--	<1.0	<1.0	<1.0	<2.0	<5.0
	7/12/2017	<100	--	--	--	<1.0	<2.0	<1.0	<2.0	--
	12/28/2018	<100	--	--	--	<1.0	<2.0	<1.0	<2.0	--
	10/6/2020	<100	--	--	--	<1.0	<2.0	<1.0	<2.0	--
PQL		100	200	400	400	1.0	2.0	1.0	2.0 / 3.0	1.0 / 5.0
MTCA Method A Cleanup Levels		800 ¹	500	500	500	5.0	1,000	700	1,000	20

Notes:

All values reported in micrograms per liter ($\mu\text{g/L}$)

-- = Not analyzed for constituent

< = Not detected at the listed laboratory detection limits

PQL = Practical Quantification Limit (laboratory detection limit)

MTBE = Methyl tert-butyl ether

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

¹ TPH-Gasoline Cleanup Level with the presence of Benzene anywhere at the Site

*No longer sampling this well.

APPENDIX A

LABORATORY DATASHEETS

605 11th Ave. SE, Suite 201 • Olympia, WA • 98501
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Libby Environmental, Inc.

3322 South Bay Road NE • Olympia, WA 98506-2957

October 8, 2020

Scott Rose
Associated Environmental Group, LLC
2633 Parkmont Lane SW, Suite A
Olympia, WA 98502

Dear Mr. Rose:

Please find enclosed the analytical data report for the Sams Food Mart Project located in McCleary, Washington.

The results of the analyses are summarized in the attached tables. Applicable detection limits and QA/QC data are included. The sample(s) will be disposed of in 30 days unless we are contacted to arrange long term storage.

Libby Environmental, Inc. appreciates the opportunity to have provided analytical services 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,

Sherry L. Chilcutt
Senior Chemist
Libby Environmental, Inc.

Libby Environmental, Inc.

SAMS FOOD MART PROJECT
AEG, LLC
McCleary, Washington
Libby Project # L201006-1
Client Project # 07-230

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Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Sample Description	Method	MW-1	MW-2R	MW-3	MW-5	MW-6
		Blank				
Date Sampled		N/A	10/6/2020	10/6/2020	10/6/2020	10/6/2020
Date Analyzed	PQL ($\mu\text{g/L}$)	10/6/2020 ($\mu\text{g/L}$)				
Benzene	1.0	nd	nd	nd	nd	nd
Toluene	2.0	nd	nd	nd	nd	nd
Ethylbenzene	1.0	nd	nd	nd	nd	nd
Total Xylenes	2.0	nd	nd	nd	nd	3.2
Gasoline	100	nd	nd	nd	nd	550
<hr/>						
Surrogate Recovery						
Dibromofluoromethane		103	103	106	106	109
1,2-Dichloroethane-d4		103	99	104	110	108
Toluene-d8		97	96	95	96	93
4-Bromofluorobenzene		93	89	90	89	92

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

SAMS FOOD MART PROJECT
AEG, LLC
McCleary, Washington
Libby Project # L201006-1
Client Project # 07-230

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

Analyses of Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Sample Description	MW-7	MW-7	Dup
Date Sampled	10/6/2020	10/6/2020	
Date Analyzed	PQL ($\mu\text{g/L}$)	10/6/2020 ($\mu\text{g/L}$)	10/6/2020 ($\mu\text{g/L}$)
Benzene	1.0	nd	nd
Toluene	2.0	nd	nd
Ethylbenzene	1.0	nd	nd
Total Xylenes	2.0	nd	nd
Gasoline	100	nd	nd
<hr/>			
Surrogate Recovery			
Dibromofluoromethane	107	107	
1,2-Dichloroethane-d4	106	112	
Toluene-d8	95	94	
4-Bromofluorobenzene	85	88	

"nd" Indicates not detected at listed detection limit.

"int" Indicates that interference prevents determination.

ACCEPTABLE RECOVERY LIMITS FOR SURROGATE : 65% TO 135%

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

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AEG, LLC
McCleary, Washington
Libby Project # L201006-1
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QA/QC for Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

Matrix Spike Sample Identification: L201002-9

	Spiked Conc. ($\mu\text{g/L}$)	MS Response ($\mu\text{g/L}$)	MSD Response ($\mu\text{g/L}$)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Benzene	5.0	4.8	5.2	96	104	8.0	65-135	
Toluene	5.0	4.3	4.7	86	94	8.9	65-135	
Ethylbenzene	5.0	4.5	4.7	90	94	4.3	65-135	
Total Xylenes	15.0	12.5	13.0	83	87	4.2	65-135	
Surrogate Recovery (%)			MS	MSD				
Dibromofluoromethane			106	106			65-135	
1,2-Dichloroethane-d4			103	107			65-135	
Toluene-d8			98	98			65-135	
4-Bromofluorobenzene			96	97			65-135	

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

Laboratory Control Sample

	Spiked Conc. ($\mu\text{g/L}$)	LCS Response ($\mu\text{g/L}$)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Benzene	5.0	5.3	106	80-120	
Toluene	5.0	4.8	96	80-120	
Ethylbenzene	5.0	5.0	101	80-120	
Total Xylenes	15.0	14.1	94	80-120	
Surrogate Recovery					
Dibromofluoromethane			99	65-135	
1,2-Dichloroethane-d4			94	65-135	
Toluene-d8			99	65-135	
4-Bromofluorobenzene			96	65-135	

ANALYSES PERFORMED BY: Sherry Chilcutt

Libby Environmental, Inc.

SAMS FOOD MART PROJECT
AEG, LLC
Libby Project # L201006-1

3322 South Bay Road NE
Olympia, WA 98506
Phone: (360) 352-2110
FAX: (360) 352-4154
Email: libbyenv@gmail.com

Date Received 10/6/2020

Time Received 1:15 PM

Received By KD

Sample Receipt Checklist

Chain of Custody

- | | | | |
|--------------------------------------|--|------------------------------------|----------------------------------|
| 1. Is the Chain of Custody complete? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 2. How was the sample delivered? | <input checked="" type="checkbox"/> Hand Delivered | <input type="checkbox"/> Picked Up | <input type="checkbox"/> Shipped |

Log In

- | | | | |
|---|---|--|------------------------------|
| 3. Cooler or Shipping Container is present. | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 4. Cooler or Shipping Container is in good condition. | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 5. Cooler or Shipping Container has Custody Seals present. | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | <input type="checkbox"/> N/A |
| 6. Was an attempt made to cool the samples? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 7. Temperature of cooler (0°C to 8°C recommended) | <u>0.0 °C</u> | | |
| 8. Temperature of sample(s) (0°C to 8°C recommended) | <u>4.8 °C</u> | | |
| 9. Did all containers arrive in good condition (unbroken)? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 10. Is it clear what analyses were requested? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 11. Did container labels match Chain of Custody? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 12. Are matrices correctly identified on Chain of Custody? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 13. Are correct containers used for the analysis indicated? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 14. Is there sufficient sample volume for indicated analysis? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 15. Were all containers properly preserved per each analysis? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |
| 16. Were VOA vials collected correctly (no headspace)? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | <input type="checkbox"/> N/A |
| 17. Were all holding times able to be met? | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No | |

Discrepancies/ Notes

18. Was client notified of all discrepancies? Yes No N/A

Person Notified: _____

Date: _____

By Whom: _____

Via: _____

Regarding: _____

19. Comments.

Libby Environmental, Inc.

4139 Libby Road NE
Olympia, WA 98506Ph: 360-352-2110
Fax: 360-352-4154

Chain of Custody Record

www.LibbyEnvironmental.com

Client: AEG

Address: 605 11th Ave SE Suite 201

City: Olympia State: WA Zip: 98501

Phone: (360) 352 9835 Fax:

Client Project # 07-230

Date: 10/6/20

Page: 1 of 1

Project Manager: Scott Rose

Project Name: Sams Food Mart

Location: 140 5 3rd St

City, State: McCleary WA

Collector: Foster Koetzel

Date of Collection: 10/6/20

Email: SRose@AEGWA.com



Sample Number	Depth	Time	Sample Type	Container Type	Field Notes										
					VOA 8021B	VOA 8021B BTEX Only	VOA 8260	SEMI VOL 8270	NWTPH-HCID	NWTPH-GX	NWTPH-DX	NWTPH-DX Ext.	PAH 8270	PCBs 8082	MTCA 5 Metals
1 MW-1	1026	GW	VOA		X								X		
2 MW-2R	1128	GW	VOA			X							X		
3 MW-3	0956	GW	VOA				X						X		
4 MW-5	1101	GW	VOA					X					X		
5 MW-6	0923	GW	VOA					X					X		
6 MW-7	1156	GW	VOA						X				X		
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															

Relinquished by: 	Date / Time 10/6/20 1315	Received by: Joy LAA	Date / Time 10-6-20 1315	Sample Receipt:	Remarks:
Relinquished by:	Date / Time	Received by:	Date / Time	Good Condition?	
				Cold?	
Relinquished by:	Date / Time	Received by:	Date / Time	Seals Intact?	
				Total Number of Containers	

TAT: 24HR 48HR 5-DAY