



May 11, 2020

Mr. In Chol Baek  
 1734 Boulevard Road SE  
 Olympia, Washington 98501-2675

RE: ***April 2020 Groundwater Sampling Results Report***  
*Pit Stop Market*  
 1734 Boulevard Road SE  
 Olympia, Washington 98501-2675  
 Ecology Facility/Site ID: 69986581

Dear Mr. In Chol Baek:

Associated Environmental Group, LLC (AEG) has prepared the enclosed ***Groundwater Sampling Results Report*** presenting results of groundwater sampling conducted on April 9, 2020, at the *Pit Stop Market* in Olympia, Washington (Site). The Site and surrounding area are detailed in Figure 1, *Site Vicinity Map*.

**WORK PERFORMED [April 2020]:**

- Obtained depth to groundwater data from six groundwater wells (MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6).
- Purged and sampled six groundwater monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6).

**GROUNDWATER MONITORING SUMMARY:**

Sampling Event:	April 2020	Values
Range of Depths to Groundwater:	5.54 to 8.60	Feet below top of well casing (Table 1, <i>Summary of Groundwater Elevations</i> )
Range of Groundwater Elevations:	151.48 to 158.05	Feet above Mean Sea Level (Table 1, <i>Summary of Groundwater Elevations</i> )
Groundwater Gradient: (Direction / Magnitude)	0.06/Southeast and 0.06/West	Feet per foot (ft/ft), Determined using data from MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6
Measurable NAPL Detected:	No	
Measurable NAPL Thickness:	N/A	
Current Remedial Action:	None	

**DISCUSSION:**

Contaminant concentrations were detected in samples of groundwater collected from monitoring wells MW-1, MW-2, and MW-4. No contaminant concentrations were detected above their laboratory detection limit in samples of groundwater collected from monitoring wells MW-3, MW-5, or MW-6. Detected concentrations are summarized below. The full analytical results for this sampling event, and historical results, are presented in the attached Table 2, *Summary of Groundwater Analytical Results*.

April 2018					
Well ID	TPH-Gasoline (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW-1	8,450	<1.0	15.5	<1.0	2,550
MW-2	1,360	<1.0	<2.0	<1.0	<2.0
MW-4	720	<1.0	<2.0	<1.0	<2.0
MTCA Method A Cleanup Levels	800	5	1,000	700	1,000

µg/L = micrograms per liter

- Gasoline-range petroleum hydrocarbons (TPH) were detected **above** the Model Toxics Control Act (MTCA) Method A cleanup level in monitoring wells MW-1 and MW-2. Gasoline-range TPH was detected **below** the MTCA Method A cleanup level in monitoring well MW-4.
- Total xylenes were detected **above** their respective MTCA Method A cleanup levels in monitoring well MW-1.
- Toluene was detected **below** the MTCA Method A cleanup level in monitoring well MW-1.

The groundwater flow direction for the April 2020 sampling event is the southeast on the western portion of the Site, and to the west on the eastern portion of the Site. The approximate gradient is 0.06 feet per foot (Figure 2, *Groundwater Elevation Contour Map 04/09/2020*).

**CONCLUSION:**

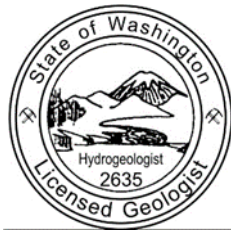
AEG has completed this monitoring event at the Site. Thank you for the opportunity to provide you with environmental consulting services. Should you have questions or require additional information, please contact our office at 360-352-9835.

Sincerely,

**Associated Environmental Group, LLC**



Scott Rose, L.H.G  
Senior Hydrogeologist



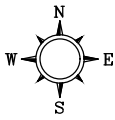
SCOTT | ROSE

Attachments:

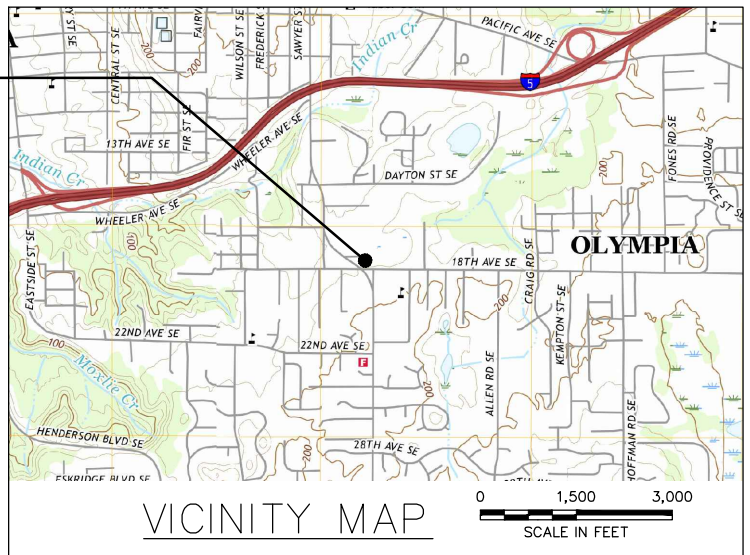
- Figure 1: *Site Vicinity Map*
- Figure 2: *Groundwater Elevation Contour Map 04/09/2020*
  
- Table 1: *Summary of Groundwater Elevations*
- Table 2: *Summary of Groundwater Analytical Results*
  
- Appendix A: Laboratory Datasheets

## **FIGURES**

FILENAME	DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
06-177_2002.DWG	ICD	4/28/2020	EG	4/28/2020



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-2017, 7.5 MINUTE QUADRANGLE MAP OLYMPIA, WASHINGTON

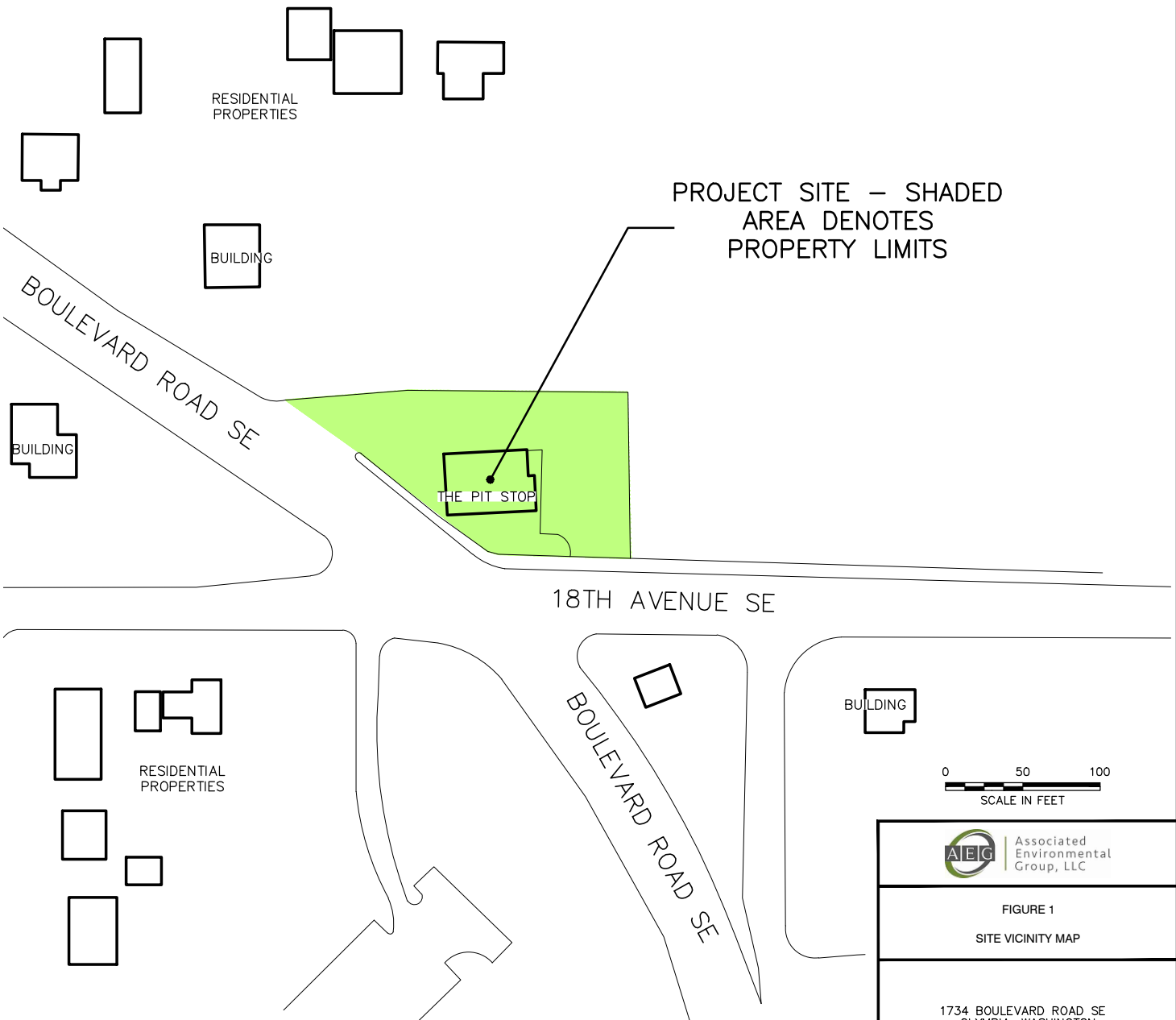
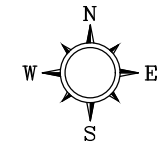


FIGURE 1  
SITE VICINITY MAP

1734 BOULEVARD ROAD SE  
OLYMPIA, WASHINGTON

FILENAME 06-177\_2002\_1.DWG  
 DRAWN BY ICD 4/30/2020  
 CHECKED BY EG 4/30/2020  
 APPROVED BY EG 4/30/2020  
 PROJECT NUMBER 06-177



**LEGEND**

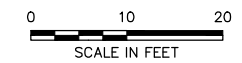
- MW-4 ◆ MONITORING WELL LOCATION
- 155.44 GROUNDWATER ELEVATION (FEET)
- 155.00 - - - GROUNDWATER ELEVATION CONTOUR LINE (FEET)
- ← 0.06 ft/ft CONTOUR INTERVAL=1.00 FEET APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/ft)

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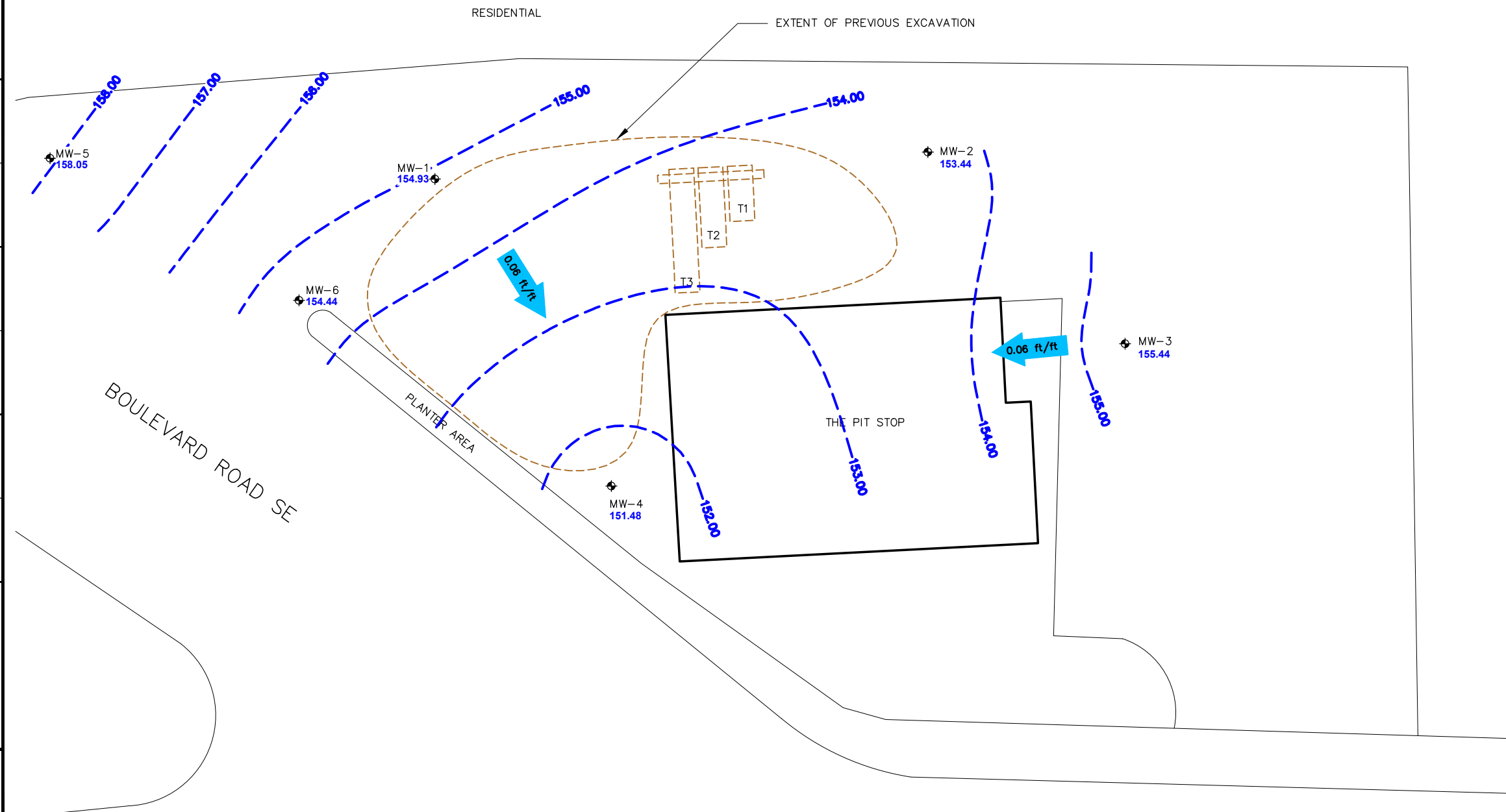
**REFERENCE**

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



**FIGURE 2**  
**GROUNDWATER ELEVATION CONTOUR MAP**  
 04/09/2020

1734 BOULEVARD ROAD SE  
 OLYMPIA, WASHINGTON



## **TABLES**

**Table 1 - Summary of Groundwater Elevations**

Pit Stop Grocery  
Olympia, Washington

Well Number/ TOC Elevation	Date	Depth to Water	Depth to Free Product	Free Product Thickness	Groundwater Elevation	Change in Groundwater Elevation
MW-1	06/21/06	7.76	--	--	154.17	--
<b>161.93</b>	10/05/06	11.40	--	--	150.53	-3.64
	01/31/07	5.80	--	--	156.13	5.60
	07/18/07	7.96	--	--	153.97	-2.16
	11/07/07	8.80	--	--	153.13	-0.84
	04/07/08	6.21	--	--	155.72	2.59
	02/07/13	6.47	--	--	155.46	-0.26
	01/31/14	8.15	--	--	153.78	-1.68
	05/15/15	7.55	--	--	154.38	0.60
	03/01/17	4.76	--	--	157.17	2.79
	04/06/18	6.03	--	--	155.90	-1.27
	04/12/19	7.40	--	--	154.53	-1.37
	04/09/20	7.00	--	--	154.93	0.40
MW-2	06/21/06	7.45	--	--	153.73	--
<b>161.18</b>	10/05/06	12.08	--	--	149.10	-4.63
	01/31/07	6.39	--	--	154.79	5.69
	07/18/07	8.70	--	--	152.48	-2.31
	11/07/07	9.94	--	--	151.24	-1.24
	04/07/08	6.89	--	--	154.29	3.05
	02/07/13	7.23	--	--	153.95	-0.34
	01/31/14	9.07	--	--	152.11	-1.84
	05/15/15	8.31	--	--	152.87	0.76
	03/01/17	6.37	--	--	154.81	1.94
	04/06/18	6.64	--	--	154.54	-0.27
	04/12/19	8.11	--	--	153.07	-1.47
	04/09/20	7.74	--	--	153.44	0.37
MW-3	01/31/07	5.08	--	--	156.84	--
<b>161.92</b>	07/18/07	7.26	--	--	154.66	-2.18
	11/07/07	8.75	--	--	153.17	-1.49
	04/07/08	5.60	--	--	156.32	3.15
	02/07/13	5.88	--	--	156.04	-0.28
	01/31/14	7.82	--	--	154.10	-1.94
	05/15/15	6.88	--	--	155.04	0.94
	03/01/17	5.14	--	--	156.78	1.74
	04/06/18	5.24	--	--	156.68	-0.10
	04/12/19	6.83	--	--	155.09	-1.59
	04/09/20	6.48	--	--	155.44	0.35

**Table 1 - Summary of Groundwater Elevations**

Pit Stop Grocery  
Olympia, Washington

Well Number/ TOC Elevation	Date	Depth to Water	Depth to Free Product	Free Product Thickness	Groundwater Elevation	Change in Groundwater Elevation
MW-4	01/31/07	7.04	--	--	153.04	--
<b>160.08</b>	07/18/07	9.30	--	--	150.78	-2.26
	11/07/07	10.69	--	--	149.39	-1.39
	04/07/08	7.64	--	--	152.44	3.05
	02/07/13	7.96	--	--	152.12	-0.32
	01/31/14	9.95	--	--	150.13	-1.99
	05/15/15	9.12	--	--	150.96	0.83
	03/01/17	7.07	--	--	153.01	2.05
	04/06/18	7.42	--	--	152.66	-0.35
	04/12/19	9.03	--	--	151.05	-1.61
	04/09/20	8.60	--	--	151.48	0.43
MW-5	01/31/07	4.54	--	--	159.05	--
<b>163.59</b>	07/18/07	6.35	--	--	157.24	-1.81
	11/07/07	8.18	--	--	155.41	-1.83
	04/07/08	4.69	--	--	158.90	3.49
	02/07/13	4.99	--	--	158.60	-0.30
	01/31/14	6.39	--	--	157.20	-1.40
	05/15/15	6.10	--	--	157.49	0.29
	03/01/17	4.50	--	--	159.09	1.60
	04/06/18	5.73	--	--	157.86	-1.23
	04/12/19	5.85	--	--	157.74	-0.12
	04/09/20	5.54	--	--	158.05	0.31
MW-6	01/31/07	5.83	--	--	155.79	--
<b>161.62</b>	07/18/07	7.96	--	--	153.66	-2.13
	11/07/07	8.89	--	--	152.73	-0.93
	04/07/08	6.28	--	--	155.34	2.61
	02/07/13	6.58	--	--	155.04	-0.30
	01/31/14	8.37	--	--	153.25	-1.79
	05/15/15	6.69	--	--	154.93	1.68
	03/01/17	5.78	--	--	155.84	0.91
	04/06/18	6.15	--	--	155.47	-0.37
	04/12/19	7.63	--	--	153.99	-1.85
	04/09/20	7.18	--	--	154.44	0.45

Notes:

All values reported in feet

TOC = Top of casing elevation relative to assigned benchmark.

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

\* = Ceased groundwater monitoring/sampling activities at this well

**Table 2 - Summary of Groundwater Analytical Results**  
Pit Stop Market  
Olympia, WA

Sample Number	Date Sampled	Gasoline	Volatile Organic Compounds				Table 830-1 Constituents				
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	EDC	EDB	Total Naphthalene	MTBE	Lead
MW-1	6/21/2006	<b>71,600</b>	<b>272</b>	<b>3,090</b>	<b>3,690</b>	<b>15,200</b>	--	--	--	--	--
	10/5/2006	<b>40,800</b>	<b>364</b>	<b>5,730</b>	<b>4,730</b>	<b>16,300</b>	<1.0	<0.2	<5.0	<b>1,170</b>	<b>430</b>
	1/31/2007	<b>12,000</b>	<b>48</b>	<b>819</b>	<b>480</b>	<b>2,560</b>	--	--	--	--	--
	7/18/2007	<b>66,300</b>	<b>363</b>	<b>7,180</b>	<b>3,010</b>	<b>11,700</b>	--	--	--	--	--
	11/7/2007	<b>111,000</b>	<b>54</b>	<b>11,500</b>	<b>4,200</b>	<b>22,400</b>	--	--	--	--	--
	4/8/2008	<b>45,000</b>	<b>48.7</b>	<b>3,330</b>	<b>942</b>	<b>6,920</b>	--	--	--	--	--
	2/7/2013	<b>114,000</b>	<b>62.7</b>	<b>7,330</b>	<b>2,480</b>	<b>15,400</b>	--	--	--	--	--
	1/31/2014	<b>90,600</b>	<b>7.2</b>	<b>3,670</b>	<b>5,730</b>	<b>30,200</b>	--	--	--	--	--
	5/18/2015	<b>170,000</b>	<1.0	<b>1,070</b>	<b>795</b>	<b>3,670</b>	--	--	--	--	--
	3/1/2017	<b>69,600</b>	<1.0	<b>2,970</b>	<b>2,850</b>	<b>15,100</b>	--	--	--	--	--
	4/6/2018	<b>20,900</b>	<b>1.0</b>	<b>4,500</b>	<b>4,840</b>	<b>22,700</b>	--	--	--	--	--
4/12/2019	<b>85,000</b>	<1.0	<b>2,900</b>	<b>4,150</b>	<b>21,300</b>	--	--	--	--	--	
4/9/2020	<b>8,450</b>	<1.0	<b>15.5</b>	<1.0	<b>2,550</b>						
MW-2	6/21/2006	<b>20,300</b>	<b>165</b>	<b>434</b>	<b>785</b>	<b>2,480</b>	--	--	--	--	--
	10/5/2006	<b>17,200</b>	<b>175</b>	<b>78.7</b>	<b>1,830</b>	<b>7,250</b>	<1.0	<0.2	<5.0	<b>228</b>	<b>150</b>
	1/31/2007	<100	<1.0	<b>1.5</b>	<1.0	<b>8.7</b>	--	--	--	--	--
	7/18/2007	<b>2,300</b>	<b>32</b>	<b>565</b>	<b>855</b>	<b>3,670</b>	--	--	--	--	--
	11/7/2007	<b>45,500</b>	<b>73</b>	<b>475</b>	<b>1,810</b>	<b>6,110</b>	--	--	--	--	--
	4/8/2008	<b>1,860</b>	<b>2.6</b>	<1.0	<b>9.1</b>	<b>89.7</b>	--	--	--	--	--
	2/7/2013	<b>8,490</b>	<b>13.9</b>	<b>15.3</b>	<b>64.9</b>	<b>154</b>	--	--	--	--	--
	1/31/2014	<b>2,020</b>	<1.0	<b>4.9</b>	<b>3.4</b>	<b>82</b>	--	--	--	--	--
	5/18/2015	<b>25,800</b>	<1.0	<2.0	<b>158</b>	<b>331</b>	--	--	--	--	--
	3/1/2017	<b>3,520</b>	<1.0	<2.0	<b>8.3</b>	<b>27.1</b>	--	--	--	--	--
	4/6/2018	<b>7,570</b>	<1.0	<2.0	<b>38</b>	<b>115</b>	--	--	--	--	--
4/12/2019	<b>700</b>	<1.0	<2.0	<b>1.0</b>	<b>5.4</b>	--	--	--	--	--	
4/9/2020	<b>1,360</b>	<1.0	<2.0	<1.0	<2.0						
MW-3	1/31/2007	<100	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--
	7/18/2007	<b>980</b>	<b>3.7</b>	<b>75</b>	<b>41</b>	<b>152</b>	--	--	--	--	--
	11/7/2007	<b>317</b>	<b>1.2</b>	<b>45</b>	<b>15</b>	<b>65</b>	--	--	--	--	--
	4/8/2008	<100	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--
	2/7/2013	<100	<1.0	<2.0	<1.0	<3.0	--	--	--	--	--
	1/31/2014	<100	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
	5/18/2015	<100	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
	3/1/2017	<100	<1.0	<2.0	<1.0	<3.0	--	--	--	--	--
	4/6/2018	<100	<1.0	<2.0	<1.0	<b>2.8</b>	--	--	--	--	--
	4/12/2019	<100	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
4/9/2020	<100	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	

**Table 2 - Summary of Groundwater Analytical Results**  
Pit Stop Market  
Olympia, WA

Sample Number	Date Sampled	Gasoline	Volatile Organic Compounds				Table 830-1 Constituents				
			Benzene	Toluene	Ethyl-benzene	Total Xylenes	EDC	EDB	Total Naphthalene	MTBE	Lead
MW-4	1/31/2007	<100	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--
	7/18/2007	<b>17,600</b>	<b>6.6</b>	<b>18.1</b>	<b>71.6</b>	<b>165</b>	--	--	--	--	--
	11/7/2007	<b>5,650</b>	<b>26</b>	<b>25</b>	<b>36</b>	<b>92</b>	--	--	--	--	--
	4/8/2008	<b>10,600</b>	<b>1.8</b>	<b>6.4</b>	<b>32.3</b>	<b>69.9</b>	--	--	--	--	--
	2/7/2013	<b>6,060</b>	<b>3.34</b>	<b>10.8</b>	<1.0	<b>12.2</b>	--	--	--	--	--
	1/31/2014	<b>2,700</b>	<1.0	<2.0	<b>1.4</b>	<2.0	--	--	--	--	--
	5/18/2015	<b>12,600</b>	<1.0	<2.0	<b>61.0</b>	<b>103</b>	--	--	--	--	--
	3/1/2017	<b>300</b>	<1.0	<2.0	<1.0	<3.0	--	--	--	--	--
	4/6/2018	<b>373</b>	<1.0	<2.0	<b>11</b>	<b>11</b>	--	--	--	--	--
	4/12/2019	<b>270</b>	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
4/9/2020	<b>720</b>	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	
MW-5	1/31/2007	<b>1,020</b>	<b>16.1</b>	<b>12.9</b>	<b>16.3</b>	<b>40.1</b>	--	--	--	--	--
	7/18/2007	<100	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--
	11/7/2007	<100	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--
	4/8/2008	<b>220</b>	<b>1.4</b>	<b>7.2</b>	<b>3.9</b>	<b>13.7</b>	--	--	--	--	--
	2/7/2013	<b>360</b>	<1.0	<2.0	<1.0	<3.0	--	--	--	--	--
	1/31/2014	<100	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
	5/18/2015	<b>1,461</b>	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
	3/1/2017	<b>940</b>	<1.0	<2.0	<1.0	<3.0	--	--	--	--	--
	4/6/2018	<100	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
	4/12/2019	<100	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
4/9/2020	<100	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	
MW-6	1/31/2007	<b>4,040</b>	<b>29.4</b>	<b>7.0</b>	<b>11.3</b>	<b>29.4</b>	--	--	--	--	--
	7/18/2007	<b>2,480</b>	<b>11.1</b>	<b>13.9</b>	<b>19</b>	<b>53.1</b>	--	--	--	--	--
	11/7/2007	<b>3,150</b>	<b>20</b>	<b>10</b>	<b>8.8</b>	<b>38</b>	--	--	--	--	--
	4/8/2008	<b>1,000</b>	<b>2.3</b>	<b>7.7</b>	<b>3.4</b>	<b>17.7</b>	--	--	--	--	--
	2/7/2013	<b>404</b>	<b>1.7</b>	<b>5.1</b>	<1.0	<b>4.0</b>	--	--	--	--	--
	1/31/2014	<b>694</b>	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
	5/18/2015	<b>1,350</b>	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
	3/1/2017	<b>420</b>	<1.0	<2.0	<1.0	<3.0	--	--	--	--	--
	4/6/2018	<100	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
	4/12/2019	<100	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--
4/9/2020	<100	<1.0	<2.0	<1.0	<2.0	--	--	--	--	--	
PQL		100	1.0	1.0 / 2.0	1.0	1.0 / 2.0 / 3.0	1.0	0.02	5.0	5.0	1.0
MTCA Method A Cleanup Levels		800*	5	1,000	700	1,000	5	0.01	160	20	15

Notes:

All values reported in micrograms per liter (µg/L)

-- = 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 the presence of Benzene anywhere at the Site

EDC = 1,2-Dichloroethane

EDB = Ethylene Dibromide

MTBE = Methyl Tert-Butyl Ether

## **APPENDIX A**

### **LABORATORY DATASHEETS**



# Libby Environmental, Inc.

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

April 13, 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 Pit Stop Market Project located in Olympia, 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.

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

PIT STOP MARKET PROJECT

AEG, LLC

Olympia, Washington

Libby Project # L200409-2

Client Project # 06-177

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

Sample Description	Method	MW1	MW2	MW3	MW4	MW5	
	Blank						
Date Sampled	N/A	4/9/2020	4/9/2020	4/9/2020	4/9/2020	4/9/2020	
Date Analyzed	PQL	4/11/2020	4/11/2020	4/11/2020	4/11/2020	4/11/2020	
	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
Benzene	1.0	nd	nd	nd	nd	nd	
Toluene	2.0	nd	15.5	nd	nd	nd	
Ethylbenzene	1.0	nd	nd	nd	nd	nd	
Total Xylenes	2.0	nd	2550	nd	nd	nd	
Gasoline	100	nd	8450	1360	nd	720	
Surrogate Recovery							
Dibromofluoromethane	111	103	108	108	108	108	
1,2-Dichloroethane-d4	123	123	127	126	127	125	
Toluene-d8	104	84	97	98	101	100	
4-Bromofluorobenzene	66	92	88	68	68	89	

"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.

PIT STOP MARKET PROJECT  
AEG, LLC  
Olympia, Washington  
Libby Project # L200409-2  
Client Project # 06-177

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		MW6	MW6 Dup
Date Sampled		4/9/2020	4/9/2020
Date Analyzed	PQL	4/11/2020	4/11/2020
	(µg/L)	(µg/L)	(µg/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
Surrogate Recovery			
Dibromofluoromethane		109	107
1,2-Dichloroethane-d4		130	125
Toluene-d8		100	98
4-Bromofluorobenzene		66	71

"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.

PIT STOP MARKET PROJECT  
AEG, LLC  
Olympia, Washington  
Libby Project # L200409-2  
Client Project # 06-177

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

## QA/QC for Gasoline (NWTPH-Gx) & BTEX (EPA Method 8260D) in Water

### Matrix Spike Sample Identification: MW6

	Spiked Conc. (µg/L)	MS Response (µg/L)	MSD Response (µg/L)	MS Recovery (%)	MSD Recovery (%)	RPD (%)	Limits Recovery (%)	Data Flag
Benzene	5.0	4.6	4.5	93	90	3.1	65-135	
Toluene	5.0	4.3	4.1	86	82	4.8	65-135	
Ethylbenzene	5.0	5.0	4.3	100	86	15.1	65-135	
Total Xylenes	15.0	14.3	13.0	95	87	9.5	65-135	

Surrogate Recovery (%)	MS	MSD	Limits
Dibromofluoromethane	111	109	65-135
1,2-Dichloroethane-d4	129	127	65-135
Toluene-d8	101	100	65-135
4-Bromofluorobenzene	71	90	65-135

ACCEPTABLE RPD IS 35%

ANALYSES PERFORMED BY: Sherry Chilcutt

### Laboratory Control Sample

	Spiked Conc. (µg/L)	LCS Response (µg/L)	LCS Recovery (%)	LCS Recovery Limits (%)	Data Flag
Benzene	5.0	5.1	102	80-120	
Toluene	5.0	4.6	92	80-120	
Ethylbenzene	5.0	4.5	90	80-120	
Total Xylenes	15.0	13.8	92	80-120	

Surrogate Recovery	LCS	Limits
Dibromofluoromethane	112	65-135
1,2-Dichloroethane-d4	128	65-135
Toluene-d8	103	65-135
4-Bromofluorobenzene	74	65-135

ANALYSES PERFORMED BY: Sherry Chilcutt

# Libby Environmental, Inc.

3322 South Bay Road NE

Olympia, WA 98506

Phone: (360) 352-2110

FAX: (360) 352-4154

Email: libbyenv@gmail.com

PIT STOP MARKET PROJECT

AEG, LLC

Libby Project # L200409-2

Date Received 4/9/2020

Time Received 12:35 PM

Received By SC

## Sample Receipt Checklist

### Chain of Custody

1. Is the Chain of Custody complete?  Yes  No
2. How was the sample delivered?  Hand Delivered  Picked Up  Shipped

### Log In

3. Cooler or Shipping Container is present.  Yes  No  N/A
4. Cooler or Shipping Container is in good condition.  Yes  No  N/A
5. Cooler or Shipping Container has Custody Seals present.  Yes  No  N/A
6. Was an attempt made to cool the samples?  Yes  No  N/A
7. Temperature of cooler (0°C to 8°C recommended) 2.2 °C
8. Temperature of sample(s) (0°C to 8°C recommended) 8.0 °C
9. Did all containers arrive in good condition (unbroken)?  Yes  No
10. Is it clear what analyses were requested?  Yes  No
11. Did container labels match Chain of Custody?  Yes  No
12. Are matrices correctly identified on Chain of Custody?  Yes  No
13. Are correct containers used for the analysis indicated?  Yes  No
14. Is there sufficient sample volume for indicated analysis?  Yes  No
15. Were all containers properly preserved per each analysis?  Yes  No
16. Were VOA vials collected correctly (no headspace)?  Yes  No  N/A
17. Were all holding times able to be met?  Yes  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.

# Chain of Custody Record

www.LibbyEnvironmental.com

3322 South Bay Road NE  
Olympia, WA 98506

Ph: 360-352-2110  
Fax: 360-352-4154

Date: 4/9/20 Page: 1 of 1

Client: AEG

Project Manager: Scott Rose

Address: 605 11<sup>th</sup> Ave SE Suite 201

Project Name: Pit Stop Market

City: Olympia State: WA Zip: 98501

Location: 1734 Boulevard Rd SE City, State: Olympia WA

Phone: (360) 352-9835 Fax:

Collector: Foster Koetzel Date of Collection: 4/9/20

Client Project # 06-177

Email: srose@AEGWA.com



Sample Number	Depth	Time	Sample Type	Container Type	VOC 8260	NWTPH-Gx	BTEX 802 + 8260D	NWTPH-HCID	NWTPH-Dx	NWTPH-Dx/Dx	c PAH 8270	PAH 8270	Semi Vol 8270	PCB 8082	MTCAs 5 Metals	RCRA 8 Metals	Field Notes
1		1130	GW	VOA	X	X											
2		0842	GW	VOA	X	X											
3		0951	GW	VOA	X	X											
4		0919	GW	VOA	X	X											
5		1025	GW	VOA	X	X											
6		1059	GW	VOA	X	X											
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	
15																	
16																	
17																	

Relinquished by: <u>[Signature]</u>	Date / Time: <u>4/9/20 1235</u>	Received by: <u>[Signature]</u>	Date / Time: <u>4-9-20 1235</u>	<b>Sample Receipt</b>		Remarks:
Relinquished by:	Date / Time:	Received by:	Date / Time:	Good Condition?	Y N	
				Cooler Temp.	°C	
				Sample Temp.	°C	
Relinquished by:	Date / Time:	Received by:	Date / Time:	Total Number of Containers		TAT: 24HR 48HR 5-DAY