

**MARCH 2015**  
**GROUNDWATER MONITORING**

Mac's One Hour Cleaners  
10825 SE 176<sup>th</sup> Street  
Renton, Washington

**TRI WESTERN INVESTMENTS, LLC.**

# ENVIRONMENTAL ASSOCIATES, INC.

1380 - 112<sup>th</sup> Avenue Northeast, Suite 300  
Bellevue, Washington 98004  
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April 1, 2015

JN-20209-5

Mr. Colin Radford  
Tri Western Investments, LLC.  
10423 Main Street, Suite #4  
Bellevue, Washington 98004

**RE:            MARCH 2015 - GROUNDWATER MONITORING**  
**Mac's One Hour Cleaners**  
**10825 SE 176<sup>th</sup> Street**  
**Renton, Washington**

Dear Mr. Radford:

Environmental Associates, Inc. (EAI) has completed a groundwater monitoring event in accordance with Tri Western Investments, LLC's authorization to sample on-site monitoring wells semi-annually until further notice.

## **Brief Project Background**

A dry-cleaner has operated as a tenant on the subject property since the 1960s. In 2009, the Client / property owner (Tri-Western Syndicated Investments) received notice from the west/southwest adjacent property owner (Bayview) that dry-cleaning solvents (tetrachloroethene or "perc" / PCE) had been discovered beneath their parcel and that they (Bayview) suspected that the source was the dry-cleaner on the subject property. Since discovery, numerous phases of explorations on and off the subject parcel have occurred along with focused remedial actions.

A network of nine (9) groundwater monitoring wells located both on the subject parcel and on the adjacent Bayview parcel have been periodically sampled since December 2011.



### **Scope of Work**

The following scope of work has been adopted for execution of this groundwater monitoring event:

- Measure current depths to groundwater in all nine (9) study area monitoring wells (MW-1 through MW-9). Utilize the data to prepare an updated water table survey and groundwater flow interpretive map.
- Collect representative groundwater samples from each monitoring well using a low-flow micro-purging technique with a peristaltic pump.
- Submit all recovered groundwater samples to the project laboratory with analysis for chlorinated volatile organic compounds (CVOCs) by EPA test method 8260.
- Prepare a written summary report documenting field methods, observations, findings, and conclusions.

### **Summary of Recent Site Work**

In May 2014, a total of 800 pounds of 3-D ME hydrogen releasing compound (HRC) along with 210 pounds of HRC-Primer, both manufactured by Regenesys, was re-applied to the existing interceptor trench adjacent to the west side of the building.

The groundwater monitoring wells (MW-1 through MW-9) were last sampled in August 2014.

### **March 2015 - Water Table Survey**

The current groundwater monitoring event was performed over a two-day period beginning on March 10<sup>th</sup>, 2015. Prior to micro-purging, the depth to groundwater below the top of each well casing was measured. These depths to groundwater along with the corresponding deduced elevations of the water table at each well location are recorded on the data tables for each monitoring well included in Appendix-A.

During this current event, water table elevations were observed to generally be 0.3 to 3 feet higher than water levels measured during the prior August 2014 sampling event, which is on par with prior late Winter / early Spring water table elevations at this site. Plate 3, Water Table Survey presents a graphical representation of the shallow water table and deduced groundwater flow directions based upon the current geometry of monitoring wells. Examining Plate 3, groundwater flow appears to be southwesterly. The groundwater flow regime appears generally consistent with prior surveys.

### **March 2015 - Groundwater Sampling**

The nine (9) monitoring wells were sampled on March 10<sup>th</sup> and 11<sup>th</sup>, 2015. Each existing monitoring well was first “micro-purged” utilizing a peristaltic pump. Following purging, groundwater samples were transferred directly to laboratory-prepared glassware.

### **Laboratory Results & Discussion**

The nine (9) groundwater samples were analyzed by the project laboratory for chlorinated volatile organic compounds by EPA test method 8260B. The current concentrations of PCE in groundwater are presented in the table below and graphically presented on Plate 4. Additionally, the current results for all contaminants tested for along with all prior laboratory results are presented in the Data Tables in Appendix-A. A copy of the laboratory report is included as Appendix-B.

***PCE Concentrations In Parts Per Billion (ppb) Prior & Current Sampling Events***

<b>Monitoring Well</b>	<b>Prior Event (August 2014)</b>	<b>Current Event (March 2015)</b>
MW-1	<1	<1
MW-2	<b>48</b>	<b>33</b>
MW-3	<b>72</b>	<b>88</b>
MW-4	4.8	3.7
MW-5	<b>35</b>	<b>22</b>
MW-6	<b>76</b>	<b>85</b>
MW-7	<b>74</b>	<b>63</b>
MW-8	1.5	1.1
MW-9	2.5	<b>8.4</b>
Compliance Level	5	5

During this current sampling event, PCE was detected in eight (8) of the nine (9) samples. Six (6) contained PCE at concentrations above the Washington State Department of Ecology’s 5 parts per billion (ppb) target compliance level. PCE was not detected in the groundwater sample recovered from MW-1 at a concentration above the laboratory’s minimum detection limit. MW-4 and MW-8 continue to periodically produce groundwater samples with detectable PCE, but at concentrations below the 5 ppb compliance level.

Referring to the Data Table for MW-5 in Appendix-A, the enhanced bio-degradation reaction stimulated by the remediation products applied to the interceptor trench appears to be ongoing. The detected concentration of PCE at MW-5 appears to have decreased since the prior August 2014 sampling event and the degradation products TCE and cis-DCE continue to be present but have also decreased since the August 2014 event. The concentration of cis-DCE decreased significantly and is presently below its WDOE target compliance level of 16 ppb. Traces of TCE and cis-DCE also continue to be detected in groundwater at MW-3 at concentrations below their WDOE target compliance levels.

The concentration data from MW-5 and MW-3 appears to continue to conform to the “classic” anaerobic microbial degradation reaction sequence that the HRC product applied to the trench system is intended to stimulate. That reaction essentially strips chlorine atoms from the PCE molecule producing TCE (3-chlorine atoms) which in turn transitions through variations of DCE (2-chlorine atoms) followed by vinyl chloride (1-chlorine) and finally ethylene / ethane (0-chlorine).

Monitoring wells MW-1 and MW-8 are both located along the southern margin of the study area. As such, monitoring well’s MW-1 and MW-8 appear to continue to establish a partial southern limit of the PCE groundwater plume, as depicted on Plate 4, “PCE In Groundwater” as a red “dashed” line.

During the current sampling event, the highest concentrations of PCE were observed in the “core-of-the-plume” monitoring wells MW-2, MW-3, MW-6, and MW-7, in which concentrations of PCE in the groundwater ranged between 33 and 88 ppb. Overall contaminant concentrations within the northern half of this “core” area (MW-3 and MW-6) appear to have remained essentially unchanged with a slight increase since the prior August 2014 monitoring event. At present the cumulative PCE concentration data at both MW-3 and MW-6 do not suggest an overall increasing concentration trend. The slight “up-tick” in PCE concentrations at MW-3 and MW-6 between the August 2014 and current March 2015 sampling events may simply represent natural/seasonal variability. Concentrations of PCE at MW-2 and MW-7, representing the southern half of the “core” area declined since the August 2014 sampling event. In fact, PCE concentrations at MW-2 appear to have been consistently declining since December 2013 and at MW-7 concentrations of PCE appear to have consistently declined since 2012. As presented on Chart 2, average site-wide concentrations of PCE encompassing all nine (9) monitoring well locations between August 2014 and March 2015 declined slightly from 39 ppb to 34 ppb.

Lastly, the concentration of PCE at the furthest down-gradient monitoring well (MW-9) was again slightly above the WDOE’s target compliance level during this current sampling event. Historically, concentrations of PCE at this location have fluctuated within a range below and slightly above the WDOE’s target compliance level of 5 ppb.

### **Next Sampling Event**

The next quarterly sampling event is tentatively scheduled to occur in August 2015.

### **Limitations**

This letter report has been prepared specific application to this project in a manner consistent with that level of care and skill normally exercised by members of the environmental science profession currently practicing under similar conditions in the area. This document is for the exclusive of Tri Western Investments, LLC., along with its members and appointed representatives. Discussion with respect to subsurface environmental conditions relies solely upon the results of sampling and testing conducted at separated sampling localities and environmental conditions may vary between those localities or at other locations, depths, and/or media. No other warranty, expressed or implied, is made here. If new information is acquired or developed in future site work Environmental Associates, Inc., must be retained to reevaluate the conclusions of this letter report and to provide amendments as required.

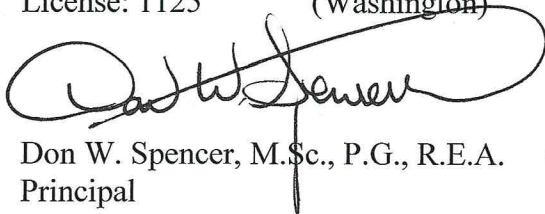
We appreciate the opportunity to be of service on this project and trust that the information provided here is fully responsive to your needs. If you have any questions or we may be of additional service, please do not hesitate to contact us.

Respectfully submitted,  
**ENVIRONMENTAL ASSOCIATES, INC.**



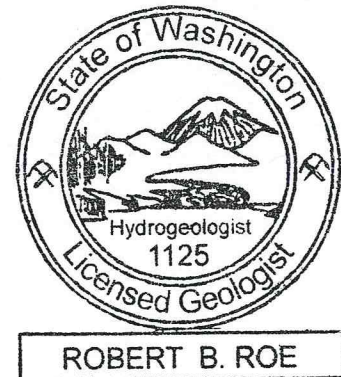
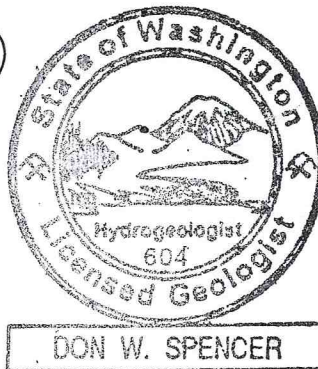
Robert B. Roe, M.Sc., P.G.  
Project Manager/Hydrogeologist

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Principal

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License: 11464 (Oregon)  
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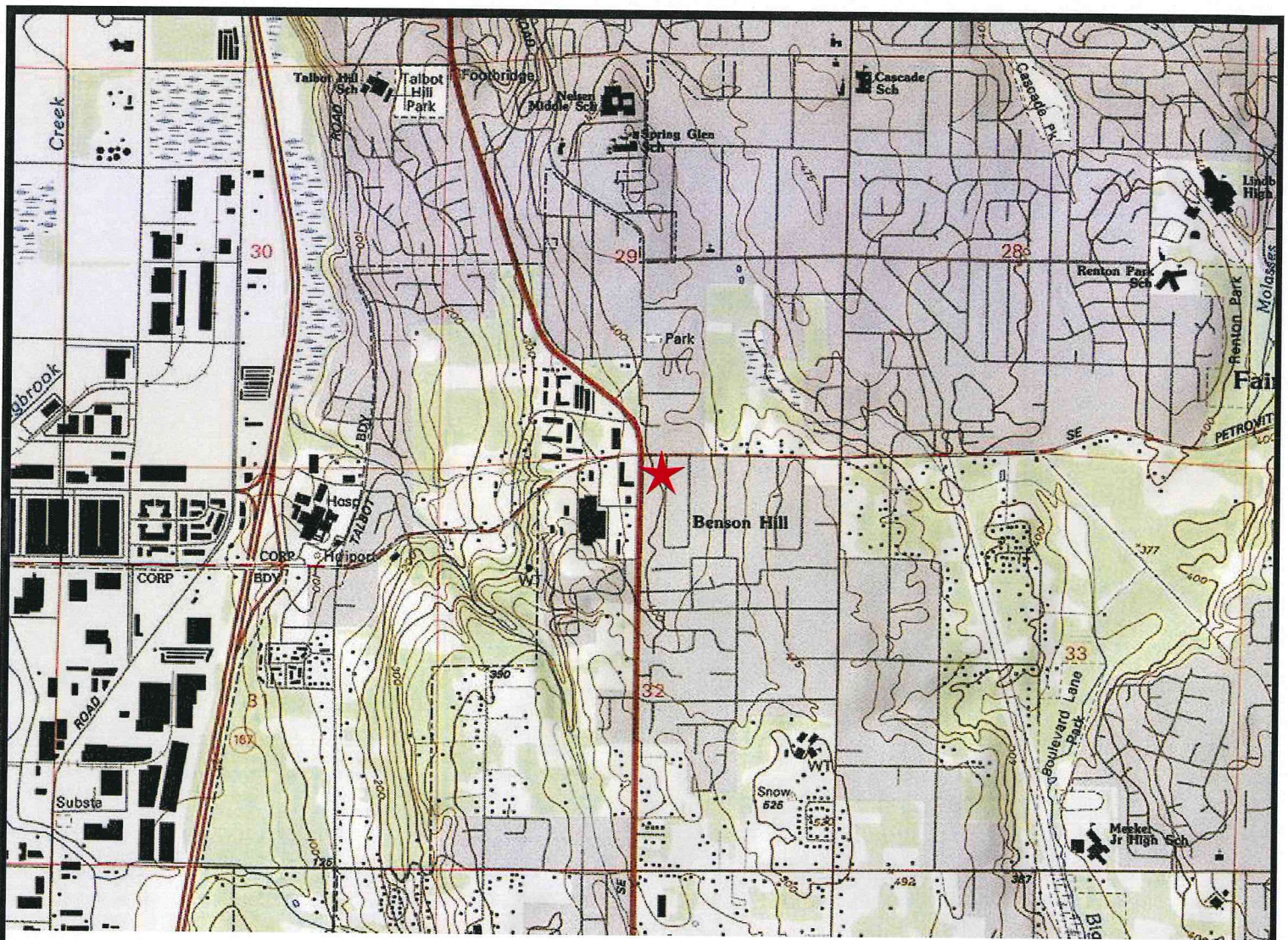
**Attachments:**

Plate 1 - Vicinity / Topographic Map  
Plate 2 - Study Area - Overview  
Plate 3 - Water Table Survey  
Plate 4 - PCE In Groundwater

Chart 1: Hydrograph  
Chart 2: PCE Concentration Trends

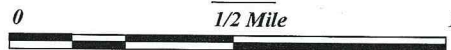
Appendix-A: Data Tables MW-1 Through MW-9  
Appendix-B: Laboratory Reports





USGS: 7.5 Minute Quadrangle: Renton, Washington  
 Contour Interval: 25 feet

Scale



Subject Property Location



Inferred groundwater flow direction based upon the local topographical gradient in the vicinity of the subject property.



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 Bellevue, Washington 98004

## VICINITY / TOPOGRAPHIC MAP

Mac's One Hour Cleaners  
 10825 SE 176th Street  
 Renton, Washington

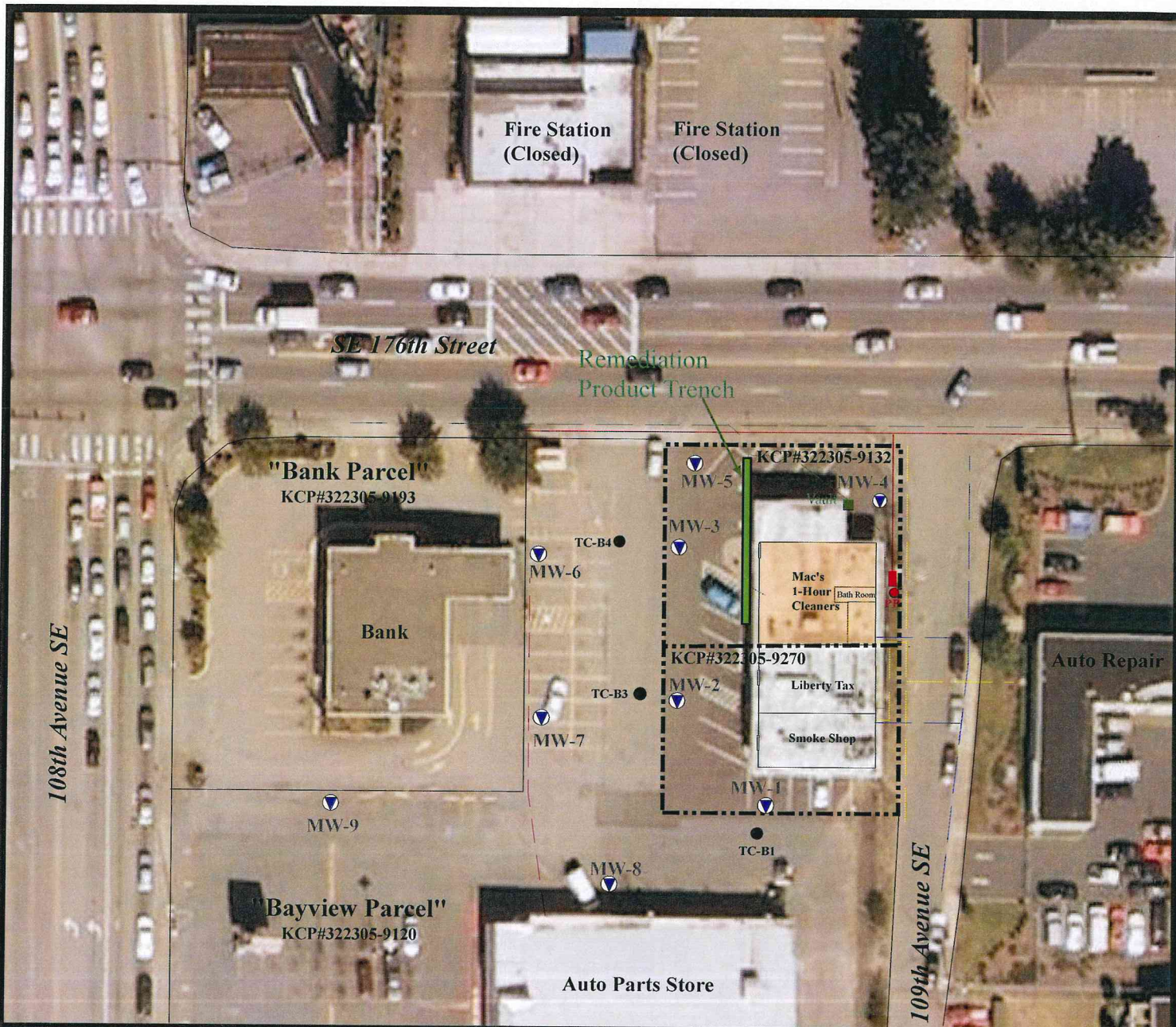
Job Number:  
 JN-20209-5

Date:  
 March 2015

Plate:

1





Approximate border of Subject Parcel.

KCP#: King County tax parcel numbers.



Existing Monitoring wells installed by EAI.



Approximate locations of borings made by Terracon (TC) on the adjacent property.



Approximate locations of underground utilities: Power (red), water (blue), natural gas (yellow), phone (orange), and sanitary sewer / storm drain (green).



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Bellevue, Washington 98004

## STUDY AREA - OVERVIEW

Mac's One Hour Cleaners  
10825 SE 176th Street  
Renton, Washington

Job Number:

JN-20209-5

Date:

March 2015

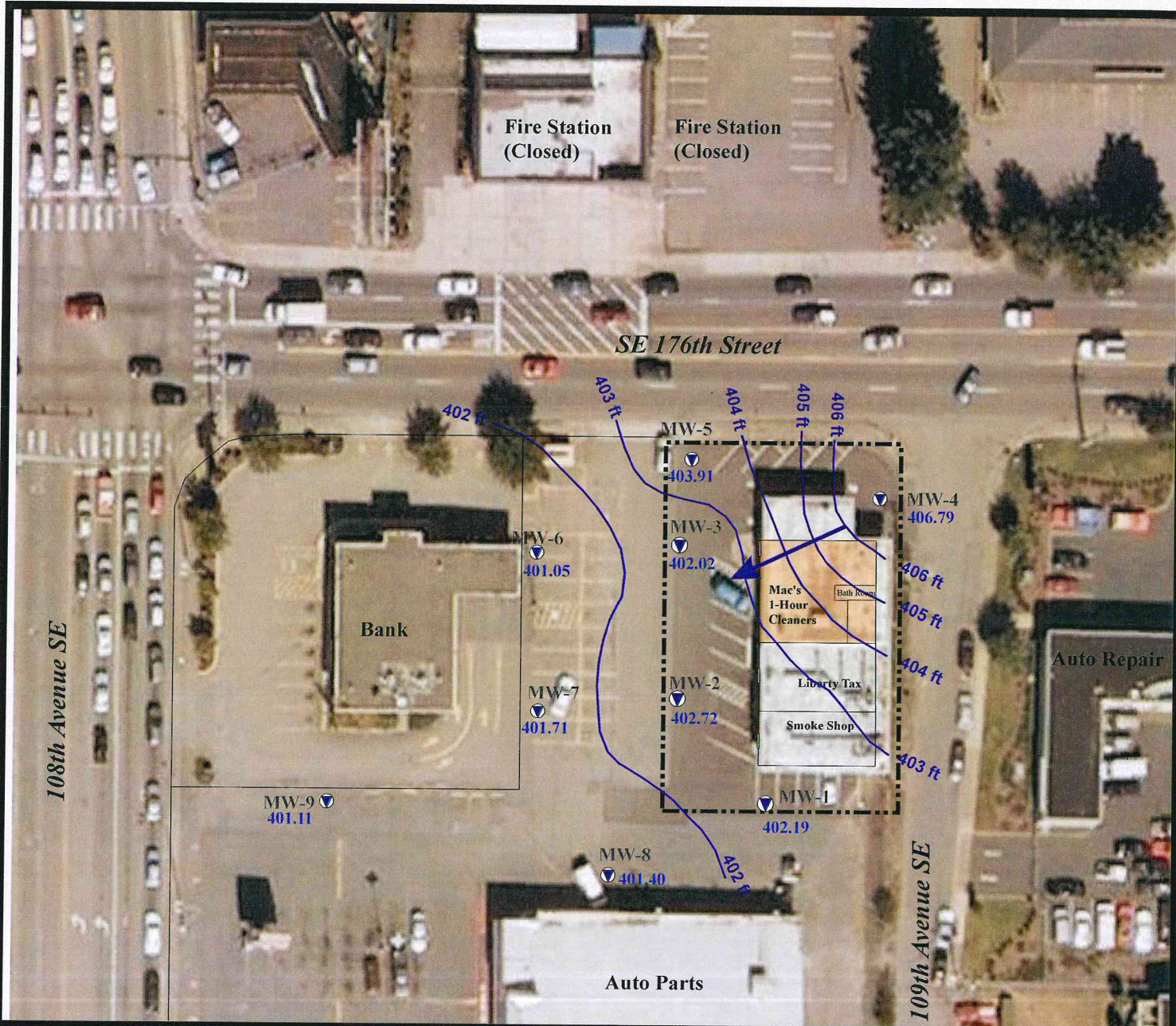
Scale:

1"=80'

Plate:

2





Approximate border of Subject Property



Water Table equal elevation contour lines and inferred groundwater flow direction.



Existing monitoring well locations.



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1380 112th Avenue N.E., Ste. 300  
Bellevue, Washington 98004

## WATER TABLE SURVEY

Mac's One Hour Cleaners  
10825 SE 176th Street  
Renton, Washington

Job Number:

JN-20209-5

Date:

August 2014

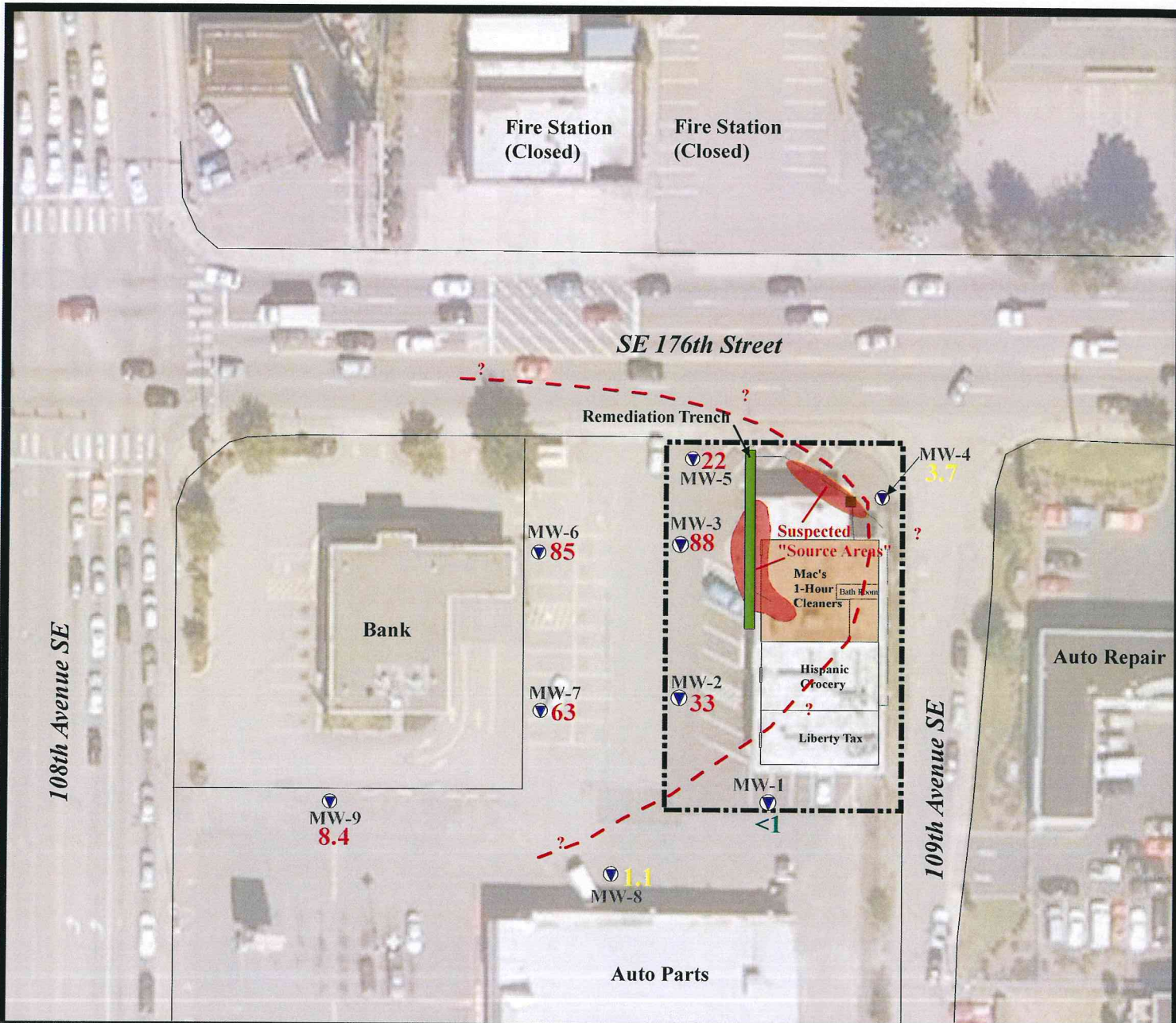
Scale:

1"=80'

Plate:

3





Approximate border of Subject Property



Preliminary conceptualization of chlorinated solvent (PCE) groundwater plume. The WDOE target compliance level for PCE in groundwater is 5 parts per billion (ppb). Red denotes concentrations above the WDOE's target compliance level. Yellow denotes detections below the target compliance level. Green denotes PCE not detected above laboratory detection limits.



Existing monitoring well locations.



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## PCE IN GROUNDWATER

Mac's One Hour Cleaners  
10825 SE 176th Street  
Renton, Washington

Job Number:

JN-20209-5

Date:

March 2015

Scale:

1"=80'

Plate:

4

# CHART 1: Hydrograph

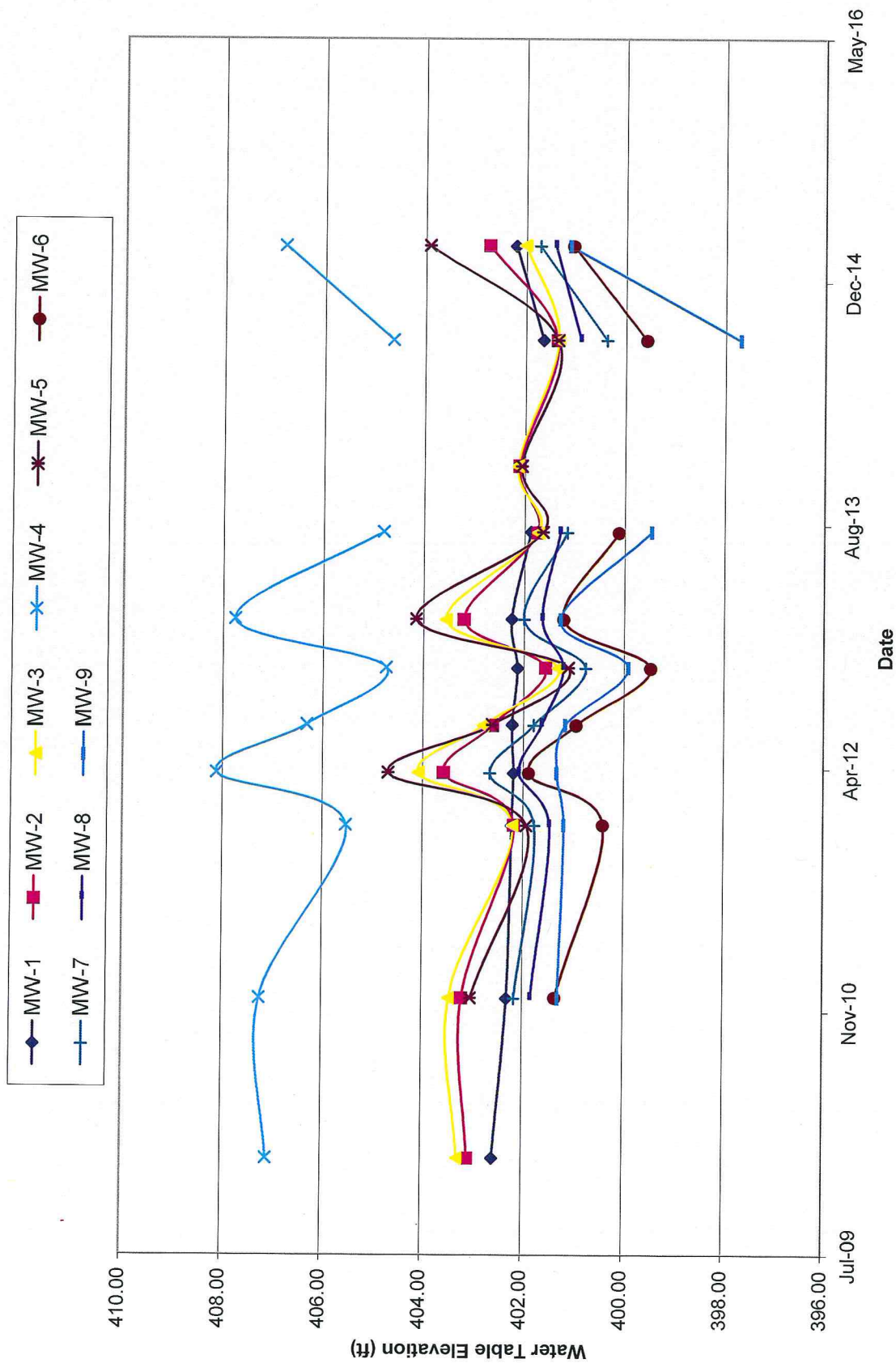
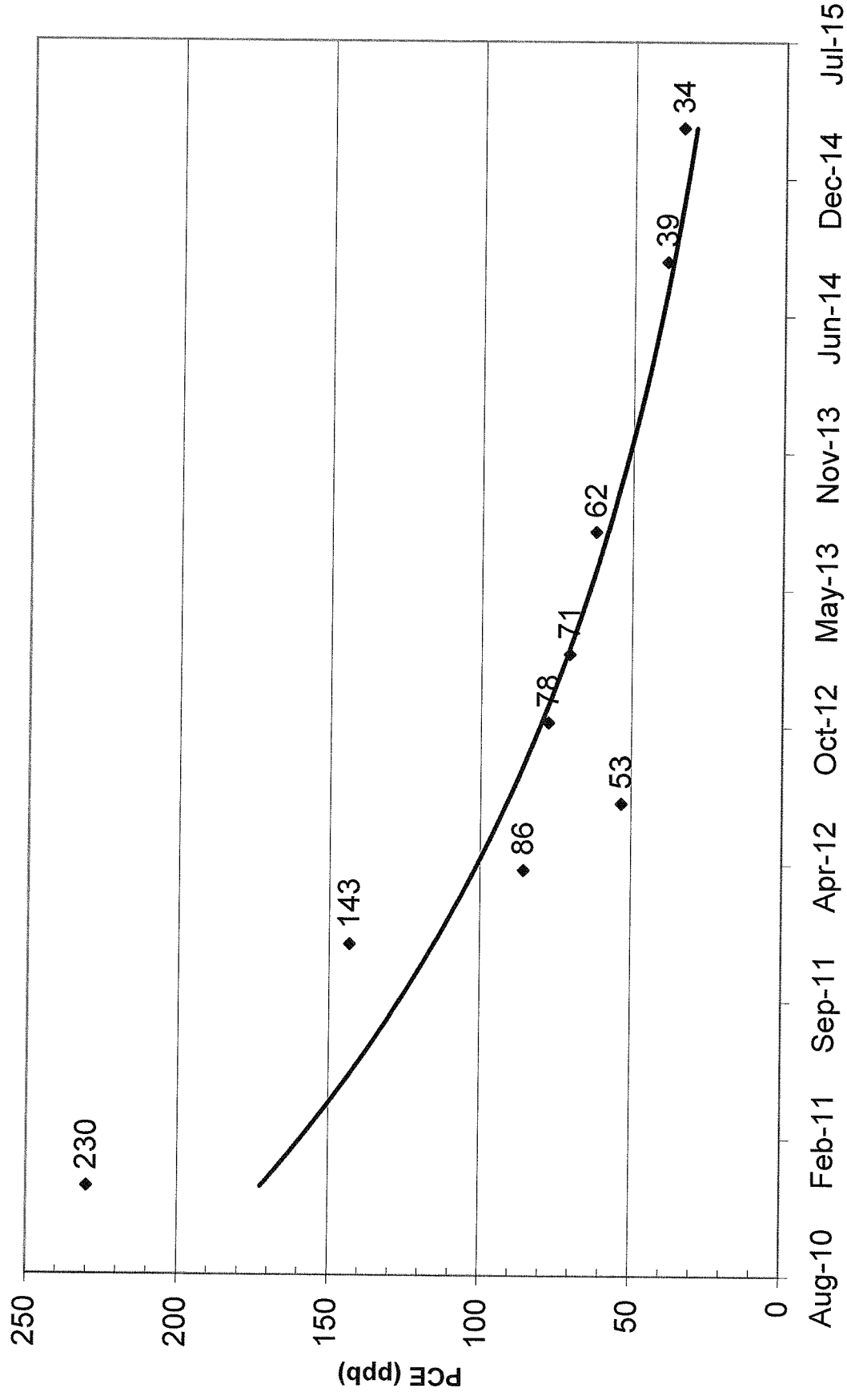




Chart 2: Site Wide Average PCE Concentration



## **APPENDIX-A**

**Data Tables  
MW-1 Through MW-9**

**DATA TABLE: MW-1**

**Groundwater Sampling Results in parts per billion (ppb)**

Monitoring Well	Tetrachloroethene (PCE)	Trichloroethene (TCE)	(cis) 1,2 Dichloroethene	(trans) 1,2 Dichloroethene	Vinyl Chloride	Depth to Water	Net Change	Water Table Elevation	pH	Conductivity (mS/m)	Temperature (Celsius)	REDOX Potential (mV)	Dissolved Oxygen (mg/L)
	MW-1												
1/20/2010	1.5	<1	<1	<1	<0.2	5.11		402.58	7.29	15.3	13.0	-93	3.69
12/15/2010	1.5	<1	<1	<1	<0.2	5.38	-0.27	402.31	5.9	9.1	12.6	110	7.12
12/5/2011	<1	<1	<1	<1	<0.2	5.47	-0.09	402.22	6.36	5.4	13.7	89	2.34
3/22/2012	<1	<1	<1	<1	<0.2	5.50	-0.03	402.19	6.16	8.1	9.87	321	8.76
6/29/2012	1.1	<1	<1	<1	<0.2	5.47	0.03	402.22	6.45	11.3	16.73	127	8.56
10/23/2012	<1	<1	<1	<1	<0.2	5.57	-0.10	402.12	6.29	3.7	15.7	446	2.97
2/1/2013	<1	<1	<1	<1	<0.2	5.45	0.12	402.24	6.09	10	10.7	182	6.65
7/30/2013	<1	<1	<1	<1	<0.2	5.82	-0.37	401.87	6.14	1.32	19.9	190	4.8
12/13/2013													
8/28/2014	<1	<1	<1	<1	<0.2	6.05	-0.23	401.64					
3/10/2015	<1	<1	<1	<1	<0.2	5.5	0.32	402.19					
Reporting Limit <sup>3</sup>	1	1	1	1	0.2								
Existing Cleanup Level <sup>4</sup>	5 (A)	5 (A)	16 (B)	160 (B)	0.2 (A)								

Notes:

1 - "ND" denotes analyte not detected at or above listed Reporting Limit.

2- "NA" denotes sample not analyzed for specific analyte.

3- "Reporting Limit" represents the laboratory lower quantitation limit.

4- Method A or B groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC, amended 2/12/01.

**Bold and Italics denotes concentrations above existing MTCA Method A groundwater cleanup levels.**

**DATA TABLE: MW-2**

**Groundwater Sampling Results in parts per billion (ppb)**



DATA TABLE: MW-3													
Groundwater Sampling Results in parts per billion (ppb)													
Monitoring Well	Tetrachloroethene (PCE)	Trichloroethene (TCE)	(cis) 1,2 Dichloroethene	(trans) 1,2 Dichloroethene	Vinyl Chloride	Depth to Water	Net Change	Water Table Elevation	pH	Conductivity (mS/m)	Temperature (Celsius)	REDOX Potential (mV)	Dissolved Oxygen (mg/L)
MW-3													
1/20/2010	1,500	1.4	<1	<1	<0.2	5.55		403.29	6.63	21.8	14.2	200	5.56
12/16/2010	770	1.7	<1	<1	<0.2	5.39	0.16	403.47	5.54	21.9	14.9	225	7.49
12/5/2011	240	<1	<1	<1	<0.2	6.65	-1.26	402.21	6.19	16.8	15.4	217	6.13
3/23/2012	150	<1	<1	<1	<0.2	4.76	1.89	404.10	5.71	23.7	11.47	311	7.91
6/28/2012	110	<1	<1	<1	<0.2	6.05	-1.29	402.81	5.95	28.8	16.82	269	8.22
10/24/2012	130	<1	<1	<1	<0.2	7.54	-1.49	401.32	6.24	25.0	18.3	473	5.06
1/31/2013	120	<1	<1	<1	<0.2	5.30	2.24	403.56	5.66	32.8	12.5	238	3.43
7/29/2013	100	<1	1.4	<1	<0.2	7.13	-1.83	401.73	5.75	23.7	19.1	312	6.9
12/13/2013	89	<1	3.6	<1	<0.2	6.72	0.41	402.14					
8/28/2014	72	1.1	<1	<1	<0.2	7.51	-0.79	401.35					
3/11/2015	88	1.3	1.3	<1	<0.2	6.84	0.67	402.02					
Reporting Limit <sup>3</sup>	1	1	1	1	0.2								
Existing Cleanup Level <sup>4</sup>	5 (A)	5 (A)	16 (B)	160 (B)	0.2 (A)								

Notes:

1 - "ND" denotes analyte not detected at or above listed Reporting Limit.

2- "NA" denotes sample not analyzed for specific analyte.

3- "Reporting Limit" represents the laboratory lower quantitation limit.

4- Method A or B groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC, amended 2/12/01.

Bold and Italics denotes concentrations above existing MTCA Method A groundwater cleanup levels.

Notes:

- 1 - "ND" denotes analyte not detected at or above listed Reporting Limit.
- 2 - "NA" denotes sample not analyzed for specific analyte.
- 3- "Reporting Limit" represents the laboratory lower quantitation limit.
- 4- Method A or B groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC, amended 2/12/01.

Bold and italics denotes concentrations above existing MTCA Method A groundwater cleanup levels.

**DATA TABLE: MW-4**

**Groundwater Sampling Results in parts per billion (ppb)**

Monitoring Well	Tetrachloroethene (PCE)	Trichloroethene (TCE)	(cis) 1,2 Dichloroethene	(trans) 1,2 Dichloroethene	Vinyl Chloride	Depth to Water	Net Change	Water Table Elevation	pH	Conductivity (mS/m)	Temperature (Celsius)	REDOX Potential (mV)	Dissolved Oxygen (mg/L)	
	MW-4													
	1/20/2010	2.6	<1	<1	<1	<0.2	5.65	407.09	6.86	33.4	13.5	221	5.88	
	12/16/2010	6.8	<1	<1	<1	<0.2	5.53	407.24	5.64	31.1	14.0	216	6.64	
	12/6/2011	3.6	<1	<1	<1	<0.2	7.24	405.53	6.31	20.3	14.1	220	5.05	
	3/23/2012	3.6	<1	<1	<1	<0.2	4.65	408.12	5.76	40.5	11.01	356	7.86	
	6/29/2012	2.9	<1	<1	<1	<0.2	6.45	406.32	6.08	29.7	15.87	199	8.71	
	10/24/2012	2.6	<1	<1	<1	<0.2	8.03	404.74	6.47	26.5	17.8	373	5.15	
	2/1/2013	3.2	<1	<1	<1	<0.2	5.01	407.76	5.86	29.7	12.6	222	5.01	
	7/30/2013	3.4	<1	<1	<1	<0.2	7.97	404.8	5.81	28	18.5	272	6.3	
	12/13/2013													
	8/28/2014	4.8	<1	<1	<1	<0.2	8.14	404.63						
	3/10/2015	3.7	<1	<1	<1	<0.2	5.98	406.79						
Reporting Limit <sup>3</sup>	1	1	1	1	0.2									
Existing Cleanup Level <sup>4</sup>	5 (A)	5 (A)	16 (B)	160 (B)	0.2 (A)									

## Notes:

- 1- "ND" denotes analyte not detected at or above listed Reporting Limit.
- 2- "NA" denotes sample not analyzed for specific analyte.
- 3- "Reporting Limit" represents the laboratory lower quantitation limit.
- 4- Method A or B groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC, amended 2/12/01.

**Bold and Italics denotes concentrations above existing MTCA Method A groundwater cleanup levels.**

DATA TABLE: MW-5													
Groundwater Sampling Results in parts per billion (ppb)													
Monitoring Well	Tetrachloroethene (PCE)	Trichloroethene (TCE)	(cis) 1,2 Dichloroethene	(trans) 1,2 Dichloroethene	Vinyl Chloride	Depth to Water	Net Change	Water Table Elevation	pH	Conductivity (mS/m)	Temperature (Celsius)	REDOX Potential (mV)	Dissolved Oxygen (mg/L)
MW-5													
12/16/2010	<b>230</b>	1.9	<1	<1	<0.2	7.06		403.03	5.72	14.7	15.3	219	6.77
12/5/2011	<b>150</b>	<1	<1	<1	<0.2	8.16	-1.10	401.93	6.30	9.3	15.3	198	4.67
3/23/2012	<b>84</b>	<1	<1	<1	<0.2	5.40	2.76	404.69	5.81	31.7	11.08	261	4.13
6/29/2012	<b>15</b>	3	<b>120</b>	<1	<0.2	7.47	-2.07	402.62	6.49	180	15.35	-92	10.44
10/24/2012	<b>13</b>	<1	<b>90</b>	<1	<0.2	8.98	-1.51	401.11	6.74	9.8	17.7	-89	0.33
2/1/2013	<b>33</b>	1.4	<b>29</b>	<1	<b>0.22</b>	5.95	3.03	404.14	6.18	41.7	12.9	80	0.00
7/30/2013	<b>32</b>	3.8	<b>64</b>	<1	<b>0.46</b>	8.46	-2.51	401.63	6.21	9.3	17	11	3
12/13/2013	<b>39</b>	4.7	<b>34</b>	<1	<0.2	8.03	0.43	402.06					
8/28/2014	<b>35</b>	7.9	<b>47</b>	<1	<0.2	8.74	-0.71	401.35					
3/11/2015	<b>22</b>	1.3	5.7	<1	<0.2	6.18	2.56	403.91					
Reporting Limit <sup>3</sup>	1	1	1	1	0.2								
Existing Cleanup Level <sup>4</sup>	5 (A)	5 (A)	16 (B)	160 (B)	0.2 (A)								

Notes:

1 - "ND" denotes analyte not detected at or above listed Reporting Limit.

2- "NA" denotes sample not analyzed for specific analyte.

3- "Reporting Limit" represents the laboratory lower quantitation limit.

4- Method A or B groundwater cleanup levels as published in the Model Toxics Control Act (MTCa) 173-340-WAC, amended 2/12/01.

Bold and italics denotes concentrations above existing MTCa Method A groundwater cleanup levels.

DATA TABLE: MW-6													
Groundwater Sampling Results in parts per billion (ppb)													
Monitoring Well	Tetrachloroethene (PCE)	Trichloroethene (TCE)	(cis) 1,2 Dichloroethene	(trans) 1,2 Dichloroethene	Vinyl Chloride	Depth to Water	Net Change	Water Table Elevation	pH	Conductivity (mS/m)	Temperature (Celsius)	REDOX Potential (mV)	Dissolved Oxygen (mg/L)
MW-6													
12/16/2010	<b>250</b>	1.1	<1	<1	<0.2	6.48		401.35	6.03	19.7	13.9	217	6.68
12/6/2011	<b>210</b>	<1	<1	<1	<0.2	7.42	-0.94	400.41	6.59	15.9	14.4	197	6.81
3/22/2012	<b>120</b>	<1	<1	<1	<0.2	5.94	1.48	401.89	5.35	16.6	10.35	323	7.97
6/28/2012	<b>95</b>	<1	<1	<1	<0.2	6.88	-0.94	400.95	6.24	18.8	15.41	251	8.78
10/23/2012	<b>160</b>	<1	<1	<1	<0.2	8.36	-1.48	399.47	6.53	19.8	15.8	422	8.93
1/31/2013	<b>110</b>	<1	<1	<1	<0.2	6.62	1.74	401.21	5.87	21.0	11.90	215	5.45
7/29/2013	<b>140</b>	<1	<1	<1	<0.2	7.71	-1.09	400.12	5.89	0.203	828	316	7.6
12/13/2013													
8/28/2014	<b>76</b>	<1	<1	<1	<0.2	8.25	-0.54	399.58					
3/10/2015	<b>85</b>	<1	<1	<1	<0.2	6.78	1.47	401.05					
Reporting Limit <sup>3</sup>	1	1	1	1	0.2								
Existing Cleanup Level <sup>1</sup>	5 (A)	5 (A)	16 (B)	160 (B)	0.2 (A)								

Notes:

- 1 - "ND" denotes analyte not detected at or above listed Reporting Limit.
- 2 - "NA" denotes sample not analyzed for specific analyte.
- 3 - "Reporting Limit" represents the laboratory lower quantitation limit.
- 4 - Method A or B groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC, amended 2/12/01.

Bold and Italics denotes concentrations above existing MTCA Method A groundwater cleanup levels.



**DATA TABLE: MW-7**

**Groundwater Sampling Results in parts per billion (ppb)**

Monitoring Well	Tetrachloroethene (PCE)	Trichloroethene (TCE)	(cis) 1,2 Dichloroethene	(trans) 1,2 Dichloroethene	Vinyl Chloride	Depth to Water	Net Change	Water Table Elevation	pH	Conductivity (mS/m)	Temperature (Celsius)	REDOX Potential (mV)	Dissolved Oxygen (mg/L)
MW-7	280	1.8	<1	<1	<0.2	5.25		402.16	6.15	23.0	13.7	139	7.22
	230	<1	<1	<1	<0.2	5.64	-0.39	401.77	6.68	14.0	13.3	164	5.51
	130	<1	<1	<1	<0.2	4.75	0.89	402.66	6.20	19.6	10.41	308	9.32
	110	<1	<1	<1	<0.2	5.62	-0.87	401.79	6.62	22.1	15.67	236	9.34
	170	1	<1	<1	<0.2	6.65	-1.03	400.76	6.59	20.0	16.4	437	8.63
	150	<1	<1	<1	<0.2	5.41	1.24	402.00	6.48	19.9	11.8	181	6.91
	130	<1	<1	<1	<0.2	6.27	-0.86	401.14	6.08	19.6	9.45	328	8.4
	74	<1	<1	<1	<0.2	7.04	-0.77	400.37					
	63	<1	<1	<1	<0.2	5.7	1.34	401.71					
Reporting Limit <sup>3</sup>	1	1	1	1	0.2								
Existing Cleanup Level	5 (A)	5 (A)	16 (B)	160 (B)	0.2 (A)								

Notes:

- 1 - "ND" denotes analyte not detected at or above listed Reporting Limit.
- 2- "NA" denotes sample not analyzed for specific analyte.
- 3- "Reporting Limit" represents the laboratory lower quantitation limit.
- 4- Method A or B groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC, amended 2/12/01.

**Bold and Italics** denotes concentrations above existing MTC-A Method A groundwater cleanup levels.

DATA TABLE: MW-8														
Groundwater Sampling Results in parts per billion (ppb)														
Monitoring Well	Tetrachloroethene (PCE)	Trichloroethene (TCE)	(cis) 1,2 Dichloroethene	(trans) 1,2 Dichloroethene	Vinyl Chloride	Depth to Water	Net Change	Water Table Elevation	pH	Conductivity (mS/m)	Temperature (Celsius)	REDOX Potential (mV)	Dissolved Oxygen (mg/L)	
MW-8	1.8	<1	<1	<1	<0.2	4.39		401.83	5.74	27.9	12.7	191	6.16	
	<1	<1	<1	<1	<0.2	4.75	-0.36	401.47	6.08	17.4	12.1	183	7.92	
	<1	<1	<1	<1	<0.2	4.14	0.61	402.08	5.94	22.0	9.95	335	3.02	
	<1	<1	<1	<1	<0.2	4.59	-0.45	401.63	6.33	24.7	16.35	285	7.67	
	1.5	<1	<1	<1	<0.2	5.01	-0.42	401.21	6.41	23.6	16.8	446	3.24	
	<1	<1	<1	<1	<0.2	4.59	0.42	401.63	6.22	28.6	11.2	225	1.57	
	1.2	<1	<1	<1	<0.2	4.94	-0.35	401.28	5.88	25.8	19.0	252	5.0	
	1.5	<1	<1	<1	<0.2	5.33	-0.39	400.89						
	1.1	<1	<1	<1	<0.2	4.82	0.51	401.4						
Reporting Limit <sup>3</sup>	1	1	1	1	0.2									
Existing Cleanup Level <sup>4</sup>	5 (A)	5 (A)	16 (B)	160 (B)	0.2 (A)									
Notes:														
1 - "ND" denotes analyte not detected at or above listed Reporting Limit.														
2- "NA" denotes sample not analyzed for specific analyte.														
3- "Reporting Limit" represents the laboratory lower quantitation limit.														
4- Method A or B groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC, amended 2/12/01.														
Bold and Italics denotes concentrations above existing MTCA Method A groundwater cleanup levels.														

Notes:

1 - "ND" denotes analyte not detected at or above listed Reporting Limit.

2- "NA" denotes sample not analyzed for specific analyte.

3- "Reporting Limit" represents the laboratory lower quantitation limit.

4- Method A or B groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC, amended 2/12/01.

Bold and Italics denotes concentrations above existing MTCA Method A groundwater cleanup levels.

DATA TABLE: MW-9													
Groundwater Sampling Results in parts per billion (ppb)													
Monitoring Well	Tetrachloroethene (PCE)	Trichloroethene (TCE)	(cis) 1,2 Dichloroethene	(trans) 1,2 Dichloroethene	Vinyl Chloride	Depth to Water	Net Change	Water Table Elevation	pH	Conductivity (mS/m)	Temperature (Celsius)	REDOX Potential (mV)	Dissolved Oxygen (mg/L)
MW-9													
12/15/2010	<b>50</b>	<1	<1	<1	<0.2	1.94		401.29	5.88	11.8	11.0	184	9.41
12/6/2011	<b>10</b>	<1	<1	<1	<0.2	2.05	-0.11	401.18	7.11	8.3	12.8	160	8.37
3/22/2012	<b>12</b>	<1	<1	<1	<0.2	1.90	0.15	401.33	6.14	7.1	9.43	322	10.97
6/28/2012	<b>15</b>	<1	<1	<1	<0.2	2.07	-0.17	401.16	6.55	12.6	17.04	242	6.35
10/24/2012	<b>4.3</b>	<1	<1	<1	<0.2	3.32	-1.25	399.91	6.59	4.70	17.50	439	8.39
1/31/2013	<b>6.7</b>	<1	<1	<1	<0.2	1.96	1.36	401.27	6.22	7.0	10.1	207	8.37
7/30/2013	<b>9.9</b>	<1	2.6	<1	<0.2	3.77	-1.81	399.46	6.36	19.1	18	255	6.1
12/13/2013													
8/28/2014	<b>2.5</b>	<1	<1	<1	<0.2	5.55	-1.78	397.68					
3/10/2015	<b>8.4</b>	<1	<1	<1	<0.2	2.12	3.43	401.11					
Reporting Limit <sup>3</sup>	1	1	1	1	0.2								
Existing Cleanup Level <sup>4</sup>	5 (A)	5 (A)	16 (B)	160 (B)	0.2 (A)								

Notes:

- 1 - "ND" denotes analyte not detected at or above listed Reporting Limit.
- 2- "NA" denotes sample not analyzed for specific analyte.
- 3- "Reporting Limit" represents the laboratory lower quantitation limit.
- 4- Method A or B groundwater cleanup levels as published in the Model Toxics Control Act (MTCA) 173-340-WAC, amended 2/12/01.

Bold and Italics denotes concentrations above existing MTCA Method A groundwater cleanup levels.

## **APPENDIX-B**

### **Laboratory Reports**



FRIEDMAN & BRUYA, INC.

ENVIRONMENTAL CHEMISTS

James E. Bruya, Ph.D.  
Yelena Aravkina, M.S.  
Michael Erdahl, B.S.  
Arina Podnozova, B.S.  
Eric Young, B.S.

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www.friedmanandbruya.com

March 18, 2015

Rob Roe, Project Manager  
Environmental Associates, Inc.  
1380 112th Ave. NE, 300  
Bellevue, WA 98004

Dear Mr. Roe:

Included are the results from the testing of material submitted on March 11, 2015 from the Mac's 1-hour Cleaner, 20209-5, F&BI 503191 project. There are 13 pages included in this report. Any samples that may remain are currently scheduled for disposal in 30 days. If you would like us to return your samples or arrange for long term storage at our offices, please contact us as soon as possible.

We appreciate this opportunity to be of service to you and hope you will call if you have any questions.

Sincerely,

FRIEDMAN & BRUYA, INC.



Michael Erdahl  
Project Manager

Enclosures  
EAI0318R.DOC

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### CASE NARRATIVE

This case narrative encompasses samples received on March 11, 2015 by Friedman & Bruya, Inc. from the Environmental Associates Mac's 1-hour Cleaner, 20209-5, F&BI 503191 project. Samples were logged in under the laboratory ID's listed below.

<u>Laboratory ID</u>	<u>Environmental Associates</u>
503191 -01	MW-1
503191 -02	MW-2
503191 -03	MW-3
503191 -04	MW-4
503191 -05	MW-5
503191 -06	MW-6
503191 -07	MW-7
503191 -08	MW-8
503191 -09	MW-9

All quality control requirements were acceptable.

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-1	Client: Environmental Associates
Date Received: 03/11/15	Project: Mac's 1-hour Cleaner, 20209-5, F&BI 503191
Date Extracted: 03/12/15	Lab ID: 503191-01
Date Analyzed: 03/12/15	Data File: 031208.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

	% Recovery:	Lower Limit:	Upper Limit:
Surrogates:			
1,2-Dichloroethane-d4	114	85	117
Toluene-d8	94	91	108
4-Bromofluorobenzene	97	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-2	Client: Environmental Associates
Date Received: 03/11/15	Project: Mac's 1-hour Cleaner, 20209-5, F&BI 503191
Date Extracted: 03/12/15	Lab ID: 503191-02
Date Analyzed: 03/12/15	Data File: 031209.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

	% Recovery:	Lower Limit:	Upper Limit:
Surrogates:			
1,2-Dichloroethane-d4	109	85	117
Toluene-d8	98	91	108
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	33

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-3	Client: Environmental Associates
Date Received: 03/11/15	Project: Mac's 1-hour Cleaner, 20209-5, F&BI 503191
Date Extracted: 03/12/15	Lab ID: 503191-03
Date Analyzed: 03/12/15	Data File: 031210.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

	% Recovery:	Lower Limit:	Upper Limit:
Surrogates:			
1,2-Dichloroethane-d4	106	85	117
Toluene-d8	97	91	108
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	1.3
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.3
Tetrachloroethene	88

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-4	Client:	Environmental Associates
Date Received:	03/11/15	Project:	Mac's 1-hour Cleaner, 20209-5, F&BI 503191
Date Extracted:	03/12/15	Lab ID:	503191-04
Date Analyzed:	03/12/15	Data File:	031211.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	105	85	117
Toluene-d8	97	91	108
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	3.7

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-5	Client: Environmental Associates
Date Received: 03/11/15	Project: Mac's 1-hour Cleaner, 20209-5, F&BI 503191
Date Extracted: 03/12/15	Lab ID: 503191-05
Date Analyzed: 03/12/15	Data File: 031212.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

	% Recovery:	Lower Limit:	Upper Limit:
Surrogates:			
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	97	91	108
4-Bromofluorobenzene	100	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	5.7
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	1.3
Tetrachloroethene	22



# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-6	Client: Environmental Associates
Date Received: 03/11/15	Project: Mac's 1-hour Cleaner, 20209-5, F&BI 503191
Date Extracted: 03/12/15	Lab ID: 503191-06
Date Analyzed: 03/12/15	Data File: 031213.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

	% Recovery:	Lower Limit:	Upper Limit:
Surrogates:			
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	97	91	108
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	85

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-7	Client:	Environmental Associates
Date Received:	03/11/15	Project:	Mac's 1-hour Cleaner, 20209-5, F&BI 503191
Date Extracted:	03/12/15	Lab ID:	503191-07
Date Analyzed:	03/12/15	Data File:	031214.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	85	117
Toluene-d8	97	91	108
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	63

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID: MW-8	Client: Environmental Associates
Date Received: 03/11/15	Project: Mac's 1-hour Cleaner, 20209-5, F&BI 503191
Date Extracted: 03/12/15	Lab ID: 503191-08
Date Analyzed: 03/12/15	Data File: 031215.D
Matrix: Water	Instrument: GCMS9
Units: ug/L (ppb)	Operator: JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	101	85	117
Toluene-d8	96	91	108
4-Bromofluorobenzene	99	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	1.1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	MW-9	Client:	Environmental Associates
Date Received:	03/11/15	Project:	Mac's 1-hour Cleaner, 20209-5, F&BI 503191
Date Extracted:	03/12/15	Lab ID:	503191-09
Date Analyzed:	03/12/15	Data File:	031216.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	102	85	117
Toluene-d8	96	91	108
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	8.4

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Analysis For Volatile Compounds By EPA Method 8260C

Client Sample ID:	Method Blank	Client:	Environmental Associates
Date Received:	Not Applicable	Project:	Mac's 1-hour Cleaner, 20209-5, F&BI 503191
Date Extracted:	03/12/15	Lab ID:	05-0492 mb
Date Analyzed:	03/12/15	Data File:	031207.D
Matrix:	Water	Instrument:	GCMS9
Units:	ug/L (ppb)	Operator:	JS

Surrogates:	% Recovery:	Lower Limit:	Upper Limit:
1,2-Dichloroethane-d4	104	85	117
Toluene-d8	97	91	108
4-Bromofluorobenzene	98	76	126

Compounds:	Concentration ug/L (ppb)
Vinyl chloride	<0.2
Chloroethane	<1
1,1-Dichloroethene	<1
Methylene chloride	<5
trans-1,2-Dichloroethene	<1
1,1-Dichloroethane	<1
cis-1,2-Dichloroethene	<1
1,2-Dichloroethane (EDC)	<1
1,1,1-Trichloroethane	<1
Trichloroethene	<1
Tetrachloroethene	<1

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

Date of Report: 03/18/15

Date Received: 03/11/15

Project: Mac's 1-hour Cleaner, 20209-5, F&BI 503191

### QUALITY ASSURANCE RESULTS FOR THE ANALYSIS OF WATER SAMPLES FOR VOLATILES BY EPA METHOD 8260C

Laboratory Code: 503195-05 (Matrix Spike)

Analyte	Reporting Units	Spike Level	Sample Result	Percent	Acceptance Criteria
				Recovery MS	
Vinyl chloride	ug/L (ppb)	50	1,600	0 b	61-139
Chloroethane	ug/L (ppb)	50	<1	91	55-149
1,1-Dichloroethene	ug/L (ppb)	50	19	91 b	71-123
Methylene chloride	ug/L (ppb)	50	<5	89	61-126
trans-1,2-Dichloroethene	ug/L (ppb)	50	14	92 b	72-122
1,1-Dichloroethane	ug/L (ppb)	50	2.4	88	79-113
cis-1,2-Dichloroethene	ug/L (ppb)	50	1,500	0 b	63-126
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	<1	93	70-119
1,1,1-Trichloroethane	ug/L (ppb)	50	<1	98	75-121
Trichloroethene	ug/L (ppb)	50	3,000	316 b	75-109
Tetrachloroethene	ug/L (ppb)	50	4.9	95	72-113

Laboratory Code: Laboratory Control Sample

Analyte	Reporting Units	Spike Level	Percent	Percent	Acceptance Criteria	RPD (Limit 20)
			Recovery LCS	Recovery LCSD		
Vinyl chloride	ug/L (ppb)	50	104	102	70-119	2
Chloroethane	ug/L (ppb)	50	107	105	66-149	2
1,1-Dichloroethene	ug/L (ppb)	50	104	101	75-119	3
Methylene chloride	ug/L (ppb)	50	108	105	63-132	3
trans-1,2-Dichloroethene	ug/L (ppb)	50	105	102	76-118	3
1,1-Dichloroethane	ug/L (ppb)	50	102	100	80-116	2
cis-1,2-Dichloroethene	ug/L (ppb)	50	105	104	80-112	1
1,2-Dichloroethane (EDC)	ug/L (ppb)	50	107	105	79-109	2
1,1,1-Trichloroethane	ug/L (ppb)	50	107	106	80-116	1
Trichloroethene	ug/L (ppb)	50	101	101	77-108	0
Tetrachloroethene	ug/L (ppb)	50	95	95	78-109	0

# FRIEDMAN & BRUYA, INC.

## ENVIRONMENTAL CHEMISTS

### Data Qualifiers & Definitions

- a - The analyte was detected at a level less than five times the reporting limit. The RPD results may not provide reliable information on the variability of the analysis.
- b - The analyte was spiked at a level that was less than five times that present in the sample. Matrix spike recoveries may not be meaningful.
- ca - The calibration results for the analyte were outside of acceptance criteria. The value reported is an estimate.
- c - The presence of the analyte may be due to carryover from previous sample injections.
- cf - The sample was centrifuged prior to analysis.
- d - The sample was diluted. Detection limits were raised and surrogate recoveries may not be meaningful.
- dv - Insufficient sample volume was available to achieve normal reporting limits.
- f - The sample was laboratory filtered prior to analysis.
- fb - The analyte was detected in the method blank.
- fc - The compound is a common laboratory and field contaminant.
- hr - The sample and duplicate were reextracted and reanalyzed. RPD results were still outside of control limits. Variability is attributed to sample inhomogeneity.
- hs - Headspace was present in the container used for analysis.
- ht - The analysis was performed outside the method or client-specified holding time requirement.
- ip - Recovery fell outside of control limits. Compounds in the sample matrix interfered with the quantitation of the analyte.
- j - The analyte concentration is reported below the lowest calibration standard. The value reported is an estimate.
- J - The internal standard associated with the analyte is out of control limits. The reported concentration is an estimate.
- jl - The laboratory control sample(s) percent recovery and/or RPD were out of control limits. The reported concentration should be considered an estimate.
- js - The surrogate associated with the analyte is out of control limits. The reported concentration should be considered an estimate.
- lc - The presence of the analyte is likely due to laboratory contamination.
- L - The reported concentration was generated from a library search.
- nm - The analyte was not detected in one or more of the duplicate analyses. Therefore, calculation of the RPD is not applicable.
- pc - The sample was received with incorrect preservation or in a container not approved by the method. The value reported should be considered an estimate.
- ve - The analyte response exceeded the valid instrument calibration range. The value reported is an estimate.
- vo - The value reported fell outside the control limits established for this analyte.
- x - The sample chromatographic pattern does not resemble the fuel standard used for quantitation.



503191

## SAMPLE CHAIN OF CUSTODY

ME 63 3/11/15

Send Report To Environmental Associates, Inc.  
 Company Tri Western Investments, LLC  
 Address 10423 Main Street, Suite #4  
 City, State, ZIP Bellvue - WA 98007  
 Phone (425) 455-9025 Fax #(425) 455-2346

SAMPLERS (signature) <u>[Signature]</u>	PO#
PROJECT NAME/NO. <u>Mac's 1-hour Cleaner</u>	<u>20209-5</u>
REMARKS	

Page # 1 of 1

TURNAROUND TIME  
☒ Standard (2 Weeks)  
☐ RUSH  
 Rush charges authorized by \_\_\_\_\_

SAMPLE DISPOSAL  
☐ Dispose after 30 days  
☐ Return samples  
☐ Will call with instructions

Sample ID	Lab ID	Date Sampled	Time Sampled	Sample Type	# of containers	ANALYSES REQUESTED						Notes
						TPH-Diesel	TPH-Gasoline	BTEX by 8021B	VOCs by 8260	SVOCs by 8270	HFS	
MW-1	-01A-B	3/10/15		H <sub>2</sub> O	2				X			
MW-2	-02A-B	3/11/15			2				X			
MW-3	-03A-B	3/11/15			2				X			
MW-4	-04A-B	3/10/15			2				X			
MW-5	-05A-B	3/11/15			2				X			
MW-6	-06A-B	3/10/15			2				X			
MW-7	-07A-B	3/10/15			2				X			
MW-8	-08A-B	3/10/15			2				X			
MW-9	-09A-B	3/10/15		↓	2				X			
Samples received at 4 °C												

Friedman & Bruya, Inc.  
 3012 16th Avenue West  
 Seattle, WA 98119-2029  
 Ph. (206) 285-8282  
 Fax (206) 283-5044

SIGNATURE	PRINT NAME	COMPANY	DATE	TIME
<u>[Signature]</u>	Robert Roe	EMT	3/11/15	
<u>[Signature]</u>	Michael E. Dahl	Ph. Bme	3/11/15	1530
Relinquished by:				
Received by:				
Relinquished by:				
Received by:				