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January 31, 2020

Project No. 08-08-114

Pilot Travel Centers LLC  
5508 Lonas Drive  
Knoxville, Tennessee 37939-0146

Attn.: Mr. Joey Cupp - Director, Environmental

Re: Fourth Quarter 2019 Groundwater Monitoring Report, Pilot Travel Center #391,  
1600 East Pine Street, Central Point, Jackson County, Oregon  
Oregon DEQ File No. 15-10-0047

Dear Mr. Cupp:

Provided herein is the *Fourth Quarter 2019 Groundwater Monitoring Report* for Pilot Travel Center #391 located at 1600 East Pine Street, Central Point, Jackson County, Oregon. This report presents a summary of groundwater monitoring and sampling activities conducted during Fourth Quarter 2019.

Should you have questions or require additional information, please do not hesitate to contact us at (530) 566-1400.

Sincerely,  
BROADBENT & ASSOCIATES, INC.

Chelsea L. Meddings  
Senior Staff Scientist

Aric C. Morton, R.G., C.E.M.  
Principal Geologist



cc: Mr. Eric Clough, Oregon Department of Environmental Quality, Western Region Coos Bay Office  
Mr. Ray Heysell, Travel Center LLC., 3921 Cherry Lane, Medford, OR 97504

**FOURTH QUARTER 2019 GROUNDWATER MONITORING REPORT  
PILOT TRAVEL CENTER #391  
CENTRAL POINT, JACKSON COUNTY, OREGON**

Broadbent & Associates, Inc. (Broadbent) is pleased to present this *Fourth Quarter 2019 Groundwater Monitoring Report* on behalf of Pilot Travel Centers LLC (Pilot) associated with Pilot Travel Center #391 (PTC #391 or Site) located in Central Point, Jackson County, Oregon. Drawing 1 depicts the general location of the Site. Drawing 2 depicts the general area of investigation associated with the Site. Groundwater monitoring and sampling was performed to assist with evaluation of Site conditions associated with the release of diesel from dispenser T7. Details of work performed, discussion of results, and recommendations are provided below.

Facility Name / Address:	Pilot Travel Center #391 (PTC #391) 1600 East Pine Street, Central Point, Jackson County, Oregon
Pilot Project Manager / Title:	Mr. Joey Cupp - Director, Environmental, (865) 588-7488
Broadbent Contact:	Mr. Aric Morton, (530) 566-1400
Broadbent Project No.:	08-08-114
Primary Regulatory Agency / ID No.:	Oregon Department of Environmental Quality (DEQ) LUST Case #15-10-0047
Current phase of project:	Monitoring and evaluation of Site conditions
List of Acronyms / Abbreviations:	See end of report text for list of acronyms/abbreviations used in report.

**WORK PERFORMED THIS PERIOD (Fourth Quarter 2019):**

1. Prepared and submitted the *Third Quarter 2019 Groundwater Monitoring Report* on October 31, 2019.
2. Performed groundwater monitoring and sampling on November 22, 2019.

**WORK SCHEDULED FOR NEXT PERIOD (First Quarter 2020):**

1. Prepare and submit the *Fourth Quarter 2019 Groundwater Monitoring Report* (contained herein).
2. Conduct First Quarter 2020 groundwater monitoring and sampling in March 2020.

**QUARTERLY MONITORING PLAN SUMMARY:**

Groundwater level gauging:	MW-1 through MW-11	(quarterly)
Groundwater sample collection:	MW-1 through MW-11	(quarterly)
Biodegradation indicator parameter monitoring:	Not applicable.	(quarterly)

**QUARTERLY RESULTS SUMMARY:**

**LNAPL**

LNAPL observed this quarter:	Yes	(yes/no)
LNAPL recovered this quarter:	None	(gal)
Cumulative LNAPL recovered:	5 (LNAPL + water)	(gal)

**Groundwater Elevation and Gradient:**

Depth to groundwater:	13.81 (MW-4) to 16.37 (MW-11)	(ft below TOC)
Gradient direction:	East	(compass direction)
Gradient magnitude:	0.008	(ft/ft)
Average change in elevation:	-0.27	(ft since last measurement)

**Laboratory Analytical Data Summary:** GRO, DRO, and Naphthalene were detected above specific DEQ RBC levels in select wells (reported below).

## ACTIVITIES CONDUCTED & RESULTS:

Fourth Quarter 2019 groundwater monitoring and sampling activities were conducted on November 22, 2019. Wells MW-1 through MW-11 were monitored for depth to water and depth to LNAPL, if present. No irregularities were reported during gauging activities. Measured depths to groundwater ranged from 13.81 ft in well MW-4 to 16.37 ft in well MW-11. SoakEase absorbent socks installed in wells MW-3 and MW-6 were flipped to maximize absorption of any product present. Water level elevations yielded a horizontal groundwater gradient with a general direction to the East at an approximate magnitude of 0.008 ft/ft. Groundwater elevations decreased approximately 0.27 ft since Third Quarter 2019. Broadbent's groundwater monitoring and sampling field procedures are provided in Appendix A. Groundwater monitoring field data sheets are provided in Appendix B. Current and historical measured depths to groundwater and respective groundwater elevations are summarized in Table 1. Table 3 provides a history of calculated direction and magnitude of the groundwater gradient observed at the Site. Drawing 3 contains groundwater elevation contours and gradient data.

Groundwater samples were collected from wells MW-1 through MW-11 on November 22, 2019. No irregularities were reported during purging or sampling, with the exclusion that a grab sample was collected from well MW-2 without a full purge due to insufficient water. Samples were submitted under chain-of-custody protocol to Alpha Analytical for analysis of Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX) by EPA Method 8260C, Total Petroleum Hydrocarbons Gasoline Range Organics (GRO, carbon chain lengths C4 – C13) by Method Northwest Total Petroleum Hydrocarbons – Gasoline Extended (NWTPH-Gx), Diesel Range Organics (DRO, C13-C22) by Method NWTPH – Diesel Extended (NWTPH-Dx), and Semi-Volatile Organic Compounds (SVOCs) by EPA Method 8270 with Selected Ion Monitoring (SIM) for PAHs. No significant irregularities were reported by the laboratory, with the exception of: Reporting limits in samples MW-1, MW-3, and MW-6 were increased due to high concentrations of target analytes and DRO detections in well MW-6 may include contributions from lighter-end hydrocarbons that elute in the DRO range. Laboratory analytical results are summarized within Table 2, and the laboratory report is provided in Appendix C. Drawing 4 summarizes select groundwater constituents which were analyzed during this monitoring event. Isoconcentration contour maps for Fourth Quarter 2019 concentrations of DRO and GRO are provided as Drawings 5 and 6, respectively.

A review of Table 2 indicates the following general descriptions of notable detections observed during laboratory analysis:

- GRO was detected in three (3) samples with the highest concentration observed in MW-1 at 740 µg/L;
- DRO was detected in seven (7) samples at concentrations ranging from 430 µg/L in MW-11 to 6,600 µg/L in MW-3; and
- Naphthalene was detected in eight (8) samples with concentrations ranging from 0.084 µg/L in MW-5 to 8.0 µg/L in MW-1.
- Various SVOCs were detected in eight (8) samples with concentrations reported in Table 2.

## DISCUSSION:

Detected concentrations in collected samples were compared against the current May 2018 Oregon Department of Environmental Quality (DEQ) Risk Based Concentrations (RBCs) screening criteria, which include the following general exposure settings summarized in Table 2: residential, urban residential, occupational, and construction/excavation worker. Review of laboratory analytical results in Table 2 indicates that residual impacts above RBCs include the following: Naphthalene, DRO and/or GRO in samples MW-1, MW-3, MW-6 through MW-9, and MW-11 in an exposure to tap water scenario. However, by utilizing existing Site characteristics, certain potential exposure pathways may be eliminated as they are not viable pathways for exposure. The Site is provided with municipal water rather than an on-Site well, therefore exposure via tap water is not a viable exposure pathway. In addition, the Site is not used for residential purposes and the potential receptors of

Residential and Urban Residential may be eliminated as viable receptors. Accordingly, no residual concentrations appear to exceed applicable RBCs for this groundwater monitoring event. No other detected concentrations exceeded the RBCs, although several of the low laboratory detection limits were higher than the RBCs for certain analytes.

LNAPL was observed for the first time in well MW-6 during Third Quarter 2019 monitoring, necessitating the installation of a SoakEase absorbent sock. The SoakEase absorbent socks installed in wells MW-6 and MW-3 were flipped during Fourth Quarter 2019 monitoring to maximize product absorption. Both will be monitored, adjusted, and replaced as needed in First Quarter 2020.

#### **RECOMMENDATIONS:**

Based on Fourth Quarter 2019 groundwater monitoring and sampling results, it is recommended to continue with groundwater monitoring and sampling in accordance with the monitoring plan generally summarized above with the exception that it is requested to move to a semi-annual schedule. Proposed semi-annual monitoring and sampling would be performed during first and third quarters beginning with First Quarter 2020.

It is recommended that PAH (except Naphthalene), GRO, and BTEX analysis be discontinued. Accordingly, future groundwater samples will be analyzed for DRO and Naphthalene only. A formal response to this request would be appreciated.

#### **LIMITATIONS:**

The findings presented in this report are based upon observations of field personnel, points investigated, results of laboratory tests performed by Alpha Analytical Inc. of Sparks, Nevada and our understanding of Oregon Department of Environmental Quality practices. Our services were performed in accordance with the generally accepted standard of practice at the time this report was written. No other warranty expressed or implied was made. This report has been prepared for the exclusive use of Pilot Travel Centers LLC. It is possible that variations in soil or groundwater conditions could exist beyond points explored in this investigation. Also, changes in site conditions could occur in the future due to variations in rainfall, temperature, regional water usage, or other factors.

#### **REFERENCES:**

Broadbent & Associates, Inc., 2019. *Third Quarter 2019 Groundwater Monitoring Report*, Pilot Travel Center No. 391, 1600 E. Pine Street, Central Point, Jackson County, Oregon. October 31.

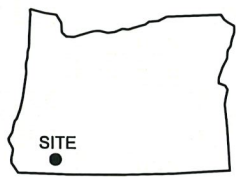
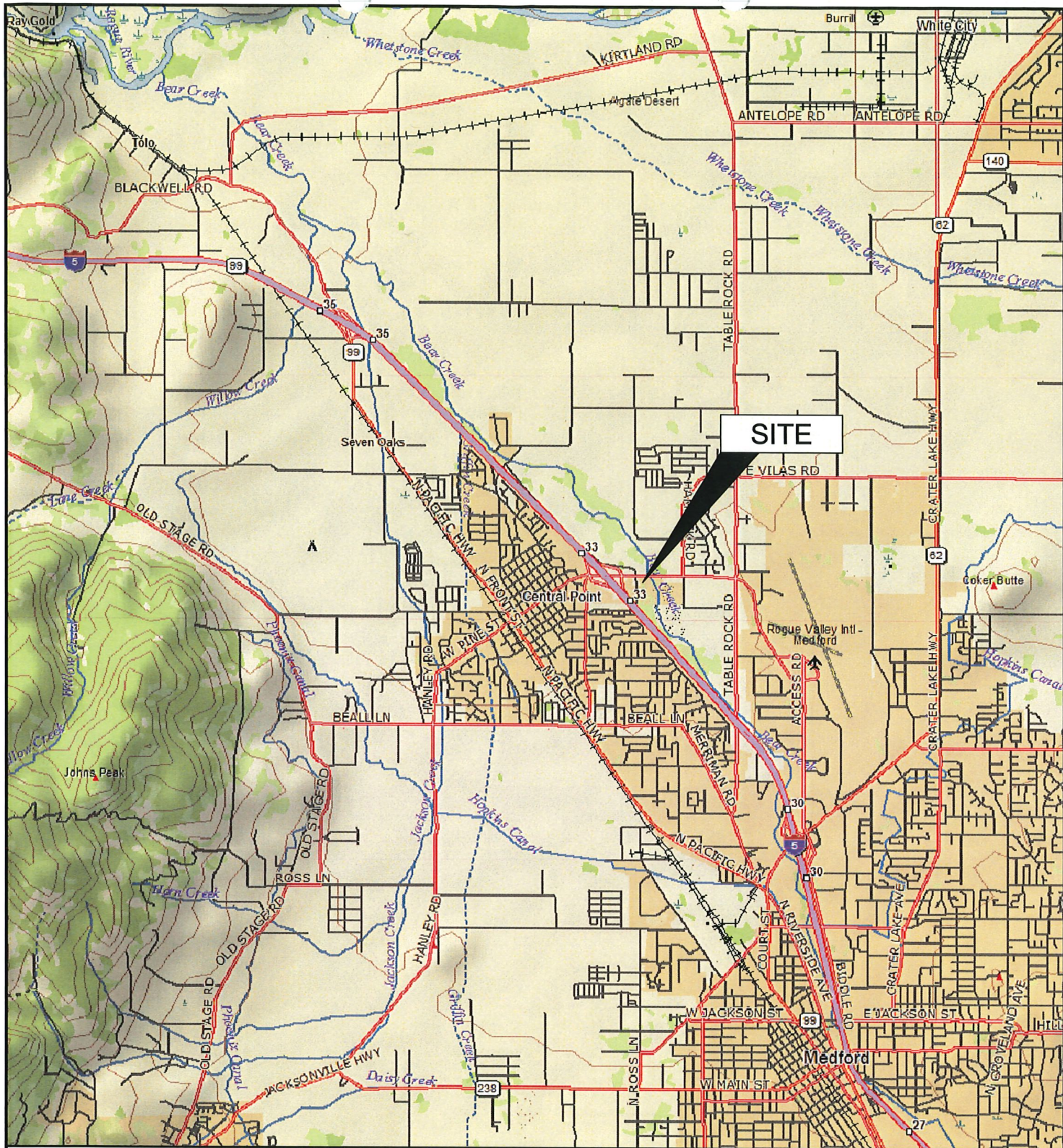
Oregon Department of Environmental Quality, 2018. *Risk-Based Decision Making for the Remediation of Petroleum Contaminated Sites*. May.

**ATTACHMENTS:**

- Drawing 1. Site Location Map
- Drawing 2. Site Map
- Drawing 3. Groundwater Elevation Contours Map
- Drawing 4. Groundwater Analytical Summary Map
- Drawing 5. DRO Isoconcentration Map
- Drawing 6. GRO Isoconcentration Map
  
- Table 1. Groundwater Elevation Data
- Table 2. Groundwater Analytical Data
- Table 3. Magnitude and Direction of Groundwater Gradient
  
- Appendix A: Field Methods
- Appendix B: Field Data Sheets
- Appendix C: Laboratory Report and Chain of Custody Documentation

**LIST OF COMMONLY USED ACCRONYMS/ABBREVIATIONS:**

BTEX:	benzene, toluene, ethylbenzene, total xylenes	LNAPL:	light non-aqueous phase liquid
DO:	dissolved oxygen	MTBE:	methyl tertiary butyl ether
DRO:	diesel range organics	NO <sub>3</sub> :	nitrate as nitrogen
Eh:	oxidation reduction potential	PAHs:	polycyclic aromatic hydrocarbons
Fe <sup>2+</sup> :	ferrous iron	SO <sub>4</sub> :	sulfate
ft/ft:	feet per foot	SVOCs:	semi-volatile organic compounds
gal:	gallons	TOC:	top of casing
GRO:	gasoline range organics	µg/L:	micrograms per liter
DEQ	Department of Environmental Quality	RBCs	Risk Based Concentrations



APPROXIMATE SCALE (mi)

IMAGE SOURCE: DELORME



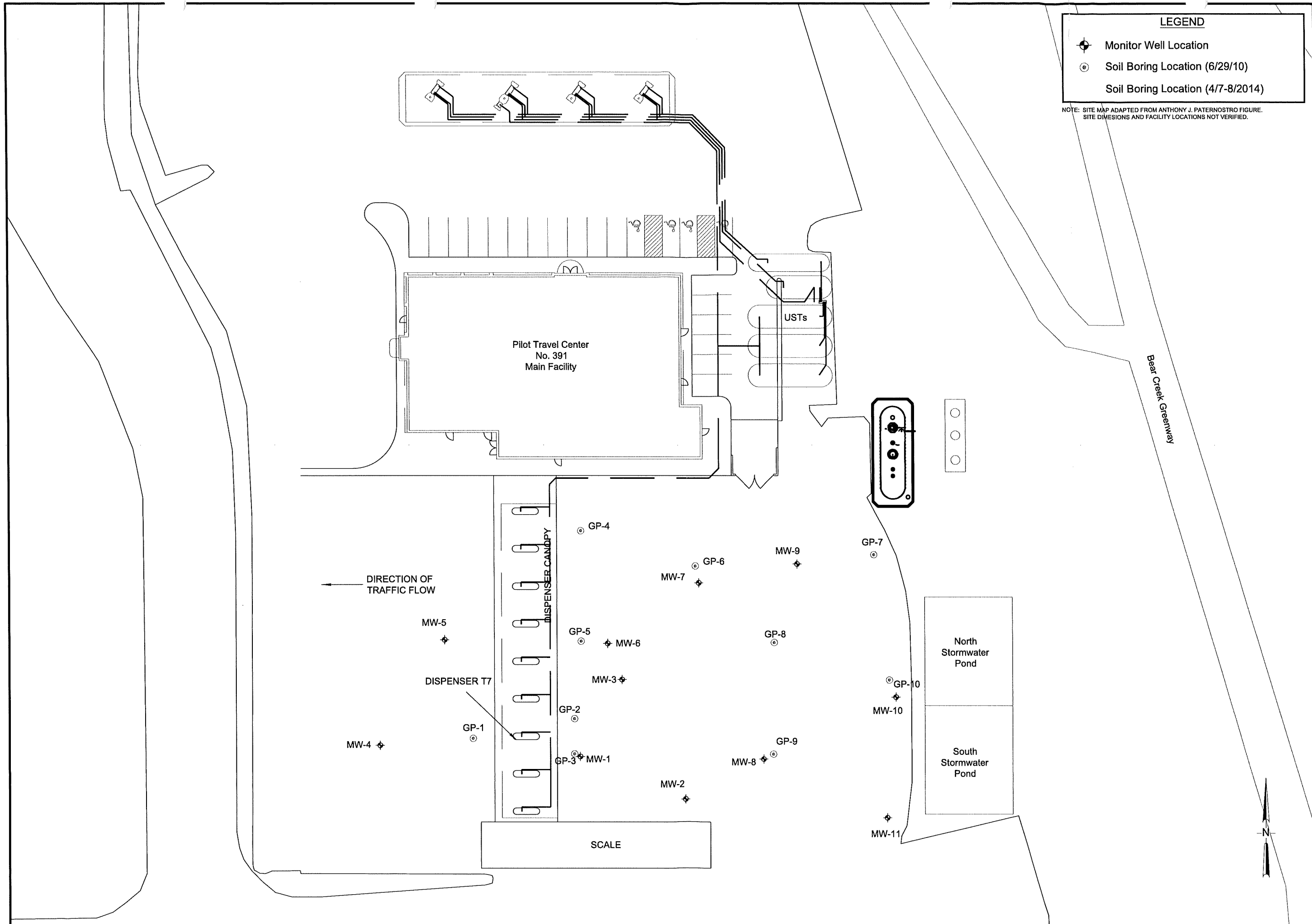
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Chico, California 95973  
Project No.: 08-08-114 Date: 1/26/2010

Pilot Travel Center # 391  
1600 E. Pine Street  
Central Point, Oregon

Site Location Map

Drawing

1



**LEGEND**


- ◆ Monitor Well Location
- ⊙ Soil Boring Location (6/29/10)
- ⊙ Soil Boring Location (4/7-8/2014)

NOTE: SITE MAP ADAPTED FROM ANTHONY J. PATERNOSTRO FIGURE.  
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

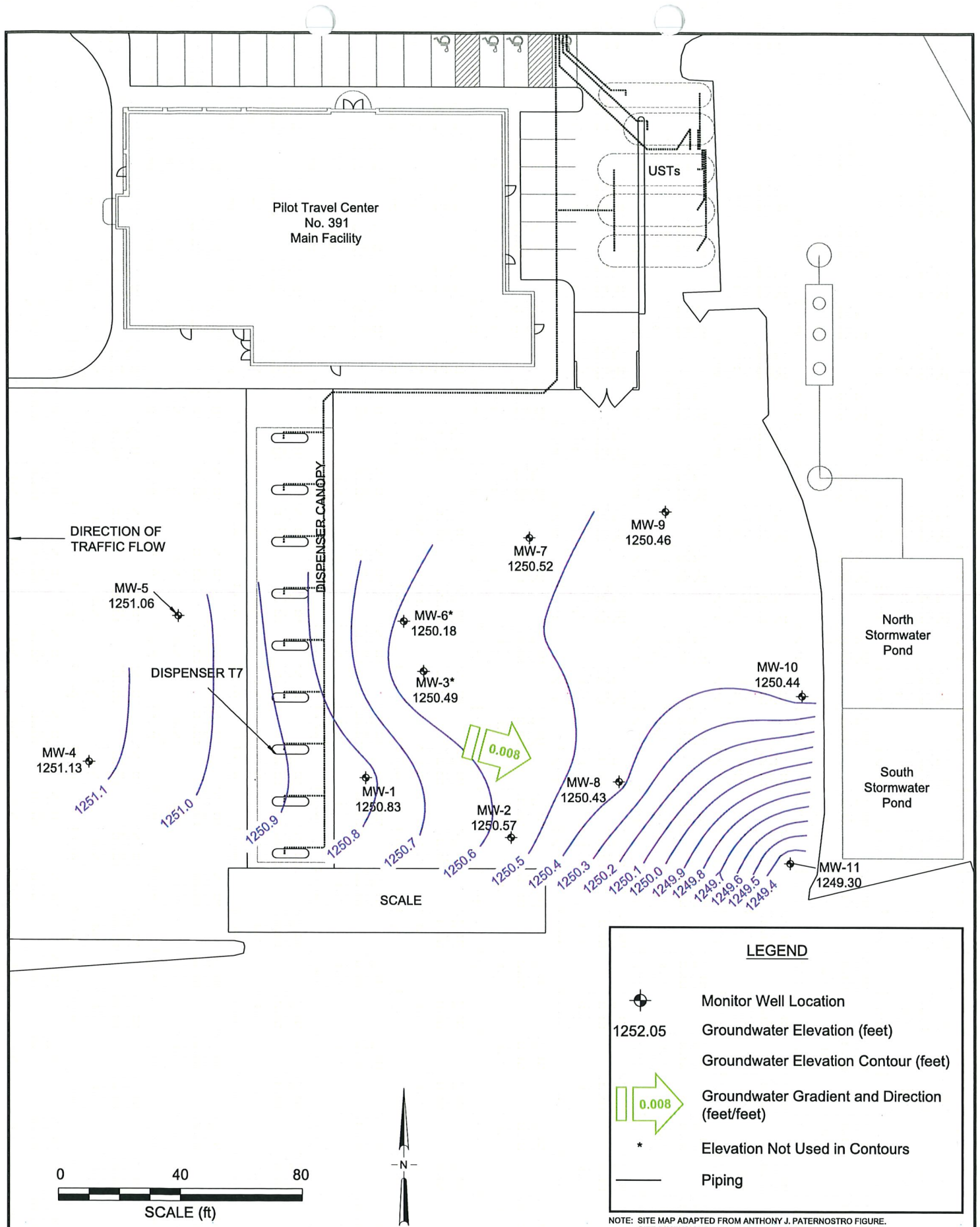
Drawing 2

Site Map



Pilot Travel center #391  
1600 E. Pine Street  
Central Point, Oregon


**BROADBENT**  
 1370 Ridgewood Dr., Suite 5  
 Chico, California 95973  
 Project No.: 08-08-114 Date: 7/23/2014

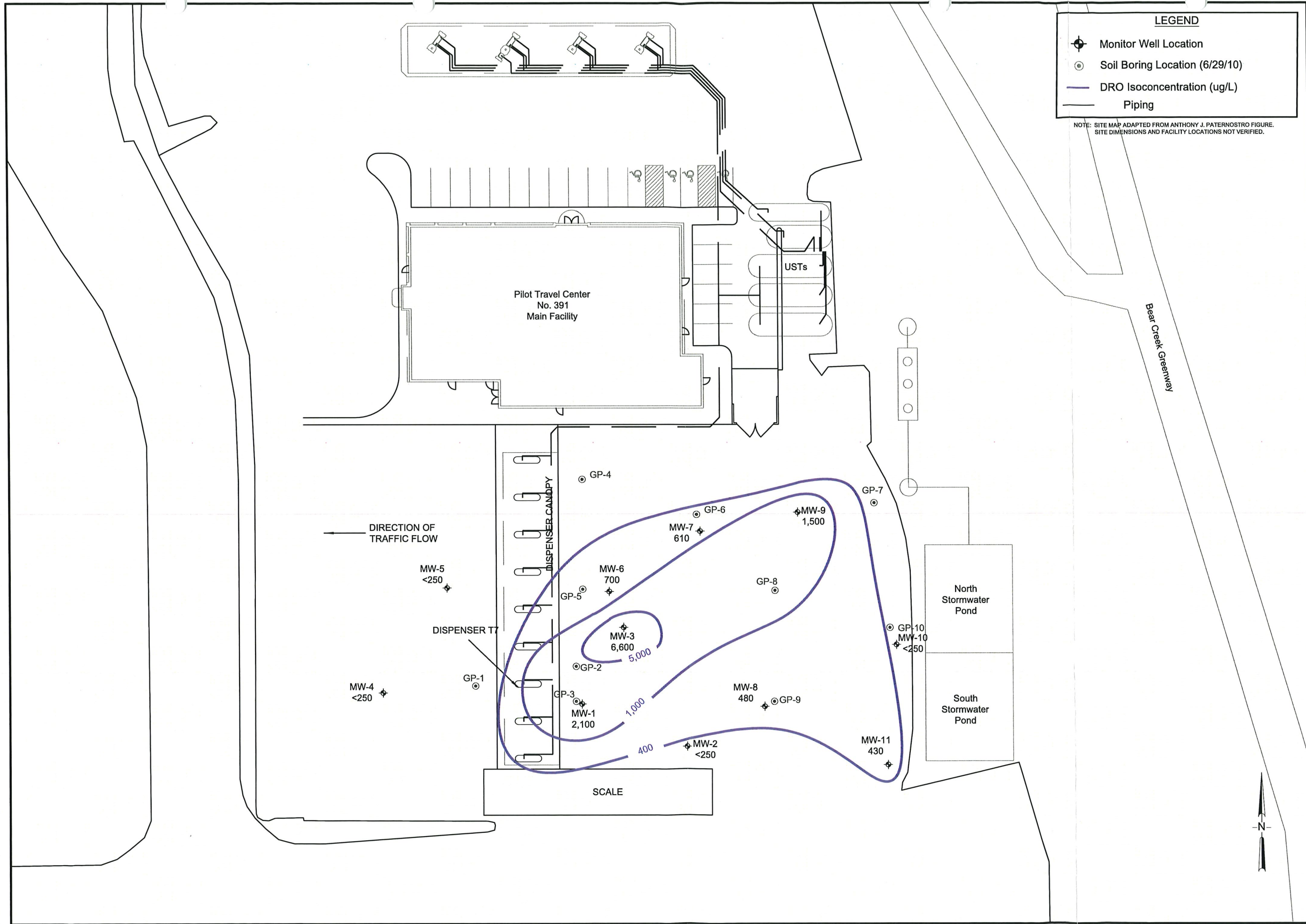
0 50 100  
 SCALE (ft)



**LEGEND**

-  Monitor Well Location
- 1252.05 Groundwater Elevation (feet)
- Groundwater Elevation Contour (feet)
-  Groundwater Gradient and Direction (feet/feet)
- \* Elevation Not Used in Contours
- Piping

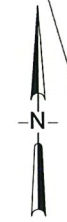
NOTE: SITE MAP ADAPTED FROM ANTHONY J. PATERNOSTRO FIGURE. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

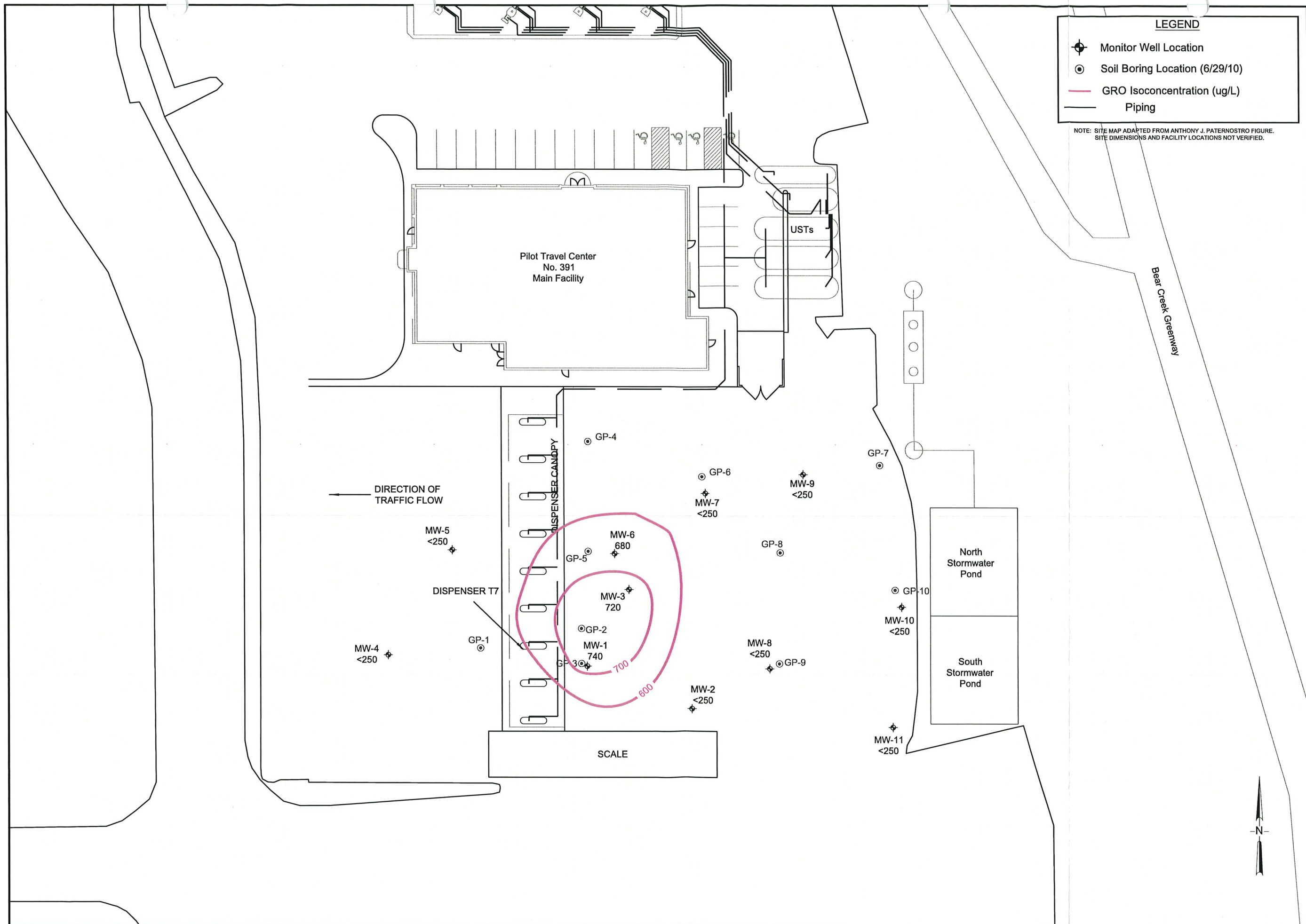


**LEGEND**

- ⊕ Monitor Well Location
- ⊙ Soil Boring Location (6/29/10)
- DRO Isoconcentration (ug/L)
- Piping

NOTE: SITE MAP ADAPTED FROM ANTHONY J. PATERNOSTRO FIGURE. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.





**LEGEND**

- ⊕ Monitor Well Location
- ⊙ Soil Boring Location (6/29/10)
- GRO Isoconcentration (ug/L)
- Piping

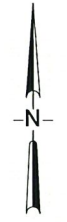
NOTE: SITE MAP ADAPTED FROM ANTHONY J. PATERNOSTRO FIGURE. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

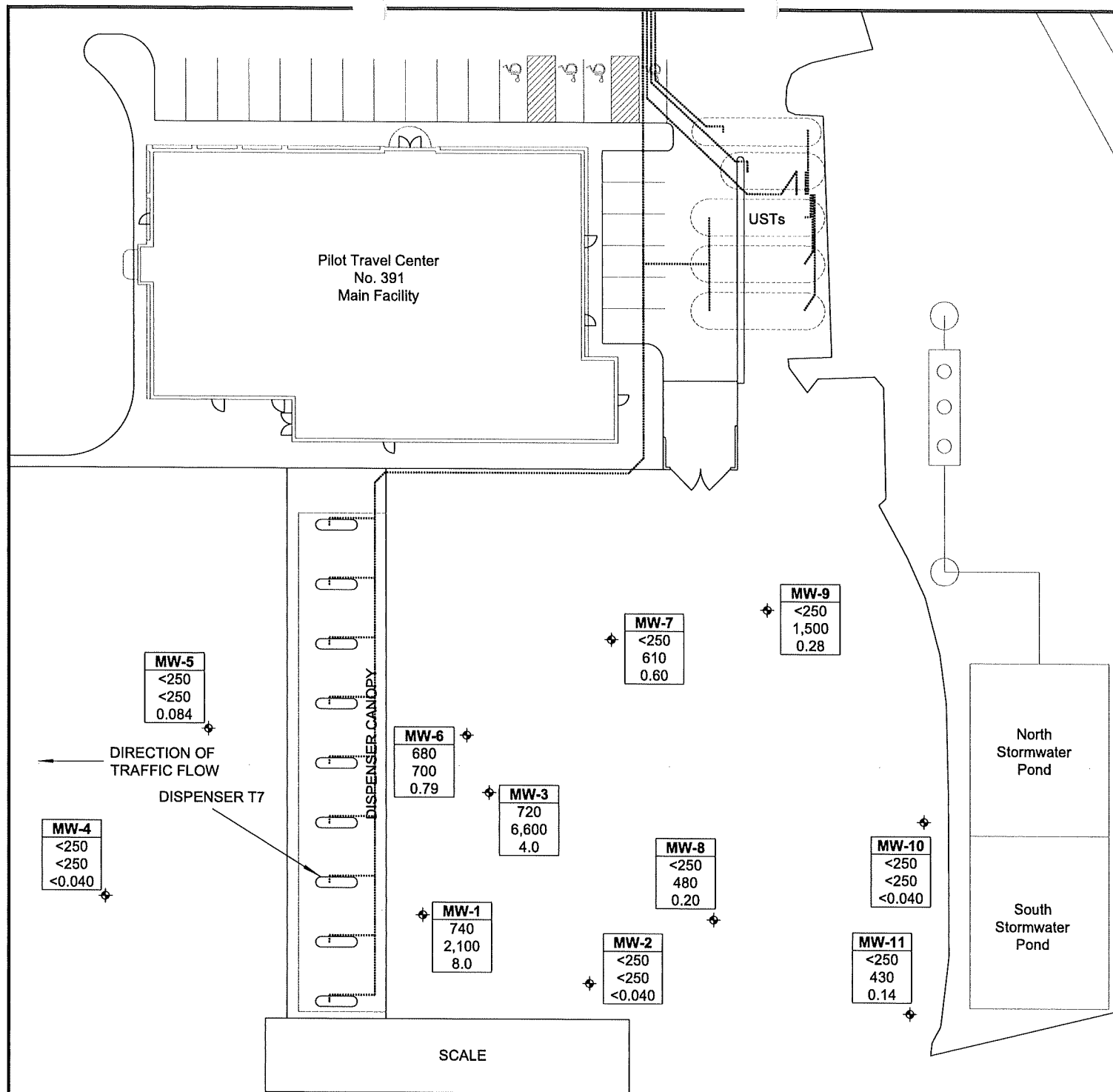
Drawing  
**6**

GRO Isoconcentration Map  
Fourth Quarter  
November 22, 2019

Pilot Travel center #391  
1600 E. Pine Street  
Central Point, Oregon

**BROADBENT**  
1370 Ridgewood Dr., Suite 5  
Chico, California 95973  
Project No.: 08-08-114 Date: 12/11/2019





NOTE: SITE MAP ADAPTED FROM ANTHONY J. PATERNOSTRO FIGURE.  
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

**LEGEND**

⊕ Monitor Well Location

<b>MW-1</b>	Well I.D.
1,400	GRO (µg/L)
8,200	DRO (µg/L)
7.3	Naphthalene (µg/L)

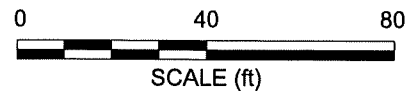


TABLE 1  
GROUNDWATER ELEVATION DATA  
PILOT TRAVEL CENTER #391  
1600 E. PINE STREET  
CENTRAL POINT, JACKSON COUNTY, OREGON

MONITOR WELL	DATE	MEASURED TOTAL DEPTH OF WELL (ft bgs)	DEPTH TO WATER (ft btoc)	DEPTH TO PRODUCT (ft btoc)	PRODUCT THICKNESS (ft)	MONITOR WELL TOP OF CASING (ft)	GROUNDWATER ELEVATION (ft)	PRODUCT ELEVATION (ft)	GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS (ft)
MW-1	11/17/2011	19.32	15.16	-	0.00	1,265.88	1,250.72	-	1,250.72
	3/5/2012	19.51	14.36	-	0.00		1,251.52	-	1,251.52
	5/7/2012	19.31	14.37	-	0.00		1,251.51	-	1,251.51
	7/31/2012	19.5	14.65	-	0.00		1,251.23	-	1,251.23
	12/6/2012	19.52	13.21	-	0.00		1,252.67	-	1,252.67
	3/4/2013	19.52	14.24	-	0.00		1,251.64	-	1,251.64
	6/10/2013	19.50	14.69	-	0.00		1,251.19	-	1,251.19
	8/29/2013	19.50	14.72	-	0.00		1,251.16	-	1,251.16
	12/9/2013	19.52	14.46	-	0.00		1,251.42	-	1,251.42
	3/27/2014	19.52	13.74	-	0.00		1,252.14	-	1,252.14
	6/19/2014	19.52	14.39	-	0.00		1,251.49	-	1,251.49
	8/22/2014	19.51	14.53	-	0.00		1,251.35	-	1,251.35
	11/20/2014	19.52	13.99	-	0.00		1,251.89	-	1,251.89
	3/16/2015	19.53	13.25	-	0.00		1,252.63	-	1,252.63
	6/19/2015	19.53	14.16	-	0.00		1,251.72	-	1,251.72
	9/21/2015	19.54	14.27	-	0.00		1,251.61	-	1,251.61
	12/7/2015	19.53	13.74	-	0.00		1,252.14	-	1,252.14
	3/7/2016	19.53	12.68	-	0.00		1,253.20	-	1,253.20
	6/15/2016	19.54	13.64	-	0.00		1,252.24	-	1,252.24
	9/18/2016	19.51	13.89	-	0.00		1,251.99	-	1,251.99
	11/14/2016	19.51	14.37	-	0.00		1,251.51	-	1,251.51
	3/19/2017	19.53	13.20	-	0.00		1,252.68	-	1,252.68
	6/19/2017	19.51	14.58	-	0.00		1,251.30	-	1,251.30
	9/18/2017	19.50	15.08	-	0.00		1,250.80	-	1,250.80
	12/5/2017	NM	14.64	14.60	0.04		1,251.24	1,251.28	1,251.28
	3/16/2018	19.54	14.67	-	0.00		1,251.21	-	1,251.21
	6/19/2018	19.53	15.01	-	0.00		1,250.87	-	1,250.87
	9/24/2018	19.38	16.31	-	0.00		1,249.57	-	1,249.57
	11/30/2018	19.53	15.52	-	0.00		1,250.36	-	1,250.36
	3/18/2019	19.53	13.83	-	0.00		1,252.05	-	1,252.05
	6/13/2019	19.53	14.34	-	0.00		1,251.54	-	1,251.54
	9/11/2019	19.53	15.05	-	0.00		1,250.83	-	1,250.83
	11/22/2019	19.39	15.05	-	0.00		1,250.83	-	1,250.83
MW-2	11/17/2011	19.45	15.59	-	0.00	1,266.12	1,250.53	-	1,250.53
	3/5/2012	19.65	14.84	-	0.00		1,251.28	-	1,251.28
	5/7/2012	19.45	14.87	-	0.00		1,251.25	-	1,251.25
	7/31/2012	19.65	15.17	-	0.00		1,250.95	-	1,250.95
	12/6/2012	19.65	13.48	-	0.00		1,252.64	-	1,252.64
	3/4/2013	19.65	14.65	-	0.00		1,251.47	-	1,251.47
	6/10/2013	19.65	15.11	-	0.00		1,251.01	-	1,251.01
	8/29/2013	19.65	15.09	-	0.00		1,251.03	-	1,251.03
	12/9/2013	19.65	14.86	-	0.00		1,251.26	-	1,251.26
	3/27/2014	19.65	14.09	-	0.00		1,252.03	-	1,252.03
	6/19/2014	19.65	14.86	-	0.00		1,251.26	-	1,251.26
	8/22/2014	19.65	14.94	-	0.00		1,251.18	-	1,251.18
	11/20/2014	19.65	14.40	-	0.00		1,251.72	-	1,251.72
	3/16/2015	19.86	13.64	-	0.00		1,252.48	-	1,252.48
	6/19/2015	19.86	14.53	-	0.00		1,251.59	-	1,251.59
	9/21/2015	19.68	14.76	-	0.00		1,251.36	-	1,251.36
	12/7/2015	19.68	14.08	-	0.00		1,252.04	-	1,252.04
	3/7/2016	19.67	13.19	-	0.00		1,252.93	-	1,252.93
	6/15/2016	19.68	14.19	-	0.00		1,251.93	-	1,251.93
	9/19/2016	19.66	14.41	-	0.00		1,251.71	-	1,251.71
	11/14/2016	19.65	14.74	-	0.00		1,251.38	-	1,251.38
	3/19/2017	19.67	13.67	-	0.00		1,252.45	-	1,252.45
	6/20/2017	19.65	15.02	-	0.00		1,251.10	-	1,251.10
	9/18/2017	19.61	15.56	-	0.00		1,250.56	-	1,250.56
	12/5/2017	19.64	14.90	-	0.00		1,251.22	-	1,251.22
	3/16/2018	19.60	14.90	-	0.00		1,251.22	-	1,251.22
	6/19/2018	19.65	15.84	-	0.00		1,250.28	-	1,250.28
	9/24/2018	19.65	15.67	-	0.00		1,250.45	-	1,250.45
	11/30/2018	19.66	15.42	-	0.00		1,250.70	-	1,250.70
	3/18/2019	19.67	13.92	-	0.00		1,252.20	-	1,252.20
	6/13/2019	19.65	14.78	-	0.00		1,251.34	-	1,251.34
	9/11/2019	19.64	15.47	-	0.00		1,250.65	-	1,250.65
	11/22/2019	19.68	15.55	-	0.00		1,250.67	-	1,250.67

TABLE 1  
GROUNDWATER ELEVATION DATA  
PILOT TRAVEL CENTER #391  
1600 E. PINE STREET  
CENTRAL POINT, JACKSON COUNTY, OREGON

MONITOR WELL	DATE	MEASURED TOTAL DEPTH OF WELL (ft bgs)	DEPTH TO WATER (ft btoc)	DEPTH TO PRODUCT (ft btoc)	PRODUCT THICKNESS (ft)	MONITOR WELL TOP OF CASING (ft)	GROUNDWATER ELEVATION (ft)	PRODUCT ELEVATION (ft)	GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS (ft)
MW-3	11/17/2011	NM	14.74	14.72	0.02	1,265.40	1,250.66	1,251.16	1,250.68
	3/5/2012	NM	14.03	14.01	0.02		1,251.37	1,251.87	1,251.39
	5/7/2012	NM	14.00	13.98	0.02		1,251.40	1,251.90	1,251.42
	7/31/2012	19.65	14.47	-	0.00		1,250.93	-	1,250.93
	12/6/2012	19.65	13.22	-	0.00		1,252.18	-	1,252.18
	3/4/2013	19.65	14.17	-	0.00		1,251.23	-	1,251.23
	6/10/2013	19.64	14.44	-	0.00		1,250.96	-	1,250.96
	8/29/2013	19.63	14.55	-	0.00		1,250.85	-	1,250.85
	12/9/2013	19.63	14.11	-	0.00		1,251.29	-	1,251.29
	3/27/2014	19.63	13.41	-	0.00		1,251.99	-	1,251.99
	6/19/2014	19.65	14.12	-	0.00		1,251.28	-	1,251.28
	8/22/2014	19.65	14.23	-	0.00		1,251.17	-	1,251.17
	11/20/2014	19.64	13.57	-	0.00		1,251.83	-	1,251.83
	3/16/2015	19.65	12.78	-	0.00		1,252.62	-	1,252.62
	6/19/2015	19.65	13.61	-	0.00		1,251.79	-	1,251.79
	9/21/2015	19.65	13.74	-	0.00		1,251.66	-	1,251.66
	12/7/2015	19.65	13.17	-	0.00		1,252.23	-	1,252.23
	3/7/2016	19.65	12.24	-	0.00		1,253.16	-	1,253.16
	6/15/2016	19.63	13.08	-	0.00		1,252.32	-	1,252.32
	9/19/2016	19.64	13.36	-	0.00		1,252.04	-	1,252.04
	11/14/2016	19.65	13.98	-	0.00		1,251.42	-	1,251.42
	3/20/2017	19.66	12.98	-	0.00		1,252.42	-	1,252.42
	6/19/2017	19.62	14.25	-	0.00		1,251.15	-	1,251.15
	9/18/2017	19.64	14.73	-	0.00		1,250.67	-	1,250.67
	9/18/2017	19.66	14.45	-	0.00		1,250.95	-	1,250.95
	3/16/2018	19.64	14.21	-	0.00		1,251.19	-	1,251.19
	6/19/2018	19.63	14.83	-	0.00		1,250.57	-	1,250.57
	9/24/2018	19.49	15.03	-	0.00		1,250.37	-	1,250.37
	11/30/2018	NM	14.81	14.69	0.12		1,250.59	1,251.19	1,250.70
	3/18/2019	19.64	13.21	---	0.00		1,252.19	---	1,252.19
6/13/2019	19.63	14.05	---	0.00		1,251.35	---	1,251.35	
9/11/2019	19.65	14.76	---	0.00		1,250.64	---	1,250.64	
11/22/2019	19.66	14.91	---	0.00		1,250.49	---	1,250.49	
MW-4	11/17/2011	18.99	13.90	-	0.00	1,264.94	1,251.04	-	1,251.04
	3/5/2012	19.18	13.05	-	0.00		1,251.89	-	1,251.89
	5/7/2012	18.98	13.05	-	0.00		1,251.89	-	1,251.89
	7/31/2012	19.18	13.29	-	0.00		1,251.65	-	1,251.65
	12/6/2012	19.19	12.10	-	0.00		1,252.84	-	1,252.84
	3/4/2013	19.18	13.04	-	0.00		1,251.90	-	1,251.90
	6/10/2013	19.18	13.50	-	0.00		1,251.44	-	1,251.44
	8/29/2013	19.20	13.67	-	0.00		1,251.27	-	1,251.27
	12/9/2013	19.20	13.44	-	0.00		1,251.50	-	1,251.50
	3/27/2014	19.20	12.56	-	0.00		1,252.38	-	1,252.38
	6/19/2014	19.18	13.23	-	0.00		1,251.71	-	1,251.71
	8/22/2014	19.20	13.46	-	0.00		1,251.48	-	1,251.48
	11/20/2014	19.10	12.98	-	0.00		1,251.96	-	1,251.96
	3/16/2015	19.19	12.25	-	0.00		1,252.69	-	1,252.69
	6/19/2015	19.19	13.07	-	0.00		1,251.87	-	1,251.87
	9/21/2015	19.20	13.38	-	0.00		1,251.56	-	1,251.56
	12/7/2015	19.19	12.99	-	0.00		1,251.95	-	1,251.95
	3/7/2016	19.20	11.75	-	0.00		1,253.19	-	1,253.19
	6/15/2016	19.17	12.78	-	0.00		1,252.16	-	1,252.16
	9/18/2016	19.18	13.13	-	0.00		1,251.81	-	1,251.81
	11/14/2016	19.19	13.14	-	0.00		1,251.80	-	1,251.80
	3/19/2017	19.20	11.91	-	0.00		1,253.03	-	1,253.03
	6/19/2017	19.19	13.23	-	0.00		1,251.71	-	1,251.71
	9/18/2017	19.19	13.79	-	0.00		1,251.15	-	1,251.15
	12/5/2017	19.18	13.38	-	0.00		1,251.56	-	1,251.56
	3/16/2018	19.18	13.29	-	0.00		1,251.65	-	1,251.65
6/19/2018	19.20	13.58	-	0.00		1,251.36	-	1,251.36	
9/24/2018	19.18	13.97	-	0.00		1,250.97	-	1,250.97	
11/30/2018	19.00	13.87	-	0.00		1,251.07	-	1,251.07	
3/18/2019	19.16	12.14	-	0.00		1,252.80	-	1,252.80	
6/13/2019	19.12	12.99	-	0.00		1,251.95	-	1,251.95	
9/11/2019	19.18	13.24	-	0.00		1,251.70	-	1,251.70	
11/22/2019	19.18	13.81	-	0.00		1,251.13	-	1,251.13	
MW-5	9/18/2016	19.95	14.15	-	0.00	1,266.01	1,251.86	-	1,251.86
	11/14/2016	19.95	14.26	-	0.00		1,251.75	-	1,251.75
	3/20/2017	19.99	13.07	-	0.00		1,252.94	-	1,252.94
	6/19/2017	19.97	14.36	-	0.00		1,251.65	-	1,251.65
	9/18/2017	19.97	15.90	-	0.00		1,250.11	-	1,250.11
	12/5/2017	19.95	14.49	-	0.00		1,251.52	-	1,251.52
	3/16/2018	19.99	14.44	-	0.00		1,251.57	-	1,251.57
	6/19/2018	19.95	14.73	-	0.00		1,251.28	-	1,251.28
	9/24/2018	19.95	15.10	-	0.00		1,250.91	-	1,250.91
	11/30/2018	19.98	14.99	-	0.00		1,251.02	-	1,251.02
	3/18/2019	19.78	13.29	-	0.00		1,252.72	-	1,252.72
	6/13/2019	19.95	14.16	-	0.00		1,251.85	-	1,251.85
9/11/2019	19.95	14.87	-	0.00		1,251.14	-	1,251.14	
11/22/2019	19.79	14.95	-	0.00		1,251.06	-	1,251.06	

TABLE 1  
GROUNDWATER ELEVATION DATA  
PILOT TRAVEL CENTER #391  
1600 E. PINE STREET  
CENTRAL POINT, JACKSON COUNTY, OREGON

MONITOR WELL	DATE	MEASURED TOTAL DEPTH OF WELL (ft bgs)	DEPTH TO WATER (ft btoc)	DEPTH TO PRODUCT (ft btoc)	PRODUCT THICKNESS (ft)	MONITOR WELL TOP OF CASING (ft)	GROUNDWATER ELEVATION (ft)	PRODUCT ELEVATION (ft)	GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS (ft)
MW-6	9/18/2016	20.1	13.69	-	0.00	1,265.80	1,252.11	-	1,252.11
	11/14/2016	20.08	14.43	-	0.00		1,251.37	-	1,251.37
	3/20/2017	20.13	13.45	-	0.00		1,252.35	-	1,252.35
	6/19/2017	20.09	14.64	-	0.00		1,251.16	-	1,251.16
	9/18/2017	20.10	15.19	-	0.00		1,250.61	-	1,250.61
	12/5/2017	20.10	14.62	-	0.00		1,251.18	-	1,251.18
	3/16/2018	20.11	14.60	-	0.00		1,251.20	-	1,251.20
	6/19/2018	20.09	14.96	-	0.00		1,250.84	-	1,250.84
	9/24/2018	20.10	15.32	-	0.00		1,250.48	-	1,250.48
	11/30/2018	20.11	15.05	-	0.00		1,250.75	-	1,250.75
	3/18/2019	19.93	13.71	-	0.00		1,252.09	-	1,252.09
	6/13/2019	20.19	14.44	-	0.00		1,251.36	-	1,251.36
	9/11/2019	-	15.15	15.13	0.02		1,250.65	1,250.75	1,250.67
	11/22/2019	20.12	15.62	-	0.00		1,250.18	-	1,250.18
MW-7	9/18/2016	19.95	13.25	-	0.00	1,265.36	1,252.11	-	1,252.11
	11/15/2016	19.92	13.96	-	0.00		1,251.40	-	1,251.40
	3/19/2017	19.99	13.22	-	0.00		1,252.14	-	1,252.14
	6/20/2017	19.96	14.38	-	0.00		1,250.98	-	1,250.98
	9/18/2017	19.97	14.85	-	0.00		1,250.51	-	1,250.51
	12/5/2017	19.97	14.27	-	0.00		1,251.09	-	1,251.09
	3/16/2018	19.98	14.25	-	0.00		1,251.11	-	1,251.11
	6/19/2018	19.97	14.64	-	0.00		1,250.72	-	1,250.72
	9/24/2018	19.96	14.98	-	0.00		1,250.38	-	1,250.38
	11/30/2018	19.98	14.69	-	0.00		1,250.67	-	1,250.67
	3/18/2019	19.98	13.45	-	0.00		1,251.91	-	1,251.91
	6/13/2019	19.96	14.16	-	0.00		1,251.20	-	1,251.20
	9/11/2019	19.95	14.77	-	0.00		1,250.59	-	1,250.59
	11/22/2019	19.97	14.84	-	0.00		1,250.52	-	1,250.52
MW-8	9/18/2016	20.06	13.43	-	0.00	1,264.97	1,251.54	-	1,251.54
	11/15/2016	20.06	13.31	-	0.00		1,251.66	-	1,251.66
	3/19/2017	20.07	12.68	-	0.00		1,252.29	-	1,252.29
	6/19/2017	20.09	14.02	-	0.00		1,250.95	-	1,250.95
	9/18/2017	20.10	14.57	-	0.00		1,250.40	-	1,250.40
	12/5/2017	20.56	13.81	-	0.00		1,251.16	-	1,251.16
	3/16/2018	20.09	13.81	-	0.00		1,251.16	-	1,251.16
	6/19/2018	20.06	14.29	-	0.00		1,250.68	-	1,250.68
	9/24/2018	20.07	14.68	-	0.00		1,250.29	-	1,250.29
	11/30/2018	20.09	14.31	-	0.00		1,250.66	-	1,250.66
	3/18/2019	19.89	12.96	-	0.00		1,252.01	-	1,252.01
	6/13/2019	20.07	13.78	-	0.00		1,251.19	-	1,251.19
	9/11/2019	20.05	14.47	-	0.00		1,250.50	-	1,250.50
	11/22/2019	20.17	14.54	-	0.00		1,250.43	-	1,250.43
MW-9	9/18/2016	19.92	13.78	-	0.00	1,265.71	1,251.93	-	1,251.93
	11/15/2016	19.93	14.24	-	0.00		1,251.47	-	1,251.47
	3/19/2017	19.94	13.58	-	0.00		1,252.13	-	1,252.13
	6/20/2017	19.92	14.80	-	0.00		1,250.91	-	1,250.91
	9/18/2017	19.93	15.26	-	0.00		1,250.45	-	1,250.45
	12/5/2017	19.93	14.61	-	0.00		1,251.10	-	1,251.10
	3/16/2018	19.95	14.59	-	0.00		1,251.12	-	1,251.12
	6/19/2018	19.92	15.01	-	0.00		1,250.70	-	1,250.70
	9/24/2018	19.92	15.35	-	0.00		1,250.36	-	1,250.36
	11/30/2018	19.94	15.04	-	0.00		1,250.67	-	1,250.67
	3/18/2019	19.94	13.80	-	0.00		1,251.91	-	1,251.91
	6/13/2019	19.92	14.54	-	0.00		1,251.17	-	1,251.17
	9/12/2019	19.93	15.06	-	0.00		1,250.65	-	1,250.65
	11/22/2019	19.96	15.25	-	0.00		1,250.46	-	1,250.46
MW-10	9/18/2016	20.13	14.28	-	0.00	1,265.72	1,251.44	-	1,251.44
	11/15/2016	20.14	13.27	-	0.00		1,252.45	-	1,252.45
	3/20/2017	20.15	13.77	-	0.00		1,251.95	-	1,251.95
	6/20/2017	20.14	14.82	-	0.00		1,250.90	-	1,250.90
	9/18/2017	20.14	15.35	-	0.00		1,250.37	-	1,250.37
	12/4/2017	20.13	14.35	-	0.00		1,251.37	-	1,251.37
	3/16/2018	20.15	14.44	-	0.00		1,251.28	-	1,251.28
	6/19/2018	20.13	14.90	-	0.00		1,250.82	-	1,250.82
	9/24/2018	20.13	15.34	-	0.00		1,250.38	-	1,250.38
	11/30/2018	20.15	14.74	-	0.00		1,250.98	-	1,250.98
	3/18/2019	20.16	13.93	-	0.00		1,251.79	-	1,251.79
	6/13/2019	20.13	14.59	-	0.00		1,251.13	-	1,251.13
	9/12/2019	20.13	15.11	-	0.00		1,250.61	-	1,250.61
	11/22/2019	20.13	15.28	-	0.00		1,250.44	-	1,250.44

TABLE 1  
GROUNDWATER ELEVATION DATA  
PILOT TRAVEL CENTER #391  
1600 E. PINE STREET  
CENTRAL POINT, JACKSON COUNTY, OREGON

MONITOR WELL	DATE	MEASURED TOTAL DEPTH OF WELL (ft bgs)	DEPTH TO WATER (ft btoc)	DEPTH TO PRODUCT (ft btoc)	PRODUCT THICKNESS (ft)	MONITOR WELL TOP OF CASING (ft)	GROUNDWATER ELEVATION (ft)	PRODUCT ELEVATION (ft)	GROUNDWATER ELEVATION CORRECTED FOR PRODUCT THICKNESS (ft)
MW-11	9/18/2016	20.08	14.44	-	0.00	1,265.67	1,251.23	-	1,251.23
	11/15/2016	20.09	14.03	-	0.00		1,251.64	-	1,251.64
	3/20/2017	20.10	13.57	-	0.00		1,252.10	-	1,252.10
	6/20/2017	20.07	14.83	-	0.00		1,250.84	-	1,250.84
	9/18/2017	20.08	15.41	-	0.00		1,250.26	-	1,250.26
	12/4/2017	20.10	14.57	-	0.00		1,251.10	-	1,251.10
	3/16/2018	20.08	14.56	-	0.00		1,251.11	-	1,251.11
	6/19/2018	20.17	15.13	-	0.00		1,250.54	-	1,250.54
	9/24/2018	20.08	15.55	-	0.00		1,250.12	-	1,250.12
	11/30/2018	20.19	15.11	-	0.00		1,250.56	-	1,250.56
	3/18/2019	19.89	13.69	-	0.00		1,251.98	-	1,251.98
	6/13/2019	20.08	14.56	-	0.00		1,251.11	-	1,251.11
	9/11/2019	20.08	15.30	-	0.00		1,250.37	-	1,250.37
	11/22/2019	19.91	16.37	-	0.00		1,249.30	-	1,249.30

Notes:  
bgs: Below Ground Surface      NM: Not Measured      Where applicable, GWE adjusted assuming a specific gravity of 0.88 for free product.  
btoc: Below Top of Casing surveyed measuring point      - : No Free Product Observed

TABLE 2  
GROUNDWATER ANALYTICAL DATA  
PILOT TRAVEL CENTER NO. 391  
1600 E. PINE STREET  
CENTRAL POINT, JACKSON COUNTY, OREGON

Table 2 - Groundwater Results			Low Level Polynuclear Aromatic Hydrocarbons (PAH) (µg/L) by EPA Method 8270C																	Volatile Organic Compounds - BTEX (µg/L) by EPA Method 8260B					TPHE ORC (µg/L) by NWTFMDC	TPHE DRC (µg/L) by NWTFMDC	TPH-P GRC (µg/L) by NWTFMDC		
			1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Methyl tert butyl ether (MTBE)	Benzene	Toluene	Ethylbenzene				Xylenes (Total)	
Screening Criteria			Residential	NE	NE	510	NE	>S	0.012	0.025	0.034	NE	0.34	>S	0.0034	>S	280	0.034	0.17	NE	110	14	0.46	1100	1.5	190	300	100	110
ODEQ RBC (µg/L)	Ingestion & Inhalation from Tapwater	Urban Residential	NE	NE	2400	NE	>S	0.043	0.08	0.11	NE	>S	>S	0.011	>S	1400	0.11	0.78	NE	>S	64	2	4400	6.7	710	300	100	110	
		Occupational	NE	NE	2500	NE	>S	0.17	0.47	0.64	NE	>S	>S	>S	0.064	>S	1300	>S	0.72	NE	>S	68	2.1	6300	6.4	830	1300	430	450
		Construction and Excavation Worker	NE	NE	>S	NE	>S	>S	>S	>S	NE	>S	>S	>S	>S	>S	>S	>S	>S	NE	>S	63000	1800	220000	4500	23000	>S	>S	14000
	Vapor Intrusion into Buildings	Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	840	NE	>S	67000	210	>S	620	86000	>S	>S	22000	
		Urban Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	2000	NE	>S	160000	510	>S	1500	86000	>S	>S	22000	
		Occupational	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	11000	NE	>S	870000	2800	>S	8200	>S	>S	>S	>S	
	Volatilization to Outdoor Air	Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	3600	NE	>S	350000	3100	>S	9900	>S	>S	>S	>S	>S
		Urban Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	8500	NE	>S	830000	7400	>S	23000	>S	>S	>S	>S	>S
	Occupational	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	16000	NE	>S	1500000	14000	>S	43000	>S	>S	>S	>S	>S	
	Well ID	Sample ID	Sample Date	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Methyl tert butyl ether (MTBE)	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	TPHE ORC (µg/L) by NWTFMDC	TPHE DRC (µg/L) by NWTFMDC	TPH-P GRC (µg/L) by NWTFMDC
MW-1	MW-1	11/17/2011	NA	NA	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.1	<1.0	36	1.5	<1.0	NA	<1.5	<1.5	19	38	NA	28,000	680	
	MW-1	3/5/2012	NA	NA	0.61	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	0.93	<0.20	27	1.2	0.27	NA	<1.0	<1.0	24	18	<500	1,800	2,600	
	MW-1	5/7/2012	NA	NA	7.1	<4.0	5.2	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	13	<4.0	110	23	10	NA	<1.0	<1.0	36	64	NA	4,200	2,300	
	MW-1	7/31/2012	NA	NA	1.4	1.0	1.5	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.40	<0.40	4.4	<0.40	34	4.9	2.1	NA	<1.0	<1.0	34	84	NA	38,000	3,700	
	MW-1	12/6/2012	NA	NA	3.7	0.7	1.2	0.45	0.43	1.1	0.43	1.1	0.43	0.75	<0.40	3.1	0.58	36	3.8	1.3	NA	<2.5	<2.5	35	69	1,200	3,600	1,500	
	MW-1	3/4/2013	NA	NA	1.7	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	1.5	<1.0	32	1.3	<1.0	NA	<0.50	<0.50	34	69	<500	2,600	2,900	
	MW-1	6/10/2013	NA	NA	0.70	0.099	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	1.2	<0.020	8.6	1.2	0.25	NA	<1.0	<1.0	32	42	<500	3,100	1,600	
	MW-1	8/29/2013	NA	NA	0.52	0.11	<0.10	<0.10	<0.10	<0.20	<0.10	<0.20	<0.10	<0.10	<0.10	0.67	<0.10	20	0.98	0.13	NA	<1.0	<1.0	31	47	NA	940	2,700	
	MW-1	12/9/2013	11	14	0.74	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	1.0	<0.20	19	0.98	<0.20	NA	<1.0	<1.0	30	45	NA	2,600	2,100	
	MW-1	3/27/2014	13	17	0.11	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	0.21	<0.020	16	1.2	0.18	NA	<1.0	<1.0	22	31	NA	2,000	1,600	
	MW-1	6/19/2014	12	14	0.75	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.40	<0.40	1.2	<0.40	18	1.1	<0.40	NA	<1.0	<1.0	25	26	<500	2,000	1,800	
	MW-1	8/22/2014	9.5	12	0.45	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	0.60	<0.20	14	0.77	<0.20	NA	<1.0	<1.0	16	14	NA	3,000	2,000	
	MW-1	11/20/2014	12	14	0.41	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	0.69	<0.20	18	0.61	<0.20	NA	<1.0	<1.0	20	19	NA	2,600	1,300	
	MW-1	3/16/2015	2.8	<0.40	0.43	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.40	<0.40	0.72	<0.40	4.3	<0.40	<0.40	NA	<1.0	<1.0	7.7	5.3	NA	2,700	1,200	
	MW-1	6/19/2015	3.6	0.80	0.35	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.20	<0.10	<0.10	<0.10	0.54	<0.10	5.4	<0.10	<0.10	NA	<1.0	<1.0	15	11	NA	1,000	1,600	
	MW-1	9/21/2015	8.9	7.1	0.47	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.20	<0.10	<0.10	<0.10	0.60	<0.10	12	0.92	0.23	NA	<1.0	<1.0	10	9.3	NA	1,300	1,600	
	MW-1	12/7/2015	2.5	0.50	0.35	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.20	<0.10	<0.10	<0.10	0.28	<0.10	3.8	<0.10	0.12	NA	<1.0	<1.0	11	10	NA	7,600	1,400	
	MW-1	3/7/2016	0.95	0.78	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	1.6	0.20	<0.20	NA	<1.0	<1.0	<1.0	<1.0	NA	2,400	<250	
	MW-1	6/15/2016	2.5	1.1	0.36	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.20	<0.10	<0.10	<0.10	0.42	<0.10	2.7	0.46	0.11	NA	<1.0	<1.0	<1.0	<1.0	NA	940 K	390	
	MW-1	9/18/2016	6.4	6.9	0.48	0.12	<0.10	<0.10	<0.10	<0.20	<0.10	<0.20	<0.10	<0.10	<0.10	0.78	<0.10	7.9	0.92	0.12	NA	<1.0	<1.0	2.4	2.7	NA	2,100	390	
	MW-1	11/14/2016	3.0	2.5	0.26	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	0.48	<0.20	3.9	0.49	<0.20	NA	<1.0	<1.0	1.5	2.4	NA	3,100	330	
	MW-1	3/19/2017	2.5	1.3	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	1.9	0.61	<0.20	NA	<1.0	<1.0	<1.0	<1.0	NA	2400	<250	
	MW-1	6/20/2017	3.1	1.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	0.27	<0.20	2.7	0.49	<0.20	NA	<0.50	<0.50	<0.50	0.51	NA	1400	<250	
	MW-1	9/18/2017	11.0	3.4	0.76	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	0.96	<0.20	9.0	3.0	1.2	NA	<0.50	<0.50	<0.50	0.92	NA	8700	900	
	MW-1	3/16/2018	12	9.6	0.65	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	0.97	<0.20	13	1.3	0.30	<0.50	<0.50	<0.50	<0.50	0.54	NA	4200	1200	
	MW-1	6/19/2018	4.2	0.95	0.56	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	0.89	<0.20	4.9	0.24	0.51	<0.50	<0.50	<0.50	<0.50	<0.50	NA	3500	2200	
	MW-1	9/24/2018	12	6.2	0.69	<0.20	0.29	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	1.3	<0.20	11	1.6	0.60	NA	<0.50	<0.50	<0.50	<0.50	NA	7000	990	
	MW-1	11/30/2018	11	6.2	0.66	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<1.0	<0.50	<0.50	<0.50	0.91	<0.20	6.4	0.85	<0.50	NA	<0.50	<0.50	<0.50	<0.50	NA	3800 K	690	
	MW-1	3/18/2019	8.2	11	0.52	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	0.95	<0.20	7.3	0.95	0.29	NA	<0.50	<0.50	<0.50	<0.50				



Table 2 - Groundwater Results			Low Level Polynuclear Aromatic Hydrocarbons (PAH) (µg/L) by EPA Method 8270C																	Volatile Organic Compounds - BTEX (µg/L) by EPA Method 8260B					TPHE ORO (µg/L) by NWTRPHOX	TPHE DRO (µg/L) by NWTRPHOX	TPHP GRO (µg/L) by NWTRPHOX		
			1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(b)pyrene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Methyl tert butyl ether (MTBE)	Benzene	Toluene	Ethylbenzene				Xylenes (Total)	
Screening Criteria			Residential	NE	NE	510	NE	>S	0.012	0.025	0.034	NE	0.34	>S	0.0034	>S	280	0.034	0.17	NE	110	14	0.46	1100	1.5	190	300	100	110
ODEQ RBC (µg/L)	Ingestion & Inhalation from Tapwater	Residential	NE	NE	2400	NE	>S	0.043	0.08	0.11	NE	>S	>S	0.011	>S	1400	0.11	0.78	NE	>S	64	2	4400	6.7	710	300	100	110	
		Occupational	NE	NE	2500	NE	>S	0.17	0.47	0.64	NE	>S	>S	0.064	>S	1300	>S	0.72	NE	>S	68	2.1	6300	6.4	830	1300	430	450	
		Construction and Excavation Worker	NE	NE	>S	NE	>S	>S	>S	>S	NE	>S	>S	>S	>S	>S	>S	>S	500	NE	>S	63000	1800	220000	4500	23000	>S	>S	14000
	Vapor Intrusion into Buildings	Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	840	NE	>S	67000	210	>S	620	86000	>S	>S	22000
		Urban Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	2000	NE	>S	160000	510	>S	1500	86000	>S	>S	22000
		Occupational	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	11000	NE	>S	870000	2800	>S	8200	>S	>S	>S	
	Volatilization to Outdoor Air	Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	3600	NE	>S	350000	3100	>S	9900	>S	>S	>S	>S
		Urban Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	8500	NE	>S	830000	7400	>S	23000	>S	>S	>S	>S
	Occupational	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	16000	NE	>S	1500000	14000	>S	43000	>S	>S	>S	>S	
	Well ID	Sample ID	Sample Date	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(b)pyrene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Methyl tert butyl ether (MTBE)	Benzene	Toluene	Ethylbenzene	Xylenes (Total)	TPHE ORO (µg/L) by NWTRPHOX	TPHE DRO (µg/L) by NWTRPHOX	TPHP GRO (µg/L) by NWTRPHOX
MW-3	MW-3	11/17/2011	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	MW-3	3/5/2012	NA	NA	3.3	<2.0	<2.0	<2.0	<2.0	<4.0	<2.0	<4.0	<2.0	<2.0	6.5	<2.0	75	12	5.5	NA	5.7	6.7	28	59	<500	33,000	4,700		
	MW-3	5/7/2012	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	MW-3	7/31/2012	NA	NA	<0.40	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.40	0.83	<0.40	13	0.53	<0.40	NA	4.4	<1.0	28	67	NA	6,200	3,800		
	MW-3	12/6/2012	NA	NA	2.1	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	1.8	<1.0	28	1.5	<1.0	NA	3.2	<1.0	18	28	660	8,200	2,000		
	MW-3	3/4/2013	NA	NA	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	10	1.5	<1.0	NA	1.6	<0.50	9.4	7.6	<500	2,600	1,800		
	MW-3	6/10/2013	NA	NA	0.34	0.13	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	0.44	<0.020	7.6	1.4	0.44	NA	2.4	<1.0	20	16	<500	3,200	1,100		
	MW-3	8/29/2013	NA	NA	0.56	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.20	<0.10	<0.10	0.82	<0.10	10	0.90	0.23	NA	1.9	<1.0	19	18	NA	950	2,000		
	MW-3	12/9/2013	10	14	1.0	0.32	0.25	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	0.73	<0.20	15	1.9	0.29	NA	1.3	<1.0	12	14	NA	1,200	1,000		
	MW-3	3/27/2014	5.2	7.5	0.13	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	0.13	<0.020	13	0.81	0.33	NA	<1.0	<1.0	8.2	13	NA	3,300	1,500		
	MW-3	6/19/2014	11	14	0.57	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.40	0.89	<0.40	16	0.84	<0.40	NA	<1.0	<1.0	14	12	<500	3,200	1,300		
	MW-3	8/22/2014	7.8	11	0.34	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.20	<0.10	<0.10	0.40	<0.10	12	0.67	0.12	NA	<1.0	<1.0	10	9.1	<500	1,600	1,600		
	MW-3	11/20/2014	10	13	0.37	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	0.73	<0.20	15	0.93	<0.20	NA	<1.0	<1.0	16	9.6	<500	6,700	1,200		
	MW-3	3/16/2015	10	9.3	0.64	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	0.72	<0.20	14	1.1	0.39	NA	<1.0	<1.0	3.7	4.9	<500	9,100	1,900		
	MW-3	6/19/2015	8.6	13	0.49	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	0.79	<0.20	12	0.82	<0.20	NA	<1.0	<1.0	1.4	8.8	<500	6,100	2,000		
	MW-3	9/21/2015	11	17	0.66	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	0.84	<0.20	16	0.96	<0.20	NA	<1.0	<1.0	<1.0	<1.0	NA	2,500	1,700		
	MW-3	12/7/2015	8.1	12	0.33	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	0.45	<0.20	10	0.57	<0.20	NA	<1.0	<1.0	<1.0	<1.0	NA	4,200	1,300		
	MW-3	3/7/2016	5.4	5.8	0.27	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	0.30	0.53	<0.20	5.9	0.73	<0.20	NA	<1.0	<1.0	<1.0	<1.0	NA	9,800	1,200	
	MW-3	6/15/2016	11	25*	0.50	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	0.95	<0.20	11	1.5	0.33	NA	<1.0	<1.0	<1.0	<1.0	NA	5,200 K	1,400		
	MW-3	9/18/2016	8.3	18	0.61	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.80	0.99	<0.40	4.6	0.98	<0.40	NA	<1.0	<1.0	<1.0	<1.0	NA	1,600	490		
	MW-3	11/14/2016	7.2	15	0.61	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.80	1.1	<0.40	6.6	1.2	<0.40	NA	<1.0	<1.0	<1.0	<1.0	NA	2,700	390		
	MW-3	3/30/2017	1.4	0.63	<0.40	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.80	0.63	<0.40	<0.80	0.52	<0.40	NA	<1.0	<1.0	<1.0	<1.0	NA	3,500	270		
	MW-3	6/19/2017	3.1	0.97	0.71	<0.40	<0.40	2.6	<0.20	<0.40	<0.20	<0.80	<0.20	<0.80	1.30	<0.20	2.2	0.96	<0.20	NA	<0.50	<0.50	<0.50	<0.50	NA	1,000	270		
	MW-3	9/18/2017	2.5	0.63	0.47	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.80	1.00	<0.40	2.4	0.51	<0.40	NA	<0.50	<0.50	<0.50	<0.50	NA	5,000	1,200		
	MW-3	12/5/2017	8.6	8.1	0.66	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	0.69	<0.20	6.2	0.95	<0.20	NA	<0.50	<0.50	<0.50	<0.50	NA	2,800	>250		
	MW-3	3/16/2018	3.3	2.7	0.51	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	0.82	<0.20	1.9	0.54	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	NA	2,900	490		
	MW-3	6/19/2018	1.6	1.1	0.25	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	0.48	<0.20	1.4	0.33	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	NA	1,100	690		
	MW-3	9/24/2018	7.6	2.2	0.90	<0.20	0.28	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.40	1.9	<0.20	2.1	1.1	0.35	NA	<0.50	<0.50	<0.50	<0.50	NA	5,400	820		
	MW-3	11/30/2018	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	MW-3	3/18/2019	5.2	6.8	0.50	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.20	<0.10	<0.10	0.98	<0.10	2.3	1.0	0.17	NA	<0.50	<0.50	<0.50	<0.50	NA	4,400	1,100		
	MW-3	6/13/2019	5.9	7.7	0.55	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.80	0.91	<0.40	2.4	1.0	<0.40	NA	<0.50	&							

Table 2 - Groundwater Results			Low Level Polynuclear Aromatic Hydrocarbons (PAH) (µg/L) by EPA Method 8270C																	Volatile Organic Compounds - BTEX (µg/L) by EPA Method 8260B					TPHE ORO (µg/L) by NWTFMDC	TPHE DRO (µg/L) by NWTFMDC	TPHP GRO (µg/L) by NWTFMDC			
			1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(b)pyrene	Benzo(k)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Methyl tert butyl ether (MTBE)	Benzene	Toluene	Ethylbenzene				Xylenes (Total)		
Screening Criteria			Residential	NE	NE	510	NE	>S	0.012	0.025	0.034	NE	0.34	>S	0.0034	>S	280	0.034	0.17	NE	110	14	0.46	1100	1.5	190	300	100	110	
ODEQ RBC (µg/L)	Ingestion & Inhalation from Tapwater	Urban Residential	NE	NE	2400	NE	>S	0.043	0.08	0.11	NE	>S	>S	0.011	>S	1400	0.11	0.78	NE	>S	64	2	4400	6.7	710	300	100	110		
		Occupational	NE	NE	2500	NE	>S	0.17	0.47	0.64	NE	>S	>S	0.064	>S	1300	>S	0.72	NE	>S	68	2.1	6300	6.4	830	1300	430	450		
		Construction and Excavation Worker	NE	NE	>S	NE	>S	>S	>S	>S	NE	>S	>S	>S	>S	>S	>S	>S	500	NE	>S	63000	1800	220000	4500	23000	>S	>S	14000	
	Vapor Intrusion into Buildings	Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	840	NE	>S	67000	210	>S	620	86000	>S	>S	22000	
		Urban Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	2000	NE	>S	160000	510	>S	1500	86000	>S	>S	22000	
		Occupational	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	11000	NE	>S	870000	2800	>S	8200	>S	>S	>S		
	Volatilization to Outdoor Air	Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	3600	NE	>S	350000	3100	>S	9900	>S	>S	>S	>S	
		Urban Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	8500	NE	>S	830000	7400	>S	23000	>S	>S	>S	>S	
		Occupational	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	16000	NE	>S	1500000	14000	>S	43000	>S	>S	>S	>S	
	Well ID	Sample ID	Sample Date																											
MW-4	MW-4	11/17/2011	NA	NA	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	0.022	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	3/5/2012	NA	NA	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	0.021	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	5/7/2012	NA	NA	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	7/31/2012	NA	NA	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	12/6/2012	NA	NA	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	3/4/2013	NA	NA	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250
	MW-4	6/10/2013	NA	NA	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	8/29/2013	NA	NA	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	12/9/2013	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	3/27/2014	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	6/19/2014	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	8/22/2014	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	11/20/2014	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	3/16/2015	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	6/19/2015	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	9/21/2015	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	12/7/2015	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	3/7/2016	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	6/15/2016	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	460	<250
	MW-4	9/18/2016	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	270
	MW-4	11/14/2016	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	3/19/2017	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	<1.0	NA	<250	<250
	MW-4	6/19/2017	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250
	MW-4	9/18/2017	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250
	MW-4	12/5/2017	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250
	MW-4	3/16/2018	<0.020	<0.020	<0.020	&lt																								

Table 2 - Groundwater Results			Low Level Polynuclear Aromatic Hydrocarbons (PAH) (µg/L) by EPA Method 8270C																	Volatile Organic Compounds - BTEX(µg/L) by EPA Method 8260B					TPHE ORO (µg/L) by NWFPMDX	TPHE DRO (µg/L) by NWFPMDX	TPH-P GRO (µg/L) by NWFPMDX		
			1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Methyl tert butyl ether (MTBE)	Benzene	Toluene	Ethylbenzene				Xylenes (Total)	
ODEQ RBC (µg/L)	Ingestion & Inhalation from Tapwater	Residential	NE	NE	510	NE	>S	0.012	0.025	0.034	NE	0.34	>S	0.0034	>S	280	0.034	0.17	NE	110	14	0.46	1100	1.5	190	300	100	110	
		Urban Residential	NE	NE	2400	NE	>S	0.043	0.08	0.11	NE	>S	>S	0.011	>S	1400	0.11	0.78	NE	>S	64	2	4400	6.7	710	300	100	110	
		Occupational	NE	NE	2500	NE	>S	0.17	0.47	0.64	NE	>S	>S	0.084	>S	1300	>S	0.72	NE	>S	68	2.1	6300	6.4	830	1300	430	450	
	GW in Excavation	Construction and Excavation Worker	NE	NE	>S	NE	>S	>S	>S	>S	NE	>S	>S	>S	>S	>S	>S	500	NE	>S	63000	1800	220000	4500	23000	>S	>S	14000	
		Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	840	NE	>S	67000	210	>S	620	86000	>S	>S	22000	
	Vapor Intrusion into Buildings	Urban Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	2000	NE	>S	160000	510	>S	1500	86000	>S	>S	22000	
		Occupational	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	11000	NE	>S	870000	2800	>S	8200	>S	>S	>S		
	Volatilization to Outdoor Air	Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	3600	NE	>S	350000	3100	>S	9900	>S	>S	>S		
		Urban Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	8500	NE	>S	830000	7400	>S	23000	>S	>S	>S		
	Occupational	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	>S	NV	16000	NE	>S	1500000	14000	>S	43000	>S	>S	>S			
Well ID	Sample ID	Sample Date																											
MW-5	MW-5	9/18/2016	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	0.039	<0.020	NA	<1.0	<1.0	<1.0	<1.0	NA	<250	<250	
	MW-5	11/14/2016	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	NA	<250	<250	
	MW-5	3/20/2017	0.29	<0.020	0.068	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	0.36	0.10	<0.020	NA	<1.0	<1.0	<1.0	<1.0	NA	<250	<250		
	MW-5	6/19/2017	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	NA	<250	<250		
	MW-5	9/18/2017	0.67	<0.020	0.067	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	0.057	0.27	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	NA	<250	<250		
	MW-5	12/5/2017	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	NA	510	<250		
	MW-5	3/16/2018	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250		
	MW-5	6/19/2018	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250		
	MW-5	9/24/2018	0.058	0.050	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250		
	MW-5	11/30/2018	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250	
	MW-5	3/18/2019	0.23	<0.020	0.073	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	0.11	0.066	0.10	<0.020	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250	
	MW-5	6/13/2019	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250	
	MW-5	9/11/2019	0.022	<0.020	0.021	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	0.070	0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250	
	MW-5	11/22/2019	0.048	0.024	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	0.084	0.028	0.029	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	<250	<250	
MW-6	MW-6	9/18/2016	8.0	10	0.71	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.40	0.97	<0.40	11	0.95	<0.40	NA	<1.0	<1.0	4.0	<1.0	NA	1,700	660		
	MW-6	11/14/2016	5.0	7.8	<0.40	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.40	0.56	<0.40	6.3	0.57	<0.40	NA	<1.0	<1.0	1.5	1.6	NA	820	620		
	MW-6	3/20/2017	7.9	2.0	0.53	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	0.84	<0.20	5.7	0.92	<0.20	NA	<1.0	<1.0	<1.0	<1.0	NA	490	570		
	MW-6	6/19/2017	0.65	<0.20	0.58	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	0.82	<0.20	1.2	0.29	<0.20	NA	<0.50	<0.50	<0.50	<0.50	NA	700	840		
	MW-6	9/18/2017	6.10	1.5	0.53	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	0.91	<0.20	4.3	0.97	<0.20	NA	<0.50	<0.50	<0.50	<0.50	NA	610	1000		
	MW-6	12/5/2017	8.7	5.4	0.33	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	0.41	<0.20	7.0	0.42	<0.20	NA	<0.50	<0.50	<0.50	<0.50	NA	580	420		
	MW-6	3/16/2018	8.2	7.5	0.64	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	0.89	<0.20	7.3	0.94	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	NA	1200	940		
	MW-6	6/19/2018	6.2	4.8	0.52	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	0.76	<0.20	5.1	0.75	<0.20	<0.50	<0.50	<0.50	<0.50	<0.50	NA	820	1100		
	MW-6	9/24/2018	0.036	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	1400 K	1100	
	MW-6	11/30/2018	6.8	7.2	0.45	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	0.59	<0.020	2.2	0.81	<0.020	NA	<0.50	<0.50	<0.50	<0.50	NA	3100 K	720	
	MW-6	3/18/2019	9.3	14	0.57	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	0.9	<0.020	5.4	1.0	<0.020	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	1200 K	1300	
	MW-6	6/13/2019	12	20	0.84	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.40	1.1	<0.40	6.4	1.5	<0.40	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	570 K	1100	
	MW-6	11/22/2019	3.8	3.6	0.26	<0.10	<0.10	<0.10	<0.10	<0.20	<0.10	<0.20	<0.10	<0.10	0.43	<0.10	0.79	0.39	<0.10	NA	<0.50	<0.50	<0.50	<0.50	<0.50	NA	700 K	680	
	MW-7	MW-7	9/18/2016	0.91	<0.20	0.22	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	0.25	<0.20	<0.40	<0.20	<0.20	NA	<1.0	<1.0	<1.0	<1.0	NA	390	640	
MW-7		11/15/2016	0.64	<0.20	0.31	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	0.36	<0.20	0.47	0.46	<0.20	NA	<1.0	<1.0	<1.0	<1.0	NA	310	410		
MW-7		3/19/2017	1.3	<0.20	0.47	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	0.56	<0.20	0.94	<0.20	<0.20	NA	<1.0	<1.0	<1.0	<1.0	NA	470	<250		
MW-7		6/20/2017	9.1	7.8	0.68	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	1	<0.20	7.4	1.2	<0.20	NA	<0.50	<0.50	<0.50	<0.50	NA	470	<250		
MW-7		9/18/2017	0.52	<0.20	0.78	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	1	<0.20	0.91	0.22	<0.20	NA	<0.50	<0.50	<0.50	<0.50	NA	330	460		
MW-7		12/5/2017	<0.20	<0.20	0.28	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40																	

Table 2 - Groundwater Results			Low Level Polynuclear Aromatic Hydrocarbons (PAH) (µg/L) by EPA Method 8270C																	Volatile Organic Compounds - BTEX (µg/L) by EPA Method 8260B					TPH-E ORO (µg/L) by NWFPDIX	TPH-E DRO (µg/L) by NWFPDIX	TPH-P GRO (µg/L) by NWFPDIX		
			1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	Methyl tert butyl ether (MTBE)	Benzene	Toluene	Ethylbenzene				Xylenes (Total)	
ODEQ RBC (µg/L)	Ingestion & Inhalation from Tapwater	Residential	NE	NE	510	NE	>S	0.012	0.025	0.034	NE	0.34	>S	0.0034	>S	280	0.034	0.17	NE	110	14	0.46	1100	1.5	190	300	100	110	
		Urban Residential	NE	NE	2400	NE	>S	0.043	0.08	0.11	NE	>S	>S	0.011	>S	1400	0.11	0.78	NE	>S	64	2	4400	6.7	710	300	100	110	
		Occupational	NE	NE	2500	NE	>S	0.17	0.47	0.64	NE	>S	>S	0.064	>S	1300	>S	0.72	NE	>S	68	2.1	6300	6.4	830	1300	430	450	
	GW in Excavation	Construction and Excavation Worker	NE	NE	>S	NE	>S	>S	>S	>S	NE	>S	>S	>S	>S	>S	>S	500	NE	>S	63000	1800	220000	4500	23000	>S	>S	14000	
		Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	840	NE	>S	67000	210	>S	620	86000	>S	>S	22000
		Urban Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	2000	NE	>S	160000	510	>S	1500	86000	>S	>S	22000
	Vapor Intrusion into Buildings	Occupational	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	11000	NE	>S	870000	2800	>S	8200	>S	>S	>S	
		Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	3600	NE	>S	350000	3100	>S	9900	>S	>S	>S	
		Urban Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	8500	NE	>S	830000	7400	>S	23000	>S	>S	>S	
	Volatilization to Outdoor Air	Occupational	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	16000	NE	>S	1500000	14000	>S	43000	>S	>S	>S	
		Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	3600	NE	>S	350000	3100	>S	9900	>S	>S	>S	
		Urban Residential	NE	NE	>S	NE	>S	>S	NV	NV	NE	NV	NV	NV	NV	NV	>S	NV	8500	NE	>S	830000	7400	>S	23000	>S	>S	>S	
Well ID	Sample ID	Sample Date																								TPH-E ORO (µg/L) by NWFPDIX	TPH-E DRO (µg/L) by NWFPDIX	TPH-P GRO (µg/L) by NWFPDIX	
MW-9	MW-9	9/18/2016	3.4	3.3	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	2.9	<0.20	<0.20	NA	<1.0	<1.0	1.7	<1.0	NA	540	600	
	MW-9	11/15/2016	1.1	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	0.49	0.43	<0.20	NA	<1.0	<1.0	1.4	<1.0	NA	690	410	
	MW-9	3/19/2017	<0.20	<0.20	0.26	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	0.29	<0.20	0.40	<0.20	<0.20	NA	<1.0	<1.0	<1.0	<1.0	NA	1,190	<250
	MW-9	6/20/2017	0.2	<0.20	0.4	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	0.59	<0.20	0.88	<0.20	<0.20	NA	<0.50	<0.50	<0.50	<0.50	NA	580	<250
	MW-9	9/18/2017	0.55	<0.20	0.29	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	0.58	<0.20	1.3	<0.20	<0.20	NA	<0.50	<0.50	<0.50	<0.50	NA	1,500	320
	MW-9	12/5/2017	<0.20	<0.20	0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	NA	<0.50	<0.50	<0.50	<0.50	NA	4,100	<250	
	MW-9	3/16/2018	0.31	<0.20	0.36	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	0.55	<0.20	<0.40	<0.20	<0.20	NA	<0.50	<0.50	<0.50	<0.50	NA	2,900	430
	MW-9	6/19/2018	<0.20	<0.20	0.23	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	0.28	<0.20	0.81	<0.20	<0.20	<1.0	<1.0	<1.0	<1.0	NA	2,900	<250	
	MW-9	9/24/2018	0.43	<0.20	0.55	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	0.70	<0.20	0.99	<0.20	<0.20	NA	<1.0 O	<1.0 O	<1.0 O	<1.0 O	NA	2,500	410
	MW-9	11/30/2018	0.27	0.023	0.26	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	0.44	<0.20	0.50	<0.20	0.073	NA	<1.0	<1.0	<1.0	<1.0	NA	2,200	<250
	MW-9	3/18/2019	0.11	<0.20	0.23	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	0.42	<0.20	0.14	<0.20	0.041	NA	<0.50	<0.50	<0.50	<0.50	NA	540 K	<250
	MW-9	6/13/2019	0.11	0.026	0.16	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	0.42	<0.020	0.12	<0.020	0.084	NA	<0.50	<0.50	<0.50	<0.50	NA	880	<250
MW-9	9/12/2019	0.15	<0.020	0.20	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	0.36	<0.020	0.29	<0.020	0.057	NA	<0.50	<0.50	<0.50	<0.50	NA	880	<250	
MW-9	11/22/2019	0.13	<0.020	0.19	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	0.39	<0.020	0.28	<0.020	0.043	NA	<0.50	<0.50	<0.50	<0.50	NA	1,500	<250	
MW-10	MW-10	9/18/2016	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	NA	<250	<250	
	MW-10	11/15/2016	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	NA	<250	<250	
	MW-10	3/20/2017	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	0.086	<0.020	<0.020	NA	<1.0	<1.0	<1.0	<1.0	NA	<250	<250		
	MW-10	6/20/2017	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	NA	<250	<250
	MW-10	9/18/2017	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	NA	<250	<250
	MW-10	12/4/2017	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	NA	<250	<250
	MW-10	3/16/2018	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	NA	440	<250
	MW-10	6/19/2018	0.11	0.096	0.064	0.032	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	0.046	<0.020	0.17	0.034	0.030	<0.50	<0.50	<0.50	<0.50	NA	<250	<250	
	MW-10	9/24/2018	0.30	0.089	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	0.087	<0.020	0.44	<0.020	0.020	NA	<0.50	<0.50	<0.50	<0.50	NA	620	<250
	MW-10	11/30/2018	0.075	<0.020	0.055	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	0.047	<0.020	0.12	<0.020	0.039	NA	<0.50	<0.50	<0.50	<0.50	NA	370	<250
	MW-10	3/18/2019	<0.020	<0.020	0.026	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	NA	<0.50	<0.50	<0.50	<0.50	NA	<250	<250
	MW-10	6/13/2019	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	0.027	NA	<0.50	<0.50	<0.50	<0.50	NA	<250	<250
MW-10	9/12/2019	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	0.036	NA	<0.50	<0.50	<0.50	<0.50	NA	<250	<250	
MW-10	11/22/2019	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	0.036	NA	<0.50	<0.50	<0.50	<0.50	NA	<250	<250	
MW-11	MW-11	9/18/2016	5.1	1.4	0.45	<0.20	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	0.7	<0.20	1.2	0.54	<0.20	NA	<1.0	&						

**Table 3.**  
**Magnitude and Direction of Groundwater Gradient**  
Pilot Travel Center #391, 1600 E. Pine Street  
Central Point, Jackson County, Oregon

Date	Approximate flow direction	Approximate hydraulic gradient (ft/ft)
11/17/2011	East	0.060
3/5/2012	East	0.004
5/7/2012	East	0.004
7/31/2012	East	0.005
12/6/2012	Northeast	0.006
3/4/2013	Northeast	0.006
6/10/2013	Northeast	0.004
8/29/2013	Northeast	0.004
12/9/2013	Northeast	0.002
3/27/2014	Northeast	0.003
6/19/2014	Northeast	0.004
8/22/2014	Northeast	0.003
11/20/2014	East-Southeast	0.001
3/16/2015	Southeast	0.002
6/19/2015	Southeast	0.002
9/21/2015	Southeast	0.005
12/7/2015	Southeast	0.002
3/7/2016	Southeast	0.005
6/15/2016	Southeast	0.007
9/18/2016*	Southeast	0.006
11/15/2016	Variable (East & West)	0.003-0.012
3/20/2017	East	0.004
6/19/2017	East	0.003
9/18/2017	East	0.003
12/5/2017	East	0.002
3/16/2018	East	0.030
6/19/2018	East	0.003
9/24/2018	Southeast	0.020
11/30/2018	Southeast	0.008
3/18/2019	Southeast	0.003
6/13/2019	East	0.050
9/11/2019	East	0.005
<b>11/22/2019</b>	<b>East</b>	<b>0.008</b>

\*Groundwater monitor well array used for calculating gradients increased from four wells to eleven wells during Third Quarter 2016.

**APPENDIX A**  
FIELD METHODS



## QUALITY ASSURANCE/QUALITY CONTROL FIELD METHODS

Field methods discussed herein were implemented to provide for accuracy and reliability of field activities, data collection, sample collection, and handling. Discussion of these methods is provided below.

### 1.0 EQUIPMENT CALIBRATION

Equipment calibration was performed per equipment manufacturer specifications before use.

### 2.0 DEPTH TO GROUNDWATER AND LIGHT NON-AQUEOUS PHASE LIQUID MEASUREMENT

Depth to groundwater was measured in wells identified for gauging in the scope of work using a decontaminated water level indicator. The depth to water measurement was taken from a cut notch or permanent mark at the top of the well casing to which the well head elevation was originally surveyed.

Once depth to water was measured, an oil/water interface meter or a new disposable bailer was utilized to evaluate the presence and, if present, to measure the "apparent" thickness of light non-aqueous phase liquid (LNAPL) in the well. If LNAPL was present in the well, groundwater purging and sampling were not performed, unless sampling procedures in the scope of work specified collection of samples in the presence of LNAPL. Otherwise, time allowing, LNAPL was bailed from the well using either a new disposable bailer, or the disposal bailer previously used for initial LNAPL assessment. Bailing of LNAPL continued until the thickness of LNAPL (or volume) stabilized in each bailer pulled from the well, or LNAPL was no longer present. After LNAPL thickness either stabilized or was eliminated, periodic depth to water and depth to LNAPL measurements were collected as product came back into the well to evaluate product recovery rate and to aid in further assessment of LNAPL in the subsurface. LNAPL thickness measurements were recorded as "apparent." If a bailer was used for LNAPL thickness measurement, the field sampler noted the bailer entry diameter and chamber diameter to enable correction of thickness measurements. Recovered LNAPL was stored on-site in a labeled steel drum(s) or other appropriate container(s) prior to disposal.

### 3.0 WELL PURGING AND GROUNDWATER SAMPLE COLLECTION

Well purging and groundwater sampling were performed in wells specified in the scope of work after measuring depth to groundwater and evaluating the presence of LNAPL. Purging and sampling were performed using one of the methods detailed below. The method used was noted in the field records. Purge water was stored on-site in labeled steel drum(s) or other appropriate container(s) prior to disposal or on-site treatment (in cases where treatment using an on-site system is authorized).

### 3.1 Purging a Predetermined Well Volume

Purging a predetermined well volume is performed per ASTM International (ASTM) D4448-01. This purging method has the objective of removing a predetermined volume of stagnant water from the well prior to sampling. The volume of stagnant water is defined as either the volume of water contained within the well casing, or the volume within the well casing and sand/gravel in the annulus if natural flow through these is deemed insufficient to keep them flushed out.

This purging method involves removal of a minimum of three stagnant water volumes from the well using a decontaminated pump with new disposable plastic discharge or suction tubing, dedicated well tubing, or using a new disposable or decontaminated reusable bailer. If a new disposable bailer was used for assessment of LNAPL, that bailer may be used for purging. The withdrawal rate used is one that minimizes drawdown while satisfying time constraints.

To evaluate when purging is complete, one or more groundwater stabilization parameters are monitored and recorded during purging activities until stabilization is achieved. Most commonly, stabilization parameters include temperature, conductivity, and pH, but field procedures detailed in the scope of work may also include monitoring of dissolved oxygen concentrations, oxidation reduction potential, and/or turbidity<sup>1</sup>. Parameters are considered stable when two (2) consecutive readings recorded three (3) minutes apart fall within ranges provided below in Table 1. In the event that the parameters have not stabilized and five (5) well casing volumes have been removed, purging activities will cease and be considered complete. Once the well is purged, a groundwater sample(s) is collected from the well using a new disposable bailer. If a new disposable bailer was used for purging, that bailer may be used to collect the sample(s). A sample is not collected if the well is inadvertently purged dry.

Table 1. Criteria for Defining Stabilization of Water-Quality Indicator Parameters

Parameter	Stabilization Criterion
Temperature	± 0.2°C (± 0.36°F)
pH	± 0.1 standard units
Conductivity	± 3%
Dissolved oxygen	± 10%
Oxidation reduction potential	± 10 mV
Turbidity <sup>1</sup>	± 10% or 1.0 NTU (whichever is greater)

### 3.2 Low-Flow Purging and Sampling

"Low-Flow", "Minimal Drawdown", or "Low-Stress" purging is performed per ASTM D6771-02. It is a method of groundwater removal from within a well's screened interval that is intended to minimize drawdown and mixing of the water column in the well

<sup>1</sup> As stated in ASTM D6771-02, turbidity is not a chemical parameter and not indicative of when formation-quality water is being purged; however, turbidity may be helpful in evaluating stress on the formation during purging. Turbidity measurements are taken at the same time that stabilization parameter measurements are made, or, at a minimum, once when purging is initiated and again just prior to sample collection, after stabilization parameters have stabilized. To avoid artifacts in sample analysis, turbidity should be as low as possible when samples are collected. If turbidity values are persistently high, the withdrawal rate is lowered until turbidity decreases. If high turbidity persists even after lowering the withdrawal rate, the purging is stopped for a period of time until turbidity settles, and the purging process is then restarted. If this fails to solve the problem, the purging/sampling process for the well is ceased, and well maintenance or redevelopment is considered.

casing. This is accomplished by pumping the well using a decontaminated pump with new disposable plastic discharge or suction tubing or dedicated well tubing at a low flow rate while evaluating the groundwater elevation during pumping.

The low flow pumping rate is well specific and is generally established at a volume that is less than or equal to the natural recovery rate of the well. A pump with adjustable flow rate control is positioned with the intake at or near the mid-point of the submerged well screen. The pumping rate used during low-flow purging is low enough to minimize mobilization of particulate matter and drawdown (stress) of the water column. Low-flow purging rates will vary based on the individual well characteristics; however, the purge rate should not exceed 1.0 Liter per minute (L/min) or 0.25 gallon per minute (gal/min). Low-flow purging should begin at a rate of approximately 0.1 L/min (0.03 gal/min)<sup>2</sup>, or the lowest rate possible, and be adjusted based on an evaluation of drawdown. Water level measurements should be recorded at approximate one (1) to two (2) minute intervals until the low-flow rate has been established, and drawdown is minimized. As a general rule, drawdown should not exceed 25% of the distance between the top of the water column and the pump in-take.

To evaluate when purging is complete, one or more groundwater stabilization parameters are monitored and recorded during purging activities until stabilization is achieved. Most commonly, stabilization parameters include temperature, conductivity, and pH, but field procedures detailed in the scope of work may also include monitoring of dissolved oxygen concentrations, oxidation reduction potential, and/or turbidity<sup>1</sup>. The frequency between measurements will be at an interval of one (1) to three (3) minutes; however, if a flow cell is used, the frequency will be determined based on the time required to evacuate one cell volume. Stabilization is defined as three (3) consecutive readings recorded several minutes apart falling within ranges provided in Table 1. Samples will be collected by filling appropriate containers from the pump discharge tubing at a rate not to exceed the established pumping rate.

### 3.3 Minimal Purge, Discrete Depth, and Passive Sampling

In accordance with ASTM D4448-01, sampling techniques that do not rely on purging, or require only minimal purging, may be used if a particular zone within a screened interval is to be sampled or if a well is not capable of yielding sufficient groundwater for purging. To properly use these sampling techniques, a water sample is collected within the screened interval with little or no mixing of the water column within the casing. These techniques include minimal purge sampling which uses a dedicated sampling pump capable of pumping rates of less than 0.1 L/min (0.03 gal/min)<sup>2</sup>, discrete depth sampling using a bailer that allows groundwater entry at a controlled depth (e.g. differential pressure bailer), or passive (diffusion) sampling. These techniques are based on certain studies referenced in ASTM D4448-01 that indicate that under certain conditions, natural groundwater flow is laminar and horizontal with little or no mixing within the well screen.

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<sup>2</sup> According to ASTM D4448-01, studies have indicated that at flow rates of 0.1 L/min, low-density polyethylene (LDPE) and plasticized polypropylene tubing materials are prone to sorption. Therefore, TFE-fluorocarbon or other appropriate tubing material is used, particularly when tubing lengths of 50 feet or longer are used.

#### **4.0 DECONTAMINATION**

Reusable groundwater sampling equipment were cleaned using a solution of Alconox or other acceptable detergent, rinsed with tap water, and finally rinsed with distilled water prior to use in each well. Decontamination water was stored on-site in labeled steel drum(s) or other appropriate container(s) prior to disposal.

#### **5.0 SAMPLE CONTAINERS, LABELING, AND STORAGE**

Samples were collected in laboratory prepared containers with appropriate preservative (if preservative was required). Samples were labeled (site name, sample I.D., sampler initials, date, and time of collection) and stored chilled (refrigerator or ice chest with ice) until delivery to a certified laboratory, under chain of custody procedures.

#### **6.0 CHAIN OF CUSTODY RECORD AND PROCEDURE**

The field sampler was personally responsible for care and custody of the samples collected until they were properly transferred to another party. To document custody and transfer of samples, a Chain of Custody Record was prepared. The Chain of Custody Record provided identification of the samples corresponding to sample labels and specified analyses to be performed by the laboratory. The original Chain of Custody Record accompanied the shipment, and a copy of the record was stored in the project file. When the samples were transferred, the individuals relinquishing and receiving them signed, dated, and noted the time of transfer on the record.

#### **7.0 FIELD RECORDS**

Daily Report and data forms were completed by staff personnel to provide daily record of significant events, observations, and measurements. Field records were signed, dated, and stored in the project file.