COVENTRY ENVIRONMENTAL ASSOCIATES, INC.
PERMA-FILL NORTHEAST Division
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February 26, 2020

Mr. Kevin Wachter
United Tire Service
4094 Chestnut Street
Emmaus, PA 18049

RE: Fourth Environmental Characterization Progress Report
United Tire Service
4094 Chestnut Street
Emmaus, Pennsylvania

Dear Mr. Wachter:

1.0 INTRODUCTION

This fourth environmental characterization progress report details the site investigative methods/findings implemented at the subject property during the months of December, 2019 through February, 2020 in order to perform an environmental characterization pursuant to PA code Chapter 245. The site characterization was performed at the United Tire Service (aka East Penn Tire and Battery) facility located at 4094 Chestnut Street, Emmaus, Pennsylvania (Facility ID# 39-27735).

2.0 ADDITIONAL SOIL BORING AND MONITORING WELL INSTALLATION

In order to evaluate soil and groundwater quality at the site a total of three additional soil boreholes were advanced using the auger/split spoon drilling method in January, 2020. Three monitoring wells were installed (MW-13, MW-14, MW-15) to total depths of 75 feet bgs (Figure 1). Soil samples were collected by split spoon during installation of monitoring wells MW-13, MW-14 and MW-15. The soil samples were field scanned with a photoionization detector (PID) and soil samples were selected based on field observation, preserved and submitted to ALS laboratories (ALS) for analysis of PADEP UST parameters for unleaded gasoline. The drilling logs are provided in Appendix A.

3.0 SOIL QUALITY

Soil samples were collected by split spoon during installation of the monitoring wells. The soil samples were field scanned with a photoionization detector (PID) and soil samples were selected based on field observation, preserved and submitted to ALS laboratories (ALS) for analysis of PADEP UST parameters for unleaded gasoline. The drilling logs are provided in Appendix A and the soil analytical results are summarized on Table 1.0 (See Appendix B, laboratory data sheets).

Figure 2.0 shows the known extent of soil impact exceeding the PADEP soil standards. It should be noted that based on PID readings impacted soil extends beyond the extent shown. Additional soil assessment is warranted to define the full extent of the soil impact.

4.0 HYDROGEOLOGY

The top of PVC casing in each new monitoring well was surveyed by Bursich Surveyors to a common on-site datum and the depth to the water level in each well was measured. Table 2.0 summarizes the groundwater depth measurements and well elevation data.

The above data was utilized to calculate water table elevations in each well and thereby determine the direction of groundwater flow across the site. The direction of the groundwater flow based on the water level data collected on February 12, 2020 is shown on Figure 3.0. Determination of the ground water flow direction at the site based on the available data indicates a component of flow to the north, west and southwest.

5.0 GROUNDWATER QUALITY

Following well installation, water was purged from all site monitoring wells and a groundwater sample was collected within the upper two feet of the water column from each well utilizing new, dedicated polyethylene bailers on three occasions and immediately placed in laboratory provided, sterile containers and delivered to ALS Laboratories, Inc. in an iced cooler for analysis. The water samples were analyzed for the PADEP-UST required parameters for unleaded gasoline parameters. Several wells were not sampled due to insufficient quantity of water.

Analytical results of the groundwater samples are summarized in Tables 3.0 through 5.0 and laboratory data sheets are provided in Appendix B. Review of the data indicates that groundwater from monitoring wells MW-4, MW-7, MW-8, MW-9, MW-11, MW-12 and MW-15 (downgradient of the former gasoline UST system) exceeds the residential statewide health standards for several compounds. It should be noted that the MTBE concentration in MW-5 was below PADEP standard during the reporting period. Consequently, based on the most recent groundwater flow data indicating that this well appears to be in an upgradient location, installation of an additional monitoring well on V&C property across Chestnut Street does not appear to be necessary. Available analytical data indicates that plume definition in the shallow aquifer appears to be complete in the north, west and east directions. Additional definition is required in the south-southwest direction.

6.0 PRIVATE SUPPLY WELL ASSESSMENT

Two additional private supply wells were sampled during the reporting period located at 4075 Miller Ave and 4035 Miller Ave (see Figure 4 and Table 6.0). Analytical results indicated the absence of PADEP unleaded gasoline (UST regulated) parameters above the laboratory limit of detection. Tables 7 through 9 summarize the private well treatment system data for treatment systems installed at 4054 Chestnut Street, 4050 Miller Ave and 4030 Miller Ave.

EARTHRES was contracted early November, 2019 to prepare and submit the DEP public water supply (pws) permit application for the treatment system modification for removal of volatile organic compounds (VOCs) at the Yoccos Restaurant (4042 Chestnut Street). The PADEP issued the public water supply emergency permit No. 3390817-E1 on January 15, 2020. EARTHRES is in process of contracting for the installation of the treatment system which should be installed in March, 2020. Previous sampling of the facility supply well (raw) indicated the presence of a dissolved lead concentration of 24.1 ppb (lab filtered). Pursuant to DEP request, a second sample of water was collected and field filtered for laboratory analysis of dissolved lead. Analytical results of the second sample which was field filtered indicated a Not Detectable concentration (Appendix B).

8.0 ADDITIONAL INVESTIGATION

A total of fifteen additional soil borings and two additional monitoring wells as shown on Figure 5.0 are recommended to be installed. Following completion of the groundwater and soil quality assessment, an investigation into the deeper bedrock aquifer is warranted and will require the installation of wells into the bedrock. Furthermore, hydraulic testing may be warranted to evaluate site hydrogeology, contaminant migration and remedial technologies.

Pursuant to discussion with ICF, additional characterization activities will be performed under USTIFs competitive bidding process. CEA, Inc. will continue to perform the following activities.

- Complete a second round of groundwater sampling from monitoring wells MW-13, MW-14 and MW-15, including a full round of liquid levels.
- Complete POET system installation at Yoccos Restaurant.
- Continue quarterly sampling of private wells.
- Continue operation and maintenance of POET systems.
- Continue discussion with PADEP and complete follow-up activities, as deemed necessary for the following properties: 4671, 4679, 4691, 4705, 4712, 4723, 4724 Buckeye Road, 4001, 4002 Miller Ave and 4045, 4051, 4061, 4069, 4133 and 4163 Chestnut Street.

9 .0 SCR EXTENSION REQUEST

Future on and off-site characterization work, up through the SCR submittal, will be facilitated through USTIFs competitive bid process. On behalf of East Penn Tire & Battery an extension is requested until September 30, 2020 to submit the required SCR. During this time period CEA, Inc. will continue to conduct necessary corrective actions, including, but not limited to:

- Complete a second round of groundwater sampling from recently installed on and off-site wells MW-13, MW-14 and MW-15.
- Complete the installation of the POET system at the property located at 4042 Chestnut Street in Emmaus, PA (Yoccos Restaurant).
- Continue quarterly sampling of all potable wells in which gasoline short list parameters have been detected.
- Continue operation and maintenance, as necessary, of all off-site POET systems installed to date.
- As needed, continue initial identification and sampling of all potable wells located within a 1,000 foot radius of the site, as well as specific identification of all properties to which site access has been denied.
- Continue discussions with the PADEP regarding those properties to which access has not been granted, and complete follow-up activities as deemed necessary.

Very Truly Yours,
COVENTRY ENVIRONMENTAL ASSOCIATES, INC.

John F. Van Wagenen, P.G/Pres.

John F. Van Wagenen, P.G.
Principal Hydrogeologist/President

cc. A. Mabus (DEP), M. Bedle (B&B), J. Ferro (ICF)

TABLES

Table 1.0, Con't
Soil Analytical Data Summary
United Tire Service
Emmaus, Pennsylvania

Parameter/ Sample I.D.	SB-9-16	SB-9-21	SB-9-50	SB-10-24	SB-10-48	SB-11-25	SB-11-54	SB-12-19	SB-12-25	SB-12-31	SB-12-50	SB-13-21	SB-13-52	SB-14-21	SB-14-52	MW-10-24	MW-10-26	MW-10-47	MW-11-55	MW-12-18	MW-12-26	MW-12-31	MW-12-36	MW-12-41	MW-12-54	MW-13-57	MW-14-57	MW-15-57	DEP Standard*
Benzene	ND	ND	ND	ND	1350	188	72.2	4330	34,200	9,480	5,250	ND	2,620	ND	656	ND	ND	ND	ND	926	3430	5530	1240	2190	3900	ND	ND	225	500
Ethylbenzene	ND	ND	ND	ND	725	ND	295	12,700	37,000	1,040	770	ND	687	ND	238	ND	172	ND	ND	21800	12800	46300	893	546	816	ND	ND	ND	70,000
Cumene	233	ND	ND	ND	ND	ND	ND	1,470	4,260	ND	ND	ND	ND	ND	ND	57.5	ND	ND	ND	3970	1820	6280	104	ND	ND	ND	ND	ND	600,000
MTBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	127	693	ND	729	ND	1,460	ND	ND	ND	ND	ND	ND	ND	ND	164	4420	ND	ND	ND	2,000
Naphthalene	ND	ND	ND	ND	ND	ND	ND	3370	7,320	ND	ND	ND	ND	ND	542	ND	ND	ND	ND	9260	6030	18700	1740	575	829	ND	13.5	ND	25,000
Toluene	ND	ND	ND	ND	4,520	76.6	350	38,500	166,000	12,100	6,710	ND	5,430	ND	1,060	ND	ND	ND	ND	47100	45400	130000	5040	6650	9490	ND	7.9	558	100,000
Xylenes	ND	ND	ND	ND	3,490	303	1,660	73,900	220,000	5,870	3,770	ND	3,450	ND	946	ND	357	ND	ND	125000	67400	270000	5110	3190	4710	ND	ND	219	1,000,000
1,2,4 Trimethyl benzene	ND	ND	ND	ND	589	68.8	564	28,400	72,000	648	495	ND	609	ND	344	675	424	ND	ND	66200	31700	115000	2610	716	749	ND	ND	ND	8,400
1,3,5 Trimethyl benzene	ND	ND	ND	ND	174	ND	187	8,770	22,400	169	122	ND	146	ND	96.1	227	228	ND	ND	19800	11400	38300	729	187	184	ND	ND	ND	74,000
Sample Depth (ft)	16	21	50	24	48	25	54	19	25	31	50	21	52	21	52	24	26	47	55	18	26	31	36	41	54	57	57	57	

Notes: All results reported in ug/kg

* PADEP residential, unsaturated soil standard..

ND Denotes Not Detected above the laboratory limit of detection.

NA Denotes Not Analyzed

Table 2.0
Water Level Data Summary
United Tire Service
Emmaus, Pennsylvania

	May 9, 2019		May 21, 2109		July 31, 2019		Sept 6, 2019		Sept 12, 2019		Dec. 13, 2019		Jan. 6, 2020		Feb. 12, 2020	
Well #/ PVC Elevation	DTW (FT)	W.L. Elevation (FT)	DTW (FT)	W.L. Elevation (FT)	DTW (FT)	W.L. Elevation (FT)	DTW (FT)	W.L. Elevation (FT)	DTW (FT)	W.L. Elevation (FT)	DTW (FT)	W.L. Elevation (FT)	DTW (FT)	W.L. Elevation (FT)	DTW (FT)	W.L. Elevation (FT)
MW-1 (98.57)	50.34	48.23	50.70	47.87	DRY	--	DRY	--	DRY	--	DRY	--	DRY	--	DRY	--
MW-2 (98.94)	49.12	49.82	47.40	51.54	48.36	52.04	50.05	48.89	50.06	48.88	DRY	--	DRY	--	DRY	--
MW-3 (98.99)	49.17	49.82	47.24	51.75	48.05	52.33	49.94	49.05	49.42	49.57	DRY	--	DRY	--	DRY	--
MW-4 (98.71)							54.1	44.61	54.55	44.16	61.13	37.58	61.47	37.24	62.74	35.97
MW-5 (99.03)							57.48	41.55	57.67	41.36	61.65	37.38	62.00	36.97	62.80	36.23
MW-6 (98.28)							59.97	38.31	60.27	38.01	65.05	33.23	65.15	33.13	DRY	--
MW-7 (98.70)							59.43	39.27	59.63	39.07	63.73	34.97	64.35	34.35	64.42	34.28
MW-8 (99.05)							58.16	40.89	59.40	39.65	63.95	35.10	64.45	34.60	DRY	--
MW-9 (98.06)											64.55	33.51	65.18	32.88	65.48	32.58
MW-10 (98.85)											65.04	33.81	64.55	34.30	67.02	31.83
MW-11 (98.70)											63.25	35.45	63.93	34.77	64.85	33.85
MW-12 (98.74)											63.08	35.66	64.23	34.51	64.75	33.99
MW-13 (97.92)															68.15	29.77
MW-14 (97.65)															63.40	34.25
MW-15 (98.51)															69.50	29.01

Table 3
Groundwater Analytical Data Summary
(December 13, 2019)
United Tire Service
Emmaus, Pennsylvania

Parameter/ Sample I.D.	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	PADEP Standard *
Benzene	NA	NA	NA	**5800**	ND	NA	**3780**	**12400**	**65.5**	ND	ND	**2720**	5
Ethylbenzene	NA	NA	NA	**1650**	ND	NA	489	**2780**	49.4	ND	ND	357	700
Cumene	NA	NA	NA	71.5	ND	NA	ND	ND	3.4	ND	ND	29.1	840
MTBE	NA	NA	NA	**500**	9.2	NA	**112**	**24700**	1.2	ND	7.4	**1370**	20
Naphthalene	NA	NA	NA	**144**	ND	NA	ND	**527**	ND	ND	ND	64.5	100
Toluene	NA	NA	NA	**2060**	ND	NA	**1780**	**26000**	121	ND	ND	**4240**	1,000
Xylene	NA	NA	NA	5750	ND	NA	3820	**15200**	252	ND	ND	1970	10,000
1,2,4 Trimethylbenzene	NA	NA	NA	**1130**	ND	NA	**593**	**1980**	**30**	ND	ND	**319**	15
1,3,5 Trimethylbenzene	NA	NA	NA	381	ND	NA	207	**487**	16.2	ND	ND	85.7	420

Notes: All results reported in Parts Per Billion (ppb).

* PADEP statewide health groundwater standard for a used aquifer in a residential setting.

ND Denotes Not Detected above the laboratory limit of detection.

NA Denotes Not Analyzed

Table 4
Groundwater Analytical Data Summary
(January 6, 2020)
United Tire Service
Emmaus, Pennsylvania

Parameter/ Sample I.D.	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	PADEP Standard *
Benzene	NA	NA	NA	**6020**	ND	NA	NA	**9910**	**11.6**	ND	ND	**4520**	5
Ethylbenzene	NA	NA	NA	**1700**	ND	NA	NA	**2230**	7.6	ND	ND	645	700
Cumene	NA	NA	NA	69.4	ND	NA	NA	ND	ND	ND	ND	32.5	840
MTBE	NA	NA	NA	**563**	6.2	NA	NA	**21000**	1.2	ND	6.9	ND	20
Naphthalene	NA	NA	NA	**170**	ND	NA	NA	ND	ND	ND	ND	40.1	100
Toluene	NA	NA	NA	**1740**	ND	NA	NA	**23400**	20.2	ND	ND	**7530**	1,000
Xylene	NA	NA	NA	6010	ND	NA	NA	**12700**	48.6	ND	ND	3540	10,000
1,2,4 Trimethylbenzene	NA	NA	NA	**1010**	ND	NA	NA	**1590**	6.6	ND	ND	**384**	15
1,3,5 Trimethylbenzene	NA	NA	NA	373	ND	NA	NA	409	3.6	ND	ND	130	420

Notes: All results reported in Parts Per Billion (ppb).

* PADEP statewide health groundwater standard for a used aquifer in a residential setting.

ND Denotes Not Detected above the laboratory limit of detection.

NA Denotes Not Analyzed

Table 5
Groundwater Analytical Data Summary
(February 12, 2020)
United Tire Service
Emmaus, Pennsylvania

Parameter/ Sample I.D.	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13	MW-14	MW-15	PADEP Standard*
Benzene	NA	NA	NA	**6330**	ND	NA	NA	NA	**17.8**	ND	**123**	**541**	ND	ND	**2290**	5
Ethylbenzene	NA	NA	NA	**1630**	ND	NA	NA	NA	5.4	ND	5.5	16.5	ND	ND	231	700
Cumene	NA	NA	NA	67.6	ND	NA	NA	NA	ND	ND	ND	8.2	ND	ND	12.7	840
MTBE	NA	NA	NA	**657**	4.9	NA	NA	NA	ND	ND	8.1	**1250**	2.8	ND	**5470**	20
Naphthalene	NA	NA	NA	**179**	ND	NA	NA	NA	ND	ND	ND	4	ND	ND	77	100
Toluene	NA	NA	NA	970	ND	NA	NA	NA	30.1	ND	49.4	58.9	ND	ND	76	1,000
Xylene	NA	NA	NA	5380	ND	NA	NA	NA	58.2	ND	41.1	43.6	ND	ND	478	10,000
1,2,4 Trimethylbenzene	NA	NA	NA	**852**	ND	NA	NA	NA	8.1	ND	3.3	5.8	ND	ND	**84.7**	15
1,3,5 Trimethylbenzene	NA	NA	NA	372	ND	NA	NA	NA	4.5	ND	3.9	2.8	ND	ND	20.7	420

Notes: All results reported in Parts Per Billion (ppb).

* PADEP statewide health groundwater standard for a used aquifer in a residential setting.

ND Denotes Not Detected above the laboratory limit of detection.

NA Denotes Not Analyzed

Table 6.0
Supply Well Survey Summary
United Tire Service
Emmaus, Pennsylvania

Property ID	Date Survey Delivered	Owner Response / Date	Well Sampled / Date	Date Owner Notified	Chemical Detection	Date Potable Water Provided	Treatment System Installation Date
Tim Anger 4050 Miller	7/5/19	7/5/19	7/8/19	7/11/19	MTBE, 4.3 ppb	7/12/19	7/18/19
UTS 4094 Chestnut	NA	NA	7/8/19	7/11/19	ND	NA	NA
Pierfy 4015 Miller	7/5/19	7/10/19	7/15/19	7/19/19	ND	NA	NA
Miller 3964 Miller	7/5/19	7/10/19	7/15/19	7/19/19	ND	NA	NA
V&C 4095 Chestnut	7/5/19	7/10/19	7/15/19	7/19/19	ND	NA	NA
Eisenhardt 4079 Chestnut	7/5/19	7/10/19	7/15/19	7/19/19	ND	NA	NA
Druckenmiller 4168 Chestnut	7/5/19	7/10/19	7/15/19	7/19/19	ND	NA	NA
JAS 4501 Colebrook	7/5/19	7/10/19	7/15/19	7/19/19	ND	NA	NA
Mech-Plus 4701 Colebrook	7/5/19	7/10/19	7/15/19	7/19/19	ND	NA	NA
Staufer 4701 Mill	7/8/19	7/11/19	7/15/19	7/19/19	ND	NA	NA
Washer 4704 Mill	7/8/19	7/11/19	7/15/19	7/19/19	ND	NA	NA
Macilwrath 4648 Mill	7/8/19	7/11/19	7/15/19	7/19/19	ND	NA	NA
LCWA 4475 Fairview Ct	NA	Auth. 7/16/19	7/16/19	7/19/19	ND	NA	NA
Guethle 4691 Buckeye	7/5/19	7/17/19	7/18/19	7/23/19	ND	NA	NA
Tom Anger 4090 Miller	7/5/19	7/17/19	7/18/19	7/23/19	ND	NA	NA
Gable 4650 Colebrook	7/5/19	7/17/19	7/18/19	7/23/19	ND	NA	NA
Hammett 4702 Colebrook	7/5/19	7/17/19	7/18/19	7/23/19	ND	NA	NA

Armas 4070 Miller	7/5/19	7/17/19	7/18/19	7/23/19	ND	NA	
Stauffer 4788 Buckeye	7/5/19	7/18/19	7/18/19	7/23/19	ND	NA	NA
4018 Miller	7/5/19	7/18/19	7/18/19	7/23/19	ND	NA	NA
Tim Anger 4050 Miller	POST GAC TREATMENT		7/18/19	7/23/19	ND	7/12/19	7/18/19
Abdelfatah 4101 Chestnut	7/19/19	7/19/19	7/19/19	7/23/19	ND	NA	NA
Baker 4711 Buckeye	7/5/19	7/19/19	7/19/19	7/23/19	ND	NA	NA
Woodys 3941 Chestnut	7/5/19	7/19/19	7/19/19	7/23/19	ND	NA	NA
Conklin 4001 Robert	7/5/19	7/22/19	7/22/19	7/29/19	ND	NA	NA
Herbein 4790 Mill	7/5/19	7/30/19	7/31/19	8/8/19	ND	NA	NA
Boyer 4055 Miller	7/5/19	7/29/19	8/1/19	8/7/19	ND	NA	NA
O'Brien 4030 Miller	7/5/19	8/5/19	8/7/19	8/13/19	ND	NA	NA
Tantaros/strip mall 4030 Chestnut	7/5/19	8/6/19	8/7/19	8/13/19	ND	NA	NA
Iacocca/Yoccos 4042 Chestnut (4140 Chestnut)	7/5/19	8/6/19	8/7/19	8/13/19	MTBE 3.7 PPB	Denied	In process, est. March, 2020
4102 Chestnut Trivet	7/5/19	8/14/19	8/15/19	8/25/19	ND	NA	NA
4144 Chestnut Rental	7/5/19	8/14/19	8/15/19	9/3/19	ND	NA	NA
4690 Buckeye Rental	7/5/19	8/14/19	8/15/19	8/25/19	ND	NA	NA
4054 Chestnut Vacant	7/5/19	8/27/19	8/27/19	9/6/19	11.8 PPB MTBE	NOT	USED
O'Brien Re-sample 4030 Miller	7/5/19	8/5/19	8/29/19	9/6/19	1 PPB MTBE	NA	9/18/19
Mcvicar 4157 Robert	7/5/19	9/3/19	9/6/19	9/10/19	ND	NA	NA
4144 Chestnut Rental Re-sample	7/5/19	9/5/19	9/26/19 (9/6/19 ATTEMPTED)	10/2/19	ND	NA	NA
4736 Buckeye	7/5/19	9/25/19	10/3/19 (9/26/19 ATTEMPTED)	10/9/19	ND	NA	NA
4054 Chestnut (padot)	NA	NA	10/22/19	10/25/19	RAW- 23.4 mtbe CAN 1- ND POST-ND	existing	10/21/19
4050 Miller, Anger	NA	NA	12/6/19	12/12/19	RAW- 3.6 mtbe, 1 benzene 0.97 cumene CAN 1- 0.57 cumene	existing	12/17/19, Replaced Can#1
4075 Miller, Brey	7/5/19	12/6/19	12/6/19	12/13/19	ND	NA	NA
4035 Miller Kleinsmith	7/5/19	12/2/19	12/6/19	12/13/19	ND	NA	NA
4030 Miller, O'brien	NA	NA	12/13/19	12/17/19	RAW- 1.0 mtbe Can#1- 1.3 benzene 0.75 cumene	existing	existing
4030 Miller, O'brien	NA	NA	12/17/19	12/30/19	POST-ND	existing	existing
4030 Mill, Obrien	NA	NA	1/6/19	1/13/19	RAW- 0.96 mtbe CAN #1 benzene 1.6 Cumene 2.1 Toluene 0.23 POST 0.14j cumene	existing	existing
4054 Chestnut	NA	NA	1/31/20	2/6/20	RAW 23.2 mtbe Can#1-ND POST -ND	existing	existing

Table 7
Private Supply Well (4030 Miller Ave)
Treatment System Data Summary
United Tire Service
Emmaus, Pennsylvania

	Sept 6, 2019			December 13, 2019			December 17, 2019			January 6, 2020 *		
Sample Location/ Parameter	RAW	Can #1	POST	RAW	Can #1	POST	RAW	Can #1	POST	RAW	Can #1	POST
MTBE	1	NA	NA	1	ND	NA	NA	NA	ND	0.96	ND	ND
Benzene	ND	NA	NA	ND	1.3	NA	NA	NA	ND	ND	1.6	ND
Toluene	ND	NA	NA	ND	ND	NA	NA	NA	ND	ND	0.23	ND
Cumene	ND	NA	NA	ND	0.75	NA	NA	NA	ND	ND	2.1	0.14 J

NOTES:
All results reported in Parts Per Billion (ppb)
ND Denotes Not Detected
NA Denotes Not Analyzed
Treatment system installed September 18, 2019
* Eurofins Laboratory
J Denotes result less than the reporting limit but greater than or equal to the method detection limit (concentration is approximate).
System installed 9/18/19.
Canister #1 replaced 1/23/20.

Treatment System Specifications:

Pressure Tank
- Sample port

Sediment filter (10 inch, 5 micron)
- Sample port

Granular activated carbon (GAC) canister (Clack 10 x 54 inches)
- Sample port

Granular activated carbon (GAC) canister (Clack 10 x 54 inches)
- Sample port

Resin water conditioner with salt brine tank (MARLO, pre-existing)
Ultraviolet light (disinfection, pre-existing unit is not operating, owner in process of replacing unit)

Table 8
Private Supply Well (4050 Miller Ave)
Treatment System Data Summary
United Tire Service
Emmaus, Pennsylvania

	July 8, 2019			December 6, 2019		
Sample Location/ Parameter	**RAW**	**Can #1**	**POST**	**RAW**	**Can #1**	**POST**
MTBE	4.3	NA	NA	3.6	ND	NA
Benzene	ND	NA	NA	1	ND	NA
Cumene	ND	NA	NA	0.97	0.57	NA

NOTES:
All results reported in Parts Per Billion (ppb)
ND Denotes Not Detected
NA Denotes Not Analyzed
Treatment system installed July 18, 2019
Canister #1 was replaced on December 17, 2019

Treatment System Specifications:

Pressure Tank
- Sample port

Sediment filter (10 inch, 5 micron)
- Sample port

Granular activated carbon (GAC) canister (Clack 10 x 54 inches)
- Sample port

Granular activated carbon (GAC) canister (Clack 10 x 54 inches)
- Sample port

Ultraviolet light (disinfection, VIQUA model S8Q-PA, 35 by 2.5 inches)

Table 9
Private Supply Well (4054 Chestnut St.)
Treatment System Data Summary
United Tire Service
Emmaus, Pennsylvania

	August 27, 2019			October 22, 2019			January 31, 2020		
Sample Location/ Parameter	RAW	Can #1	POST	RAW	Can #1	POST	RAW	Can #1	POST
MTBE	11.8	NA	NA	23.4	ND	ND	23.2	ND	ND
Benzene	ND	NA	NA	ND	ND	ND	ND	ND	ND
Cumene	ND	NA	NA	ND	ND	ND	ND	ND	ND

NOTES:
All results reported in Parts Per Billion (ppb)
ND Denotes Not Detected
NA Denotes Not Analyzed
Treatment system installed October 21, 2019

Treatment System Specifications:

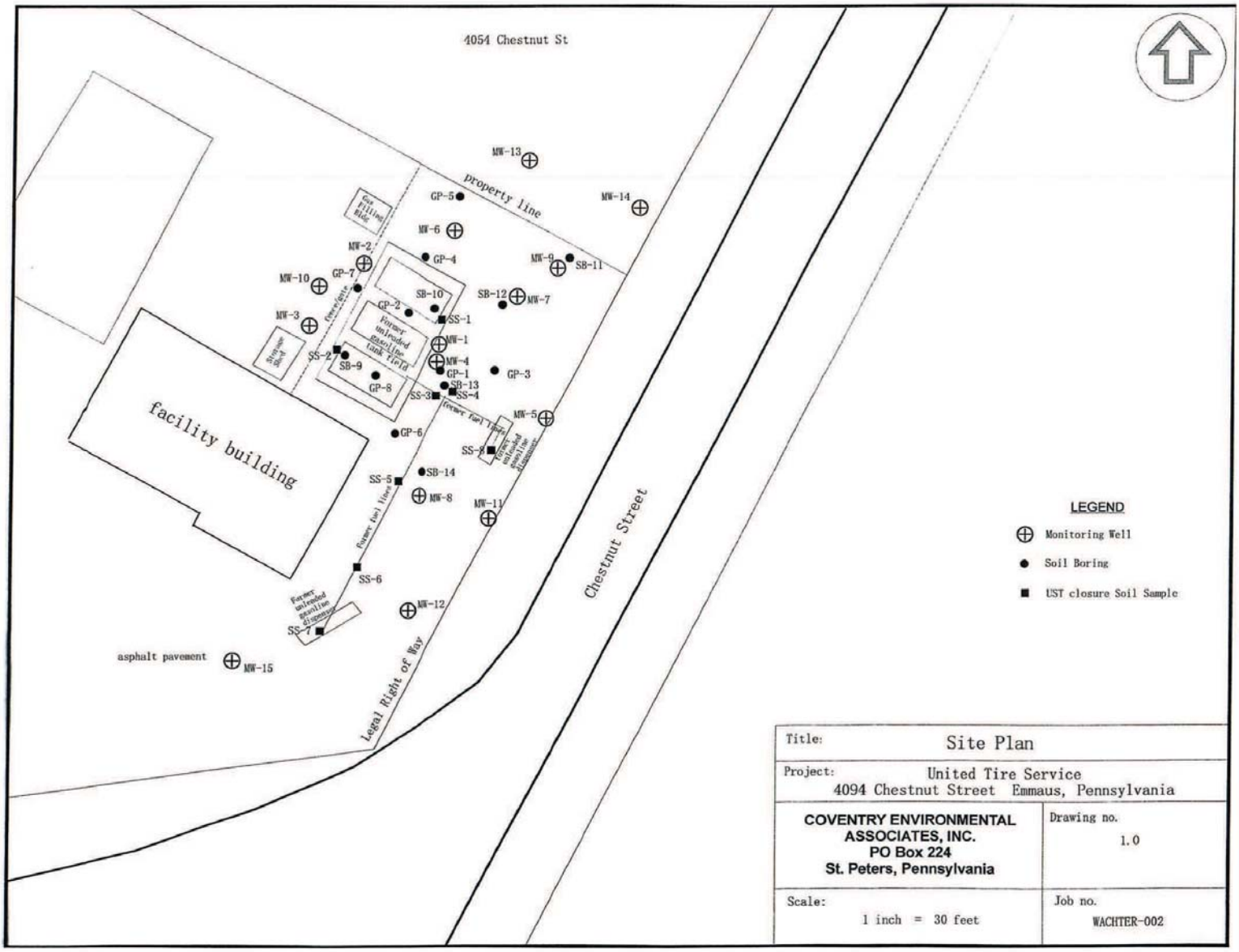
Pressure Tank
- Sample port

Sediment filter (10 inch, 5 micron)
Granular activated carbon (GAC) canister (Clack 10 x 54 inches)
- Sample port

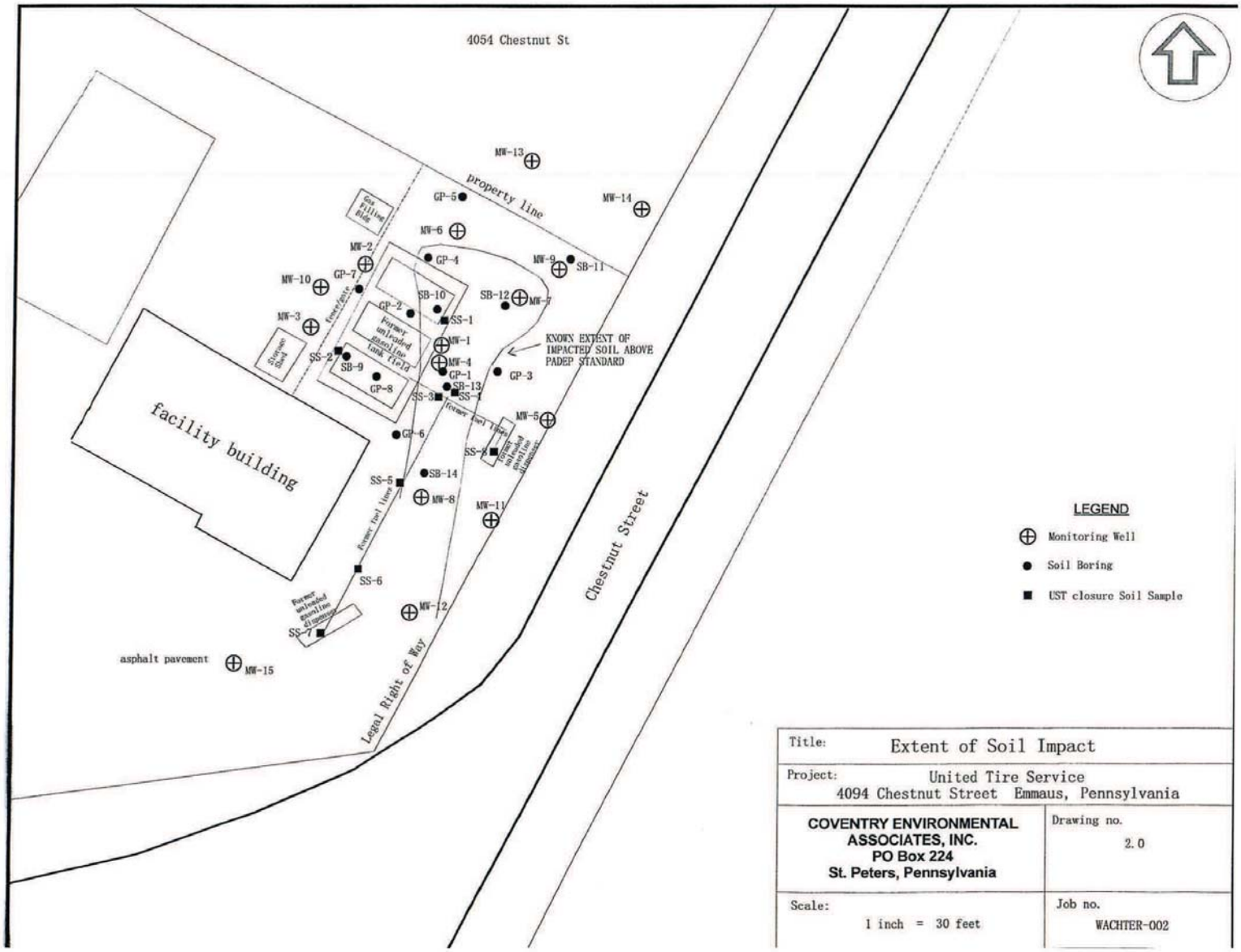
Granular activated carbon (GAC) canister (Clack 10 x 54 inches)
- Sample port

Sediment filter (10 inch, 5 micron)
Ultraviolet light (disinfection, VIQUA model S8Q-PA, 35 by 2.5 inches)

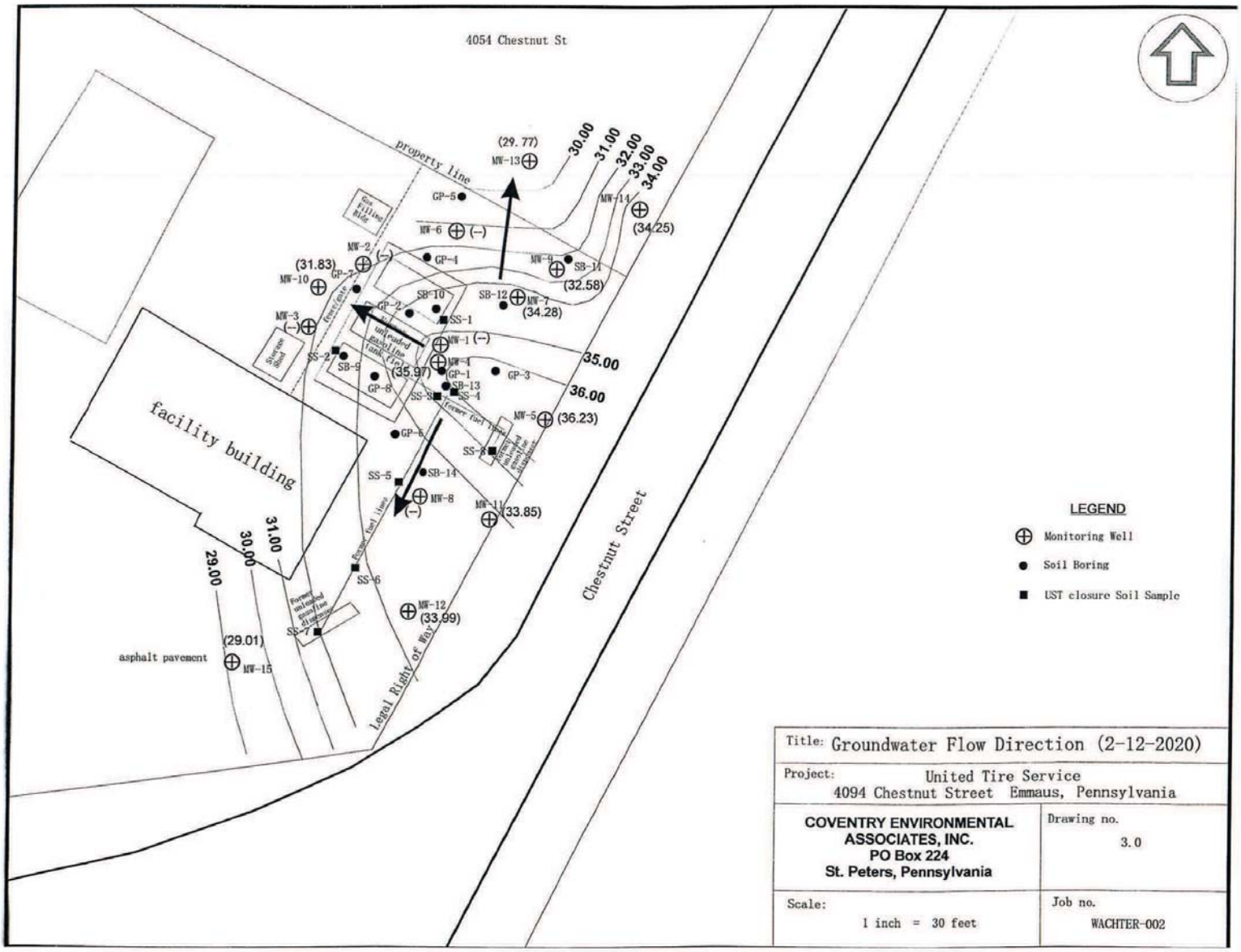
FIGURES



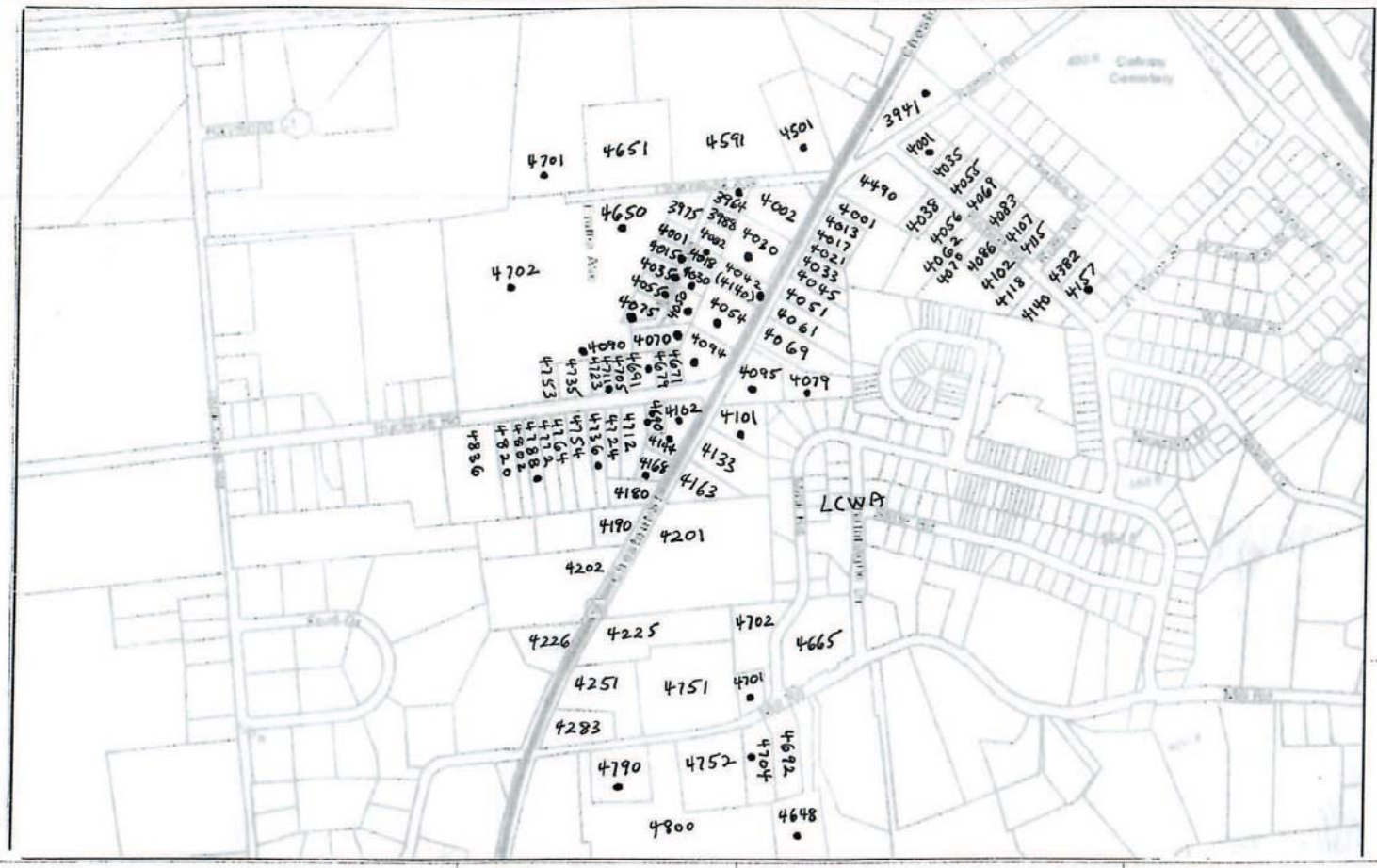
Title: Site Plan	
Project: United Tire Service 4094 Chestnut Street Emmaus, Pennsylvania	
COVENTRY ENVIRONMENTAL ASSOCIATES, INC. PO Box 224 St. Peters, Pennsylvania	Drawing no. 1.0
Scale: 1 inch = 30 feet	Job no. WACHTER-002



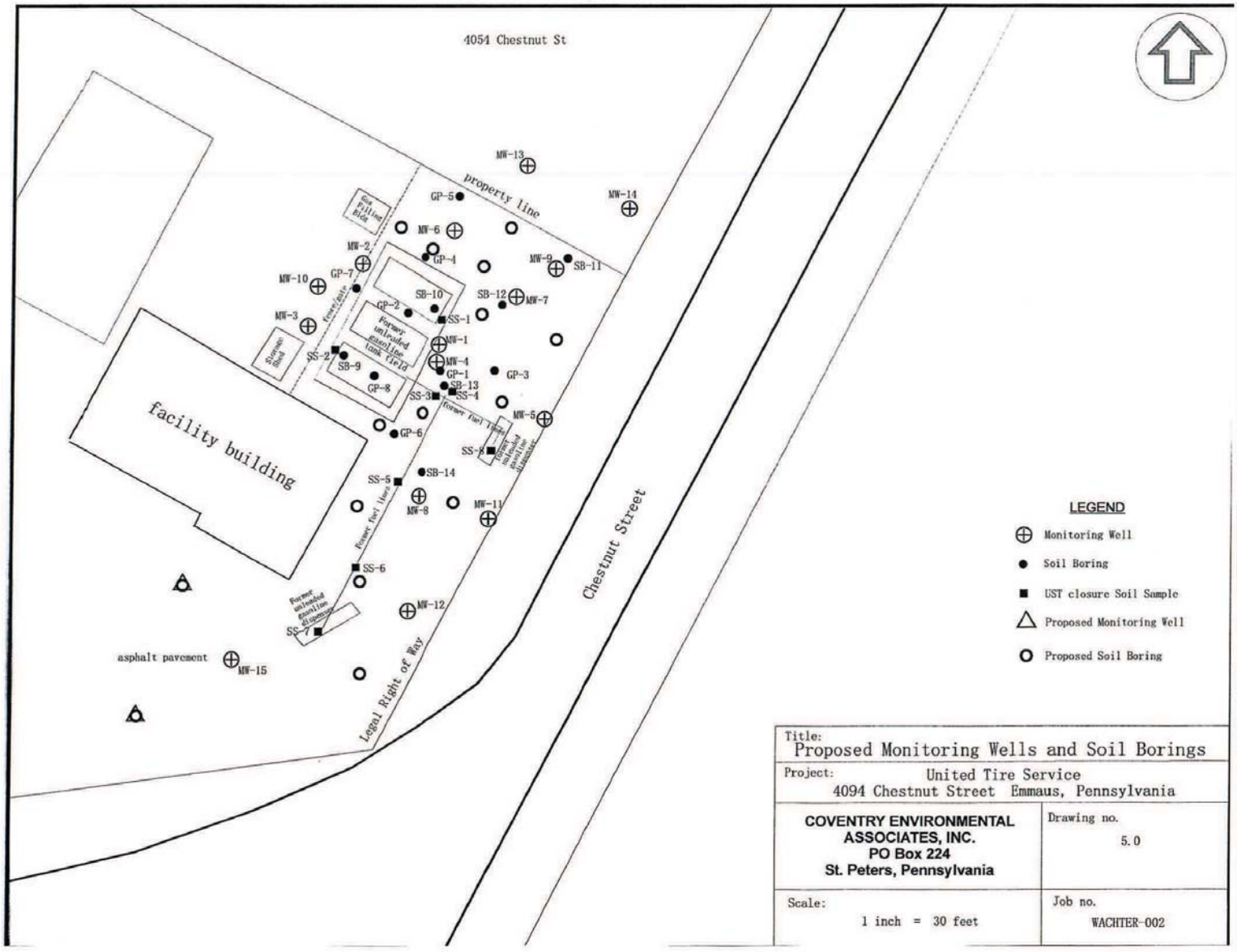
Title: Extent of Soil Impact	
Project: United Tire Service 4094 Chestnut Street Emmaus, Pennsylvania	
COVENTRY ENVIRONMENTAL ASSOCIATES, INC. **PO Box 224** **St. Peters, Pennsylvania**	Drawing no. 2.0
Scale: 1 inch = 30 feet	Job no. WACHTER-002



Title: Groundwater Flow Direction (2-12-2020)	
Project: United Tire Service 4094 Chestnut Street Emmaus, Pennsylvania	
COVENTRY ENVIRONMENTAL ASSOCIATES, INC. **PO Box 224** **St. Peters, Pennsylvania**	Drawing no. 3.0
Scale: 1 inch = 30 feet	Job no. WACHTER-002



COVENTRY ENVIRONMENTAL ASSOCIATES, INC. PO Box 224 St. Peters, Pennsylvania	job no. WACHTER-002	scale: 1" = 600' (approx)	drawing no. 4.0
United Tire Service 4094 Chestnut Street Emmaus, Pennsylvania (facility ID 39-27735)	TITLE: DRAFT Area of Private Well Survey ● Indicates well sampled		



Title: Proposed Monitoring Wells and Soil Borings	
Project: United Tire Service 4094 Chestnut Street Emmaus, Pennsylvania	
COVENTRY ENVIRONMENTAL ASSOCIATES, INC. **PO Box 224** **St. Peters, Pennsylvania**	Drawing no. 5.0
Scale: 1 inch = 30 feet	Job no. WACHTER-002

APPENDIX A

DRILLING LOGS

COVENTRY ENVIRONMENTAL ASSOCIATES, INC.

DRILLING LOG

BORING NO: mw-13

PROJECT no: UTS-02	DATE: 1/18/20	DRILLING METHOD: Auger	
PROJECT TITLE: United Tire Service		DRILLING COMPANY; Garber well drilling	
PROJECT LOCATION: United Tire Service, 4094 Chestnut St, Emmaus, PA		BOREHOLE DIAMETER (IN): 8	WATER LEVEL (FT):
		WEATHER CONDITIONS: dry, cold	LOGGED BY: jvw

DEPTH (FT)	LITHOLOGIC DESCRIPTION	well design	PID	COMMENTS
0	tan, silty clay, dry		0	no petroleum odor
–			0	PID readings from auger cuttings
10			0	
—			0	
20	same lithlogy, moist, some dolomite gravel		0	no petroleum odor
–			0	
30			0	
----			0	no petroleum odor
40			0	
—	- same lithology		0	no petroleum odor
50			0	
—			0	spoon 55 -57'
60			0 @ 57'	no petroleum odor
—			0	
70			0	
—	- end boring @ 75 feet.		0	well consruction: 75 feet total well depth surface flush manhole 4 inch diameter 40 feet solid casing (tremie grout) 35 feet 0.02" screen
80				
—				
90				
—				
100				

COVENTRY ENVIRONMENTAL ASSOCIATES, INC.

DRILLING LOG

BORING NO: mw-14

PROJECT no: UTS-02	DATE: 1/19/20	DRILLING METHOD: Auger	
PROJECT TITLE: United Tire Service		DRILLING COMPANY; Garber well drilling	
PROJECT LOCATION: United Tire Service 4094 Chestnut St Emmaus, PA		BOREHOLE DIAMETER (IN): 8	WATER LEVEL (FT):
		WEATHER CONDITIONS: dry, cold	LOGGED BY: jvw

DEPTH (FT)	LITHOLOGIC DESCRIPTION	well design	PID	COMMENTS
0	tan, silty clay, dry		0	no petroleum odor
–			0	PID readings from auger cuttings
10			0	
—			0	
20	same lithlogy, moist, some dolomite gravel		0	no petroleum odor
–			0	
			0	
30			0	
----			0	no petroleum odor
40			0	
—	- same lithology		0	no petroleum odor
50			0	
—			0	
60			0 @ 57'	spoon 55 -57' no petroleum odor
—			0	
70			0	
—	- end boring @ 75 feet.		0	well consruction: 75 feet total well depth surface flush manhole 4 inch diameter 40 feet solid casing (tremie grout) 35 feet 0.02" screen
80				
—				
90				
—				
100				

COVENTRY ENVIRONMENTAL ASSOCIATES, INC.

DRILLING LOG

BORING NO: mw-15

PROJECT no: UTS-02	DATE: 1/20/20	DRILLING METHOD: Auger	
PROJECT TITLE: United Tire Service		DRILLING COMPANY; Garber well drilling	
PROJECT LOCATION: United Tire Service 4094 Chestnut St Emmaus, PA		BOREHOLE DIAMETER (IN): 8	WATER LEVEL (FT):
		WEATHER CONDITIONS: dry, cold	LOGGED BY: jvw

DEPTH (FT)	LITHOLOGIC DESCRIPTION	well design	PID	COMMENTS
0	tan, silty clay, dry		0	no petroleum odor
–			0	PID readings from auger cuttings
10			0	
—			0	
20	same lithlogy, moist, some dolomite gravel		0	no petroleum odor
–			0	
30			0	
----			0	no petroleum odor
40			0	
—	- same lithology		0	no petroleum odor
50			0	
—			0.4	spoon 55 -57'
60			0 0.8 @ 57'	no petroleum odor
—			0	
70			0	
—	- end boring @ 75 feet.		0	well consruction: 75 feet total well depth surface flush manhole 4 inch diameter 40 feet solid casing (tremie grout) 35 feet 0.02" screen
80				
—				
90				
—				
100				