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==== ENGINEERING ====

Civil and Environmental Engineering

PROGRESS REPORT
Quanta Resources, Lodi Street
City of Syracuse, Onondaga County, New York
DEC Site No. 7-34-013 / Index No. D7-00001-07-07
Project No. 2015127

March 2021

INTRODUCTION

This report summarizes the remedial activities at the Quanta Resources – Syracuse Site since our January 2020 Progress Report. The 0.75-acre Site is a former waste oil recycling facility located in a mixed commercial and industrial area. Groundwater is impacted with light non-aqueous phase liquid (LNAPL) with a viscosity similar to motor oil which historically has been present in monitoring wells MW-1S, MW-2, MW-7 and MW-10. The LNAPL contains polychlorinated biphenyls (PCBs) in concentrations above 50 parts per million (ppm). The liquid surface in wells with LNAPL is typically 31 and 34 feet below the ground surface.

A remedial excavation was completed in 2011 to a maximum depth of 16 feet. Free product recovery efforts have been ongoing since September 2012. Installation of a vacuum-enhanced LNAPL recovery system to enhance oil recovery from the bedrock water table was completed in 2012 and operated until 2015. Free product recovery is currently being accomplished with absorbent socks that are inspected and changed quarterly in the four monitoring wells with a history of free product accumulation. The Periodic Review Report (PRR) was submitted to the New York State Department of Environmental Conservation (DEC) in July 2020. The most recent post-remedial groundwater sampling event of selected wells was completed in October 2020.

FREE PRODUCT RECOVERY

Absorbents have been maintained in the four monitoring wells with a history of free product accumulation (MW-1S, MW-2, MW-7 and MW-10) since March 2017. Quarterly inspections were completed in December 2019 and March, July and October 2020 to assess free product thickness and the amount of oil absorbed and recovered in each well. Well MW-1S had free product layers ranging in thickness from a thin layer less than 0.1 to 3.0 feet during the monitoring period. The remaining wells had either no free product layer or a thin layer of 0.1 foot or less. A total of 0.8 gallons of free product was recovered over the last 11-month period, all from MW-1S. A total of 33.2 gallons of free product has been recovered since initiating recovery efforts in 2012. Refer to the attached *Table 1A – Free Product Thickness* and *Table 1B – Monthly Free Product Recovery* for additional information.

GROUNDWATER SAMPLING

A groundwater sampling event was completed on October 8, 2020. Plumley personnel measured static water levels, purged the wells and collected samples from monitoring wells MW-1D, MW-2, MW-5, MW-6, MW-9, MW-10 and MW-12. A free product film was observed in monitoring well MW-10. No free product was observed in any of the other wells sampled. Refer to the attached *Figure 1 – Site Plan* for sampling locations and the *Groundwater Sampling Field Logs* for field observations.

Samples were submitted to SGS Accutest (SGS) for laboratory analysis of volatile organic compounds (VOCs) using United States Environmental Protection Agency (EPA) Method 8260 and PCBs using EPA Method 8082. At the request of the DEC, key monitoring wells MW-9, MW-10, MW-12 were also sampled for analysis of “emerging contaminants,” including

1,4-Dioxane using EPA Method 8270SIM and Per- and Poly-Fluorinated Alkyl Substances (PFAS) Target Analyte List (TAL) using EPA Method 537M by ID. Well MW-9 exhibited insufficient groundwater recovery over an approximate 24-hour period to allow collection of adequate groundwater volume for the PCB and emerging contaminant analyses. Therefore, the sample from well MW-9 was only analyzed for VOCs. The results are discussed below.

Groundwater Elevations

The groundwater contours calculated using elevation data measured on October 8, 2020 are shown on the attached *Figure 1 – Site Plan*. The contours are similar to prior maps, with a westerly flow direction on the west side of the site and more variable flow directions in the center area. Refer to the attached *Table 1C – Monitoring Well Groundwater Elevation Summary* for additional information.

Analytical Results

Analytical results reported total VOC concentrations ranging from 15 to 92 micrograms per liter ($\mu\text{g/L}$) in the wells tested. VOCs exceeding groundwater standards in the latest sampling event (also detected in prior sampling events) included chlorinated organics 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, chlorobenzene and vinyl chloride, as well as non-chlorinated organics benzene, isopropylbenzene and n-Propylbenzene. The reported concentrations for the majority of the VOCs exceeding standards were by factors of less than 2 to 3. VOC concentrations have varied relatively little over the past six annual monitoring events. Refer to *Table 2 – Summary of Historical Groundwater Analytical Results – VOCs*.

PCBs were not detected above the laboratory's method detection limits in four of the six wells sampled for PCBs. Wells MW-2 and MW-10 had reported total PCB concentrations of 0.51 and

0.35 µg/L respectively, both of which were comprised of Arochlors 1254 and 1260. These concentrations exceed the groundwater standard for PCBs of 0.09 µg/L. Refer to *Table 3 – Summary of Historical Groundwater Analytical Results – PCBs*.

Groundwater samples were collected from two of the three monitoring wells being monitored for emerging contaminants (MW-10 and MW-12) and analyzed for PFAS compounds and 1,4-Dioxane. This is the third sampling event for emerging contaminants analysis of these wells. Total PFAS compound concentrations of 40 and 11 nanograms per liter (ng/L) were reported in monitoring wells MW-10 and MW-12, respectively, with 1,4-Dioxane concentrations of 0.19 and 1.03 µg/L, respectively. New York State recently adopted Maximum Contaminant Levels (MCLs) for drinking water (applicable as groundwater standards) of 10 ng/L for Perfluorooctanesulfonic acid (PFOS) and Perfluorooctanoic acid (PFOA), and 1.0 µg/L for 1,4-Dioxane. Only one well, MW-10, had a PFOS/PFOA exceedance with a PFOA concentration of 12.7 ng/L. The highest 1,4-Dioxane concentration was for well MW-12 at 1.03 µg/L, essentially equal to the groundwater standard. Refer to *Table 4A – PFAS and 1,4-Dioxane in Groundwater – New Proposed MCLs* and *Table 4B – Historical Summary of Emerging Contaminant Analyses* for details.

DISCUSSION OF FINDINGS

The findings from the October 2020 groundwater sampling event and the free product inspections completed throughout the year are in overall agreement and consistent with those discussed in the January 2020 Progress Report. We offer the following comments:

- Free product recovery continues to be limited to relatively small volumes from MW-1S. The majority of the wells have not contained free product (Table 1A).

- VOC historical concentrations continue to indicate a stable, relatively low-level, dissolved phase groundwater plume condition (Table 2).
- PCB detections in groundwater have been sporadic and at relatively low concentrations (Table 3).
- The analytical results for three sampling events completed for emerging contaminants have yielded generally similar results (Table 4B).

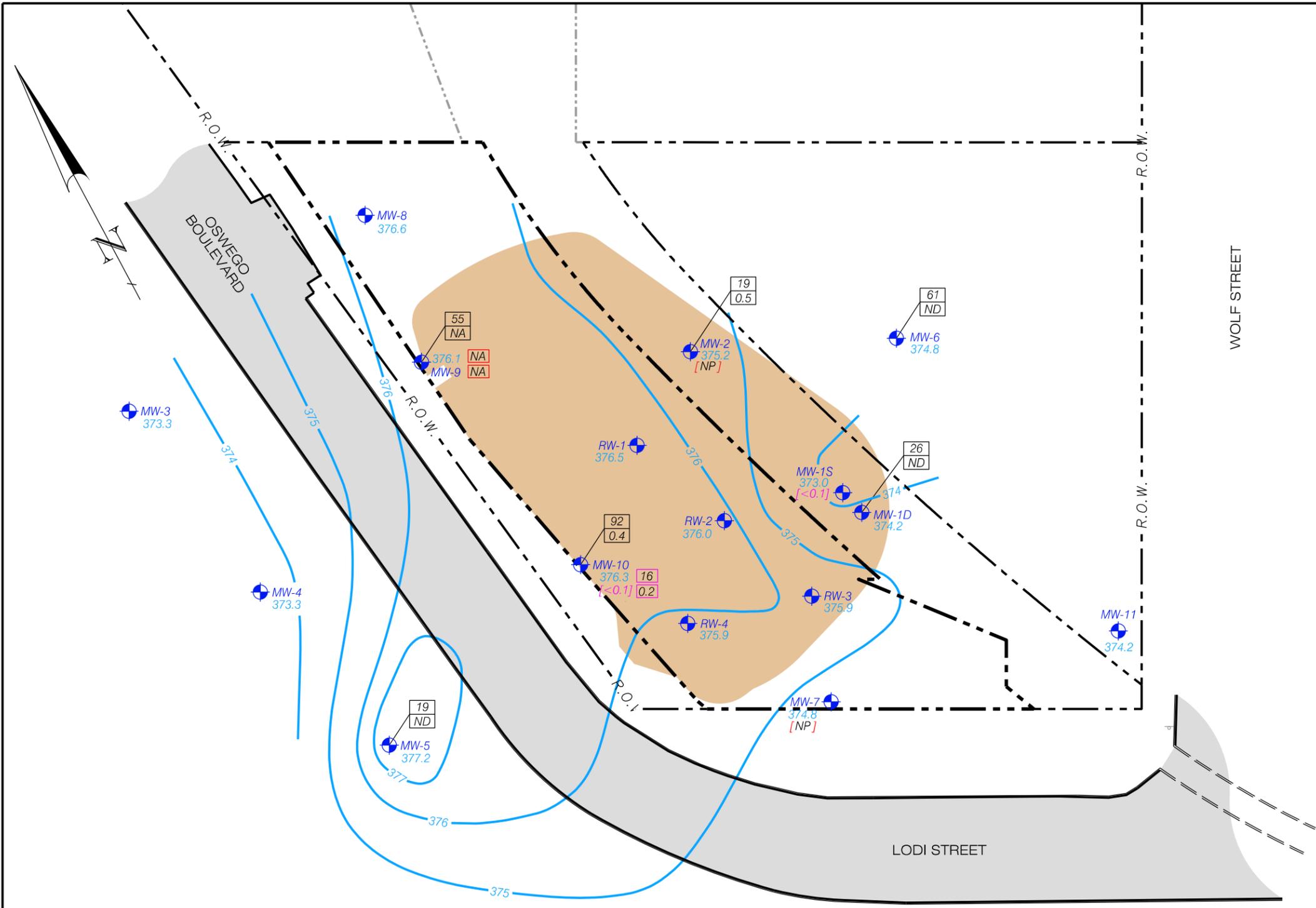
RECOMMENDATIONS

We recommend maintaining the quarterly absorbent sock and free product recovery program in MW-1S only. No measurable free product was recovered from the other three wells and layers have been absent or thin over the recently completed one-year quarterly program.

Given the consistency of the post-remedial results indicative of a stable plume condition, we recommend extending the time between sampling events to two years. The next sampling event would be in the late summer to early fall of 2022 and would include wells MW-1D, MW-2, MW-5, MW-6, MW-9, MW-10 and MW-12. Groundwater samples collected from these wells would be submitted for laboratory analysis of VOCs using EPA Method 8260 Site Specific Target Compound List (TCL) and PCBs using EPA Method 8082.

The completion of the three sampling and analysis events for emerging contaminants provided generally consistent results. Therefore, no additional sampling and analysis is recommended.

FIGURE



Key

- Property Line
- R.O.W.
- Lot Line
- MW-6
- RW-1
- Approximate 2011 Excavation Area

October 2020 Data:

- 378.93 Groundwater Elevation
- 376 Groundwater Contour
- [<0.1] Free Product Thickness (ft)
- [NP] Not Present

Groundwater Analytical Results (ug/l)

- 26 Total EPA 8260 VOCs
- ND Total EPA 8082 PCBs

Emerging Contaminants

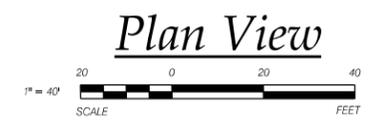
- 8 PFOA/PFAS (ng/L)
- 1.0 1,4-Dioxane (ug/L)

Notes:
 ND - Not Detected
 NA - Not Analyzed

Basemap Reference:
 "Boundary and Topographic Survey, Part of Lots 1 and 9, Block 12, City of Syracuse, Onondaga County, State of New York", Prepared by: CNY Land Surveying, Dated: 10/08/08, File No.: 08.117.

DEC SITE NO.: 7-34-013

QUANTA RESOURCES



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REVISIONS:	DATE:	BY:
PROGRESS REPORT	10/17/19	FAK
PROGRESS REPORT	12/20	FAK

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PROJECT: **SITE PLAN - OCTOBER 2020 SAMPLING EVENT**

DWG. TITLE: **SITE PLAN - OCTOBER 2020 SAMPLING EVENT**

CLIENT: **QUANTA RESOURCES / SYRACUSE PRP GROUP**

LOCATION: **CITY OF SYRACUSE, ONONDAGA COUNTY, NEW YORK**

Note: No alteration permitted hereon except as provided under Section 7209 Subdivision 2 of the New York State Education Law.

PROJECT No.:	2015127
FILE NAME.:	FIGURE 1
SCALE:	AS NOTED
DATE:	OCT. 2020
ENG'D BY:	FAK
DRAWN BY:	JJL
CHECKED BY:	DRV

SHEET NO.:

FIGURE 1

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Civil and Environmental Engineering

TABLES

QUANTA RESOURCES SITE
2802-2810 Lodi Street
City of Syracuse, Onondaga County, New York
DEC Site No. 7-34-013

TABLE 1A - FREE PRODUCT THICKNESS (FEET)

Date	MW-1S	MW-2	MW-7	MW-10	RW-1	RW-2	RW-3	RW-4	MW-1D	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-11	MW-12
07/14/09	2.04	1.80	0.90	0.85	NI	NI	NI	NI	---	---	---	---	---	---	---	---	---
2011	Completed Remedial Excavation																
09/20/12	3.23	1.07	4.03	2.09	---	0.05	0.76	---	---	---	---	---	---	---	---	---	---
09/20/12	System Startup																
09/27/12	3.20	1.51	3.21	1.68	---	0.14	0.19	---	---	---	---	---	---	---	---	---	---
10/04/12	4.26	1.39	4.85	2.05	---	0.09	0.27	---	---	---	---	---	---	---	---	---	---
10/12/12	4.25	2.21	4.49	1.69	---	0.66	0.95	---	---	---	---	---	---	---	---	---	---
11/15/12	NA	0.77	NA	1.5	---	NA	NA	---	---	---	---	---	---	---	---	---	NM
12/28/12	6.21	1.01	2.92	1.32	---	0.31	NA	---	---	---	---	---	---	---	---	---	---
01/30/13	6.4	0.29	0.33	0.87	---	0.32	0.13	---	---	---	---	---	---	---	---	---	---
02/22/13	4.76	0.13	2.01	1.37	---	0.18	0.19	---	---	---	---	---	---	---	---	---	---
03/28/13	3.41	0.13	2.31	1.37	---	0.68	0.3	---	---	---	---	---	---	---	---	---	---
04/30/13	1.14	0.06	1.40	0.96	---	---	---	---	---	---	---	---	---	---	---	---	---
05/30/13	1.62	0.77	1.36	0.95	---	NA	0.21	---	---	---	---	---	---	---	---	---	---
06/21/13	2.29	0.13	0.82	0.91	---	0.55	0.43	---	---	---	---	---	---	---	---	---	---
07/17/13	1.70	0.09	1.56	0.53	---	<0.01	0.21	---	---	---	---	---	---	---	---	---	---
08/15/13	0.50	0.20	0.11	0.30	---	0.02	0.02	0.02	---	---	---	---	---	---	---	---	---
09/25/13	3.00	0.05	0.50	0.75	---	0.01	0.01	---	---	---	---	---	---	---	---	---	---
10/30/13	3.00	0.01	0.50	0.75	---	0.05	NA	---	---	---	---	---	---	---	---	---	---
11/21/13	3.00	0.08	1.00	0.33	---	---	0.01	---	---	---	---	---	---	---	---	---	---
12/31/13	0.60	0.10	0.10	0.20	---	---	0.01	0.01	---	---	---	---	---	---	---	---	---
01/31/14	3.00	NM	NM	NM	---	NM	NM	0.01	---	---	---	---	---	---	---	---	---
01/31/14	Commence Absorbent Oil Recovery Program (Free Product Thickness Not Measurable)																
02/02/14	0.00	0.00	0.00	0.00	---	0.00	---	0.00	---	---	---	---	---	---	---	---	---
02/03/14	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	---	---	---	---	---	---	---	---	---
02/04/14	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	---	---	---	---	---	---	---	---	---
02/05/14	0.00	0.00	0.00	0.00	---	0.00	0.00	0.00	---	---	---	---	---	---	---	---	---
09/22/15	Absorbents Removed																
09/22/15	3.00	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
12/08/16	2.70	0.08	0.38	0.08	---	---	---	---	---	---	---	---	---	---	---	---	---
02/16/16	3.50	0.25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
04/02/16	3.75	0.20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
07/12/16	4.33	0.25	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
10/14/16	4.75	0.50	0.10	0.10	---	---	---	---	---	---	---	---	---	---	---	---	---
12/08/16	3.66	0.10	0.40	0.10	---	---	---	---	---	---	---	---	---	---	---	---	---
12/14/16	2.70	0.08	0.38	0.08	---	---	---	---	---	---	---	---	---	---	---	---	---
03/01/17	Absorbents Installed in Wells MW1S, MW-2, MW-7 and MW-10																
03/01/17	4.00	0.02	0.27	0.09	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
04/25/17	2.50	<0.1	1.00	<0.1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
05/26/17	1.30	<0.1	0.15	<0.1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
06/29/17	0.70	<0.1	0.20	<0.1	---	---	---	---	---	---	NM	---	---	---	---	---	---
07/29/17	0.30	<0.1	<0.1	<0.1	---	---	---	---	NM	NM	NM	NM	NM	NM	NM	NM	NM
09/08/17	0.80	<0.1	0.10	<0.1	---	---	---	---	NM	NM	NM	NM	NM	NM	NM	NM	NM
10/05/17	1.50	<0.1	0.20	<0.1	---	---	0.20	NM	---	---	---	---	---	---	---	---	---
02/28/18	1.75	<0.1	0.30	<0.2	---	---	<0.1	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
05/30/19	0.80	<0.1	<0.1	<0.1	---	---	<0.1	NM	---	---	---	---	---	---	---	---	---
09/28/18	0.30	---	---	---	---	---	---	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
12/05/18	4.75	<0.1	0.10	<0.1	---	---	<0.1	NM	---	---	---	---	---	---	---	---	---
03/20/19	1.00	<0.1	0.10	0.10	---	---	<0.1	---	---	---	---	---	---	---	---	---	---
06/02/19	1.00	0.10	0.10	0.10	---	---	---	---	NM	NM	NM	NM	NM	NM	NM	NM	NM
09/30/19	3.75	<0.0	0.10	<0.0	---	---	<0.1	---	---	---	---	---	---	---	---	---	---
12/05/18	3.00	<0.1	0.00	<0.1	---	---	<0.1	NM	---	---	---	---	---	---	---	---	---
03/20/19	1.00	<0.1	0.00	0.00	---	---	0.00	---	---	---	---	---	---	---	---	---	---
06/02/19	1.00	0.10	0.10	<0.1	---	---	---	---	NM	NM	NM	NM	NM	NM	NM	NM	NM
09/30/19	3.75	---	0.10	<0.1	---	---	---	---	---	---	---	---	---	---	---	---	---
12/05/19	3.00	---	0.10	<0.1	---	---	---	---	---	---	---	---	---	---	---	---	---
03/27/20	1.00	---	0.10	<0.1	---	---	---	---	---	---	---	---	---	---	---	---	---
07/20/20	<0.1	---	---	<0.1	---	---	---	---	---	---	---	---	---	---	---	---	---
10/20/20	<0.1	---	---	<0.1	---	---	---	---	---	---	---	---	---	---	---	---	---

Notes:

--- Not Present NI Well not installed NA Oil-water interface probe malfunction NM Not measured Free product measurements taken with an oil-water interface probe.

QUANTA RESOURCES
2802-2810 Lodi Street
City of Syracuse, Onondaga County, New York
DEC Site No. 7-34-013

TABLE 1B - MONTHLY FREE PRODUCT RECOVERY* (GALLONS)

Date	MW-1S	MW-2	MW-7	MW-10	RW-1	RW-2	RW-3	RW-4	Total	Cumulative Total
Sep-12	System Startup and Monthly Manual Bailing Begun									
Oct-12	1.32	0.26	0.92	0.40					2.9	2.9
Nov-12	0.69	0.13	0.79	0.18					1.8	4.7
Dec-12	0.99	0.08	0.79	0.20					2.1	6.8
Jan-13	0.90	0.01	0.03	0.11					1.0	7.8
Feb-13	1.82	0.01	0.42	0.13					2.4	10.2
Mar-13	1.77		0.29	0.11					2.2	12.4
Apr-13	1.43		0.17	0.11					1.7	14.1
May-13	0.54	0.03	0.16	0.05					0.8	14.8
Jun-13	0.29		0.16	0.05					0.5	15.4
Jul-13	0.21		0.26						0.5	15.8
Aug-13	0.20	0.01	0.11	0.01					0.3	16.2
Sep-13	0.26	0.01	0.11	0.05					0.4	16.6
Oct-13	0.20	0.01	0.03	0.05					0.3	16.9
Nov-13	0.21	0.01	0.08	0.03					0.3	17.2
Dec-13	0.16	0.01	0.01	0.03					0.2	17.4
Jan-14	0.26								0.3	17.7
Jan-14	Placed Absorbents Into All Wells									
Feb-14	1.01	0.13	0.26	0.26	0.08	0.30	0.12	0.08	2.24	19.9
Mar-14	0.26		0.13	0.13	0.06		0.05		0.63	20.6
Apr-14			0.07	0.10	0.01	0.08	0.02		0.28	20.8
May-14			0.05	0.01	0.01	0.03	0.01	0.01	0.13	21.0
Jun-14	0.02	0.03	0.02	0.07	0.000	0.03	0.08	0.01	0.25	21.2
Jul-14	0.14	0.04	0.02	0.05	0.00	0.03	0.05	0.01	0.34	21.6
Aug-14	0.20	0.08	0.01	0.13	0.00	0.04	0.05	0.00	0.51	22.1
Sep-14	0.27	0.01	0.03	0.13	0.01	0.04	0.03	0.02	0.54	22.6
Oct-14	0.27	0.03	0.00	0.13	0.00	0.09	0.02		0.54	23.1
Nov-14	0.27	0.08	0.00	0.13	0.19	0.19			0.86	24.0
Dec-14	0.27	0.03	0.05	0.09	0.08	0.02			0.54	24.5
Jan-15	0.27	0.00	0.07	0.09	0.11	0.11	0.04	0.00	0.68	25.2
Mar-15	0.27	0.00	0.01	0.01	0.08	0.08	0.11	0.02	0.57	25.8
Apr-15	0.08	0.07	0.03	0.01	0.04	0.11	0.09	0.17	0.60	26.4
May-15	0.07	0.03	0.05	0.04	0.02	0.11	0.04	0.00	0.36	26.7
Jun-15	0.12	0.00	0.03	0.04	0.05	0.08	0.04	0.00	0.35	27.1
Aug-15	0.02	0.03	0.02	0.02	0.02	0.11	0.11	0.00	0.34	27.4
Mar-17	Absorbents reinstalled in wells MW-1S, MW-2, MW-7 and MW-10									
Apr-17	0.27								0.27	27.7
May-17	0.27								0.27	28.0
Jun-17	0.27		0.20						0.47	28.4
Jul-17	0.27								0.27	28.7
Sep-17	0.40								0.40	29.1
Oct-17	0.40		0.20						0.60	29.7
Feb-18	0.27		0.07						0.34	30.1
May-18	0.03		0.01						0.04	30.1
Sep-18	0.03								0.03	30.1
Dec-18	0.65		0.13						0.78	30.9
Mar-19	0.27		0.13						0.40	31.3
Jun-19	0.27								0.27	31.6
Sep-19	0.50		0.13	0.13					0.76	32.3
Dec-19	0.50								0.50	32.8
Mar-20	0.27								0.27	33.1
Jul-20	0.03								0.03	33.1
Oct-20	0.03								0.03	33.2
Total	19.5	1.1	6.1	3.1	0.8	1.4	0.9	0.3	33.2	

Notes:

*Based on estimate in each bailer during bailing program and spent absorbent length during absorbent program.

Blank indicates not present/removed.

For wells not listed, free product is not present.

QUANTA RESOURCES SITE
2802-2810 Lodi Street
City of Syracuse, Onondaga County, New York
DEC Site No. 7-34-013

TABLE 1C - MONITORING WELL GROUNDWATER ELEVATION SUMMARY

WELL ID	MW-ID	MW-IS	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	RW-1	RW-2	RW-3	RW-4	
RISER ELEVATION	407.02	407.19	406.92	399.9	399.9	399.45	408.5	404.94	406.06	406.9	406.86	406.74	403.44					
GROUND ELEVATION	405.04	404.64	405.45	398.42	398.09	398.11	406.01	402.52	403.61	404.38	404	404.22	401.01					
RISER ELEVATION post excavation (1/1/2011)	407.23	404.56	405.36	399.9	399.9	401.12	408.5	402.08	404.59	406.91	403.61	406.74	403.43	404.61	404.08	403.5	402.92	
GROUND ELEVATION post excavation (1/1/2011)	404.66	404.73	405.56	398.42	398.09	396.96	406.01	402.52	402.78	404.42	403.9	404.22	401.54	404.84	404.38	404.04	403.41	
ELEVATIONS OF (Top)	365.04	370.64	377.45	373.42	366.09	376.11	387.51	389.02	386.11	386.88	384.5	384.72	381.51	381.88	381.54	384.04	383.41	
SCREEN INTERVAL (Bottom)	360.04	365.64	367.45	358.42	356.09	361.61	367.51	373.02	372.11	370.88	369.5	369.72	366.51	361.88	361.54	364.04	363.41	
BOTTOM OF BORING ELEVATION B.O.B.	357.04	365.64	367.45	356.92	355.59	359.11	367.01	372.52	371.61	370.38	369.00	369.22	366.01	361.88	361.54	364.04	363.41	
DEPTH FROM GROUND SURFACE B.O.B.	47.6	39.1	38.1	41.5	42.5	37.9	39.0	30.0	31.2	34.0	34.9	35.0	35.5	43.0	42.8	40.0	40.0	
DATE INSTALLED	11/18/91	11/25/91	11/21/91	11/26/91	11/25/91	11/27/91	12/18/08	12/11/08	12/09/08	12/10/08	12/16/08	06/25/09	07/09/09	12/16/08	06/25/09	01/02/10	07/12/10	
DIAMETER (Inches)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
CASING MATERIAL	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	
SCREEN MATERIAL	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	PVC	
SLOT SIZE (Inches)	0.010	0.010	0.010	0.010	0.010	0.010	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	0.020	
DATE*	GROUNDWATER ELEVATION																	
02/06/1992	374.45	376.81	377.8	374.03	374.00	378.46	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
04/15/1992	375.37	377.77	378.62	374.96	374.89	378.56	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
03/10/2008**	374.37	378.52 (4.5')	376.58 (2.3')	373.51	373.29	377.33	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
03/12/2008*	374.5	NM	NM	373.43	373.33	377.06	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI	
12/16/2008	NM	NM	NM	NM	NM	NM	NI	375.36	377.56	377.59	NI	NI	NI	NI	NI	NI	NI	
12/18/2008	NM	NM	NM	NM	NM	NM	NI	375.61 (.04')	378.05	377.55	377	0	NI	NI	NI	NI	NI	
12/23/2008	NM	NM	NM	NM	NM	NM	377.05	375.60 (.16')	377.73	377.53	376.8	0	NI	NI	NI	NI	NI	
01/05/2009*	375.58	NM	NM	374.6	374.55	376.53	377.41	376.41 (.26')	378.3	378.26	377.5	0	NI	NI	NI	NI	NI	
01/23/2009**	374.41	375.63 (2.4')	376.78 (2.07')	374.14	374.01	375.65	375.77	375.22 (.44')	377.5	376.99	376.5	0	NI	NI	NI	NI	NI	
06/25/2009**	374.37	375.34 (2.35')	375.94 (1.86')	373.79	373.69	375.7	375.41	375.06 (.38')	377.64	376.67	376.32 (.25')	NI	NI	NI	NI	NI	NI	
06/29/2009	374.36	375.17 (2.23')	376.10 (1.51')	373.72	373.66	375.97	375.22	374.86 (.64')	377.37	376.61	376.15 (.29')	NI	NI	NI	NI	NI	NI	
07/14/2009**	374.16	374.87 (2.04')	375.81	373.61	373.54	375.44	374.99	371.59	376.97	376.25	375.6 (.85')	NI	373.94	NI	NI	NI	NI	
09/22/2015**	378.83	379.91 (3.0')	375.56	372.7	373.9	380.12	380.3	373.68	378.39	381.51	375.81	377.34	377.83	376.11	381.38	374.9	379.12	
12/08/2016**	375.48	377.36 (3.0')	378.08 (0.08')	374.51	NM	377.86	377.07	377.00 (.38')	378.21	378.08	375.94 (.08')	376.22	375.67	378.03	377.81	377.14	377.65	
12/16/2016*	375.25	377.17 (3.0')	377.68	NM	375.2	377.87	376.54	376.79	NM	377.59	375.03	NM	375.20	NM	NM	NM	NM	
03/01/2017	NM	378.06 (4.0')	378.96 (0.02')	NM	NM	NM	NM	378.11 (.27')	NM	NM	378.99 (.09')	NM	NM	NM	NM	NM	NM	
04/25/2017	NM	377.97 (2.5')	378.26	NM	NM	NM	NM	377.48 (1')	NM	NM	378.41	NM	NM	NM	NM	NM	NM	
05/26/2017	NM	376.64 (1.3')	377.71	NM	NM	NM	NM	377.21 (.15')	NM	NM	377.82	NM	NM	NM	NM	NM	NM	
06/29/2017	375.47	375.95 (0.7')	377.95	374.2	NM	377.15	376.51	376.49	378.02	377.8	375.81	375.93	375.52	377.92	377.04	376.91	377.21	
07/29/2017	NM	376.05 (0.3')	378.45	NM	NM	NM	NM	377.07	NM	NM	376.39	NM	NM	378.44	377.96	377.35	377.7	
09/08/2017	NM	378.52 (0.8')	377.37	NM	NM	NM	NM	377.92 (<0.1')	NM	NM	378.87	NM	NM	378.21	379.4	377.12	377.6	
10/05/2017	374.19	378.93 (1.5')	374.76	372.15	NM	377.35	374.68	377.95 0.2	376.19	375.92	376.57	374.69	374.50	376.6	377.42	375.43	0.2	375.59
02/28/2018	NM	377.76 (1.8')	374.95	NM	NM	401.12	NM	378.13 0.3	NM	NM	376.71	NM	NM	376.61	377.47	375.52	0	375.77
05/30/2018	375.28	375.45 (0.8')	377.81	373.99	NM	376.91	376.38	376.46 0.1	377.88	377.6	375.62	375.75	375.39	377.72	376.75	376.78	0	377.05
09/28/2018	NM	375.87 (0.3')	378.47	NM	NM	401.12	NM	377.11 0	377.4	NM	403.61	NM	NM	378.53	378.01	377.49	0	377.75
12/05/2018	376.68	374.81 (4.8')	377.64	374.50	NM	378.87	378.53	378.22 0.1	378.18	379.32	379.52	377.57	376.63	377.29	377.13	377.10	0	377.51
03/20/2019	375.71	376.87 (1.0')	377.86	374.49	NM	377.21	376.73	377.57 0.1	378.5	378.24	378.59	386.33	375.74	378.72	378.44	377.60	0	378.45
06/02/2019	407.23	377.74 (1.0')	377.37	NM	NM	NM	NM	377.71 0.1	NM	NM	377.10	NM	NM	379.81	379.17	376.79	0	377.29
09/05/2019	375.09		377.56	374.21	NM	377.06	376.17	376.93 0.1	375	377.16	377.15	377.57	NM	NM	NM	NM	NM	
09/30/2019	375.24	376.64 (3.5')	377.56	374.03	NM	377.11	376.2	376.97 0.1	377.38	377.21	377.15	375.49	374.85	377.34	377.27	376.53	0	377.11
12/05/2019	376.78	374.79 (3.0')	377.75	374.61	NM	379.02	378.65	378.37 0.1	378.3	379.53	379.66	375.73	376.84	377.44	377.27	377.20	0	377.64
03/27/2020	376.9	378.07 (1.0')	379.03	375.61	NM	378.37	377.99	378.20 0	378.6	379.31	379.46	377.72	375.88	378.84	379.06	378.48	0	378.91
07/07/2020	374.03	373.09 0	374.97	373.09	373.02	377.07	374.6	374.64 0	376.42	376.01	376.10	386.63	374.14	376.62	376.33	376.17	0	377.02
10/08/2020	374.24	373.00 0	375.18	373.30	373.29	377.22	374.76	374.80 0	376.59	376.14	376.31	374.23	374.29	376.5	376.01	375.91	0	375.91

Notes:
(1.1') indicates measured free product thickness in feet. All wells were re-surveyed on 01/05/09 by Plumley Engineering and those elevations were used for all groundwater data from 03/10/08 to 2012. NI Not installed
*Groundwater sampling date. Wells re-surveyed after excavation, those elevations were used for all groundwater data from 2012 to present. NM Not measured
**Wells contained free product layers on the water column. A Corrected Depth To Water (CDTW) calculation was used to estimate the groundwater level without the free product using this equation: CDTW = All elevations reported in feet above mean sea level.
Static DTW - (PxG); where P = Measured Product thickness (which is notated in parenthesis) and G = Specific Gravity. Specific Gravity is currently estimated to be 0.85 based on field observations and published values.

QUANTA RESOURCES SITE
2802-2810 Lodi Street
City of Syracuse, Onondaga County, New York
DEC Site No. 7-34-013

TABLE 2 - SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS - KEY MONITORING WELLS - VOCs [DETECTIONS ONLY] (µg/L)

Compound	State Standard ¹ (µg/L)	Monitoring Well Location																				
		MW-6							MW-9							MW-10						
		01/05/09	09/23/15	12/16/16	10/05/17	12/05/18	09/05/19	10/08/20	01/05/09	09/23/15	12/16/16	10/05/17	12/05/18	09/05/19	10/08/20	01/05/09	09/23/15	12/16/16	10/05/17	12/05/18	09/05/19	10/08/20
Acetone	50	---	---	22	---	---	---	---	---	---	---	---	---	11.1	---	---	8	---	---	---	12.6	
1,1,2-Trichloroethane	1	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	2	---	---	---	---	
1,1-Dichloroethane	5	2	1	1	1.4	0.61 J	0.75 J	0.61 J	---	---	---	---	---	---	4	---	0.4	0.64 J	---	---	---	
1,2,3-Trimethylbenzene	5	---	---	---	---	NA	---	---	2	---	---	---	NA	---	22	---	---	---	NA	---	---	
1,2,4-Trichlorobenzene	5	---	---	---	---	---	---	---	---	---	---	---	---	---	1	---	1	---	---	---	---	
1,2,4-Trimethylbenzene	5	---	---	---	---	---	---	---	---	---	3.1	---	---	---	100.0	---	4.3	3.1	---	---	---	
1,2-Dibromo-3-Chloropropane	0.04	---	---	---	---	---	---	---	---	---	---	---	---	---	2.0	---	---	---	---	---	---	
1,2-Dichlorobenzene	3	9.0	4.8	3.7	7.1	4.5	7.3	7.9	5.0	6.7	1.9	3.3	1	2.1	3.9	18.0	10.7	6.3	11.4	2.6	6.8	9.3
1,2-Dichloroethene (Total)	5	1.0	1.1	0.5	---	---	---	---	---	---	---	---	---	---	---	---	1.2	0.77	0.93 J	0.77 J	---	
1,2-Dichloropropane	1	---	---	---	---	---	---	---	1.0	---	---	---	---	---	---	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	5	---	---	---	---	---	---	---	---	0.4	1.0 J	---	---	---	25.0	---	0.7	0.50 J	---	---	---	
1,3-Dichlorobenzene	3	5.0	2.7	1.6	3.2	2.4	3.6	3.9	2.0	1.9	0.9	0.99 J	0.62 J	0.94 J	1.2	---	---	0.5	0.68 J	---	0.67 J	
1,4-Dichlorobenzene	3	4.0	2.7	1.8	3.8	2.7	4.4	4.7	4.0	4.4	2.2	2.3	1.6	2.4	3	3.0	2.9	1.7	3.5	1.1	3.2	4.3
2-Butanone (MEK)	50	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
Benzene	1	3.0	2.1	1.8	3	1.7	2.4	2.3	4.0	2.2	0.4	1.2	0.66	0.46 J	0.59	41.0	25.6	3.1	24.2	2.3	10.4	22.8
Bromodichloromethane	50	NA	NA	NA	NA	---	---	---	NA	NA	NA	NA	---	---	---	NA	NA	NA	NA	---	---	---
Carbon Disulfide	60	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Chlorobenzene	5	48.0	21.0	16.4	33.6	23.9	36.9	41.8	30.0	29.1	7.8	14.1	5.8	8.2	11.8	3.0	2.0	0.5	2.2	---	1.4	1.8
Chloroethane	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	12.0	4.1	---	2.3	---	1	1.4
Chloroform	7	---	---	---	---	---	---	---	2.0	---	---	---	---	---	---	---	---	---	---	---	---	---
Ethylbenzene	5	---	---	---	---	---	---	---	---	---	1.8	---	---	---	---	51.0	---	0.4	0.65 J	---	---	---
Isopropylbenzene	5	5.0	---	0.3	0.27 J	---	---	---	9.0	11.1	1.9	6.6	0.72 J	1.8	7.3	23.0	9.7	6.1	12.6	2.3	6.1	11.8
m/p-Xylenes	5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	83.0	2.0	1.8	---	---	0.88 J	0.93 J
Methyl tert-butyl ether	10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Methylene Chloride	5	---	---	---	---	---	---	---	5.0	---	---	---	---	---	---	---	---	---	---	---	---	---
Naphthalene	10	---	---	---	---	---	---	---	---	---	---	---	---	1.2 JB ²	---	---	---	---	---	---	---	---
n-Butylbenzene	5	1.0	---	---	---	---	---	---	5.0	---	0.4	3.3	---	---	3.8	5.0	---	2.4	2	0.63 J	0.64 J	3.3
n-propylbenzene	5	4.0	---	---	---	---	---	---	12.0	11.7	1.2	7.1	---	1.6 J	8.4	26.0	10.3	9.0	12.2	1.9 J	3.7	15.9
o-Chlorotoluene	5	---	---	---	---	---	---	---	---	---	---	---	---	0.65 J	0.78 J	---	---	---	---	---	---	0.87 J
o-Xylene	5	---	---	---	---	---	---	---	1.0	---	---	0.52 J	---	---	---	11.0	1.2	0.3	1.3	---	---	1.2
p-Isopropyltoluene	5	---	---	---	---	---	---	---	---	---	0.26	---	---	---	---	4.0	---	---	---	---	---	---
sec-Butylbenzene	5	2.0	---	---	0.39 J	---	---	---	4.0	---	1.1	3.3	---	1.0 J	4.1	5.0	---	2.5	3.3	1.3 J	1.9 J	4.3
tert-Butylbenzene	5	1.0	---	---	0.45 J	---	---	0.73 J	---	---	0.4	0.81 J	---	---	1.0 J	1.0	---	0.7	0.90 J	---	---	0.96 J
Toluene	5	---	---	---	---	---	---	---	3.0	2.2	0.4	1	0.66 J	0.60 J	0.61 J	16.0	2.1	0.7	2.6	---	0.96 J	2.9
Tetrachloroethene	5	---	---	0.2	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Trichloroethene	5	---	---	0.3	---	---	---	---	---	---	---	---	---	---	---	2.0	---	1.6	0.50 J	---	---	---
Vinyl Chloride	2	5.0	2.2	0.8	0.62 J	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Total VOCs	---	90	38	50	52	36	55	61	89	69	19	47	11	21	55	458	71	54	81	13	38	92

QUANTA RESOURCES SITE
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TABLE 2 - SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS - KEY MONITORING WELLS - VOCs [DETECTIONS ONLY] (µg/L)

Compound	State Standard ¹ (µg/L)	Monitoring Well Location						
		MW-12						
		07/14/09	09/23/15	12/16/16	10/05/17	12/05/18	09/05/19	10/08/20
Acetone	50	7.0	---	---	---	---	---	---
1,1,2-Trichloroethane	1	---	---	---	---	---	---	---
1,1-Dichloroethane	5	---	---	---	---	---	---	---
1,2,3-Trimethylbenzene	5	---	---	---	---	NA	---	---
1,2,4-Trichlorobenzene	5	---	---	---	---	---	---	---
1,2,4-Trimethylbenzene	5	---	---	---	---	---	---	---
1,2-Dibromo-3-Chloropropane	0.04	---	---	---	---	---	---	---
1,2-Dichlorobenzene	3	6.0	6.4	4.8	3.3	3.4	2.6	2.2
1,2-Dichloroethene (Total)	5	---	---	---	---	---	---	---
1,2-Dichloropropane	1	---	---	---	---	---	---	---
1,3,5-Trimethylbenzene	5	---	---	---	---	---	---	---
1,3-Dichlorobenzene	3	---	---	0.3	---	---	---	---
1,4-Dichlorobenzene	3	---	1.3	1.7	1.2	1.8	1.8	1.3
2-Butanone (MEK)	50	---	---	---	---	---	---	---
Benzene	1	1.0	---	0.5	0.20 J	0.46 J	---	---
Bromodichloromethane	50	NA	NA	NA	NA	---	---	---
Carbon Disulfide	60	---	---	---	---	---	---	---
Chlorobenzene	5	---	9.1	10.1	12.1	11.2	14.5	11.4
Chloroethane	5	2.0	---	---	---	---	---	---
Chloroform	7	---	---	---	---	---	---	---
Ethylbenzene	5	---	---	---	---	---	---	---
Isopropylbenzene	5	1.0	---	1.8	---	3.9	2	---
m/p-Xylenes	5	---	---	---	---	---	---	---
Methyl tert-butyl ether	10	---	---	---	---	---	---	---
Methylene Chloride	5	---	---	---	---	---	---	---
Naphthalene	10	---	---	---	---	---	---	---
n-Butylbenzene	5	---	---	---	---	---	---	---
n-propylbenzene	5	---	---	0.4	---	1.3 J	0.63 J	---
o-Chlorotoluene	5	---	---	---	---	---	---	---
o-Xylene	5	---	---	---	---	---	---	---
p-Isopropyltoluene	5	---	---	---	---	---	---	---
sec-Butylbenzene	5	---	---	---	0.51 J	1.4 J	0.92 J	---
tert-Butylbenzene	5	---	---	0.9	0.88 J	0.96 J	0.90 J	0.94 J
Toluene	5	---	---	---	---	---	---	---
Tetrachloroethene	5	---	---	---	---	---	---	---
Trichloroethene	5	---	---	---	---	---	---	---
Vinyl Chloride	2	---	---	---	---	---	---	---
Total VOCs	---	17	17	21	17	24	23	15

Notes:

¹DEC Division of Water's Technical and Operational Guidance Series (TOGS) 1.1.1, *Ambient Water Quality Standards and Guidance Values*, reissued June 1998.

^aNo full vial available for reanalysis.

VOCs Volatile Organic Compounds

PCBs Polychlorinated Biphenyls

NA Not Analyzed

NS Not Sampled

µg/L micrograms per liter, equivalent to parts per billion (ppb)

--- Indicates the specified compound was not detected at a concentration exceeding the method detection limit.

B Indicates analyte found in associated method blank

J Indicates an estimated value

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TABLE 3 - SUMMARY OF HISTORICAL GROUNDWATER ANALYTICAL RESULTS - TOTAL PCBs (µg/L)

Compound	State Standard ¹ (µg/L)	Sample Date	Monitoring Well Location																
			MW-1D	MW-1S	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	MW-10	MW-11	MW-12	RW-1	RW-2	RW-3	RW-4
Total PCBs	0.09	03/12/2008	---	FP	FP	---	---	---	NS	NI	NI	NI	NI	NI	NI	NI	NI	NI	NI
Total PCBs	0.09	2009*	---	FP	FP	NS	NS	NS	---	FP	0.13	0.93	---	---	---	NI	NI	NI	NI
		12/08/2011	Remedial Excavation Completed																
Total PCBs	0.09	09/23/2015	0.32	FP	2.5	---	---	---	---	11.3	---	---	0.29	---	---	5.5	3.3	0.23	---
Total PCBs	0.09	12/16/2016	---	FP	12	NS	NS	---	---	FP	NS	---	2.9	NS	---	NS	NS	NS	NS
Total PCBs	0.09	10/05/2017	---	FP	4.3	NS	NS	---	---	FP	NS	---	---	NS	---	NS	NS	NS	NS
Total PCBs	0.09	12/05/2018	---	NS	3.05	NS	NS	---	---	NS	NS	---	0.28	NS	---	NS	NS	NS	NS
Total PCBs	0.09	09/05/2019	---	FP	---	NS	NS	---	---	NS	NS	---	---	NS	---	NS	NS	NS	NS
Total PCBs	0.09	10/08/2020	---	NS	0.51	NS	NS	---	---	NS	NS	NS	0.35	NS	---	NS	NS	NS	NS

Notes:

Legend: Exceed

¹DEC Division of Water's Technical and Operational Guidance Series (TOGS) 1.1.1, *Ambient Water Quality Standards and Guidance Values*, reissued June 1998.

State standard for PCBs is 0.09 µg/L for each Aroclor.

PCBs Polychlorinated Bipenyls

µg/L Micrograms per liter

NI Not Installed

NS Not Sampled

FP Free Product Present - Not Sampled

--- Indicates the specified compound was not detected at a concentration exceeding the method detection limit.

*2009 samples collected on 1/5/2009, 6/29/2009 and 7/14/2009

Refer to laboratory reports for additional information.

QUANTA RESOURCES SITE
2802-2810 Lodi Street
City of Syracuse, Onondaga County, New York
DEC Site No. 7-34-013

TABLE 4A - PFAS AND 1,4-DIOXANE IN GROUNDWATER

Date Sampled: October 8, 2020

Client Sample ID:		Unit	State Standard ¹	MW-9	MW-10	MW-12
Lab Sample ID:				JC79316-1	JC79316-8	JC79316-7
MS Semi-volatiles (EPA 537M BY ID)						
Perfluorobutanoic acid		ng/L		NS	ND (2.3)	ND (1.7)
Perfluoropentanoic acid		ng/L		NS	23.9	1.6 J
Perfluorohexanoic acid		ng/L		NS	ND (1.1)	0.99 J
Perfluoroheptanoic acid		ng/L		NS	ND (5.7)	ND (0.86)
Perfluorooctanoic acid	PFOA	ng/L	10	NS	3.6	1.4 J
Perfluorononanoic acid		ng/L		NS	ND (1.1)	ND (0.86)
Perfluorodecanoic acid		ng/L		NS	ND (1.1)	ND (0.86)
Perfluoroundecanoic acid		ng/L		NS	ND (1.1)	ND (0.86)
Perfluorododecanoic acid		ng/L		NS	ND (1.1)	ND (0.86)
Perfluorotridecanoic acid		ng/L		NS	ND (1.1)	ND (0.86)
Perfluorotetradecanoic acid		ng/L		NS	ND (1.1)	ND (0.86)
Perfluorobutanesulfonic acid		ng/L		NS	ND (1.1)	ND (0.86)
Perfluorohexanesulfonic acid		ng/L		NS	ND (1.1)	ND (0.86)
Perfluoroheptanesulfonic acid		ng/L		NS	ND (1.1)	ND (0.86)
Perfluorooctanesulfonic acid	PFOS	ng/L	10	NS	12.7	7
Perfluorodecanesulfonic acid		ng/L		NS	ND (1.1)	ND (0.86)
PFOSA		ng/L		NS	ND (11)	ND (1.7)
MeFOSAA		ng/L		NS	ND (2.3)	ND (1.7)
EtFOSAA		ng/L		NS	ND (2.3)	ND (1.7)
6:2 Fluorotelomer sulfonate		ng/L		NS	ND (2.3)	ND (1.7)
8:2 Fluorotelomer sulfonate		ng/L		NS	ND (2.3)	ND (1.7)
MS Semi-volatiles (SW846 8270D BY SIM)						
1,4-Dioxane		ug/L	1	NS	1.03	0.194

Notes:

Legend: Hit Exceed

¹ Maximum contaminant levels (MCL), adopted August 2020.

PFAS Per- and Poly-Fluorinated Alkyl Substances

ng/L nanograms per liter, equivalent to parts per trillion (ppt)

ug/L micrograms per liter, equivalent to parts per billion (ppb)

ND Not Detected

J Indicates an estimated value

NS Not Sampled due to not enough recovery volume in the well

QUANTA RESOURCES SITE
2802-2810 Lodi Street
City of Syracuse, Onondaga County, New York
DEC Site No. 7-34-013

**TABLE 4B - HISTORICAL SUMMARY OF
EMERGING CONTAMINANT ANALYSES**

Date	MW-9	MW-10	MW-12
Total PFOA and PFOS (ng/L)			
12/5/2018	27.0	ND	9.5
9/5/2019	28.5	2.9	5.0
10/8/2020	NS	16.3	8.4
Total PFAS Compounds (ng/L)			
12/5/2018	51.4	ND	15.7
9/5/2019	53.3	22.0	5.0
10/8/2020	NS	40.2	11.0
1,4 - Dioxane (ug/L)			
12/5/2018	2.34	0.23	0.24
9/5/2019	4.47	0.33	0.16
10/8/2020	NS	1.03	0.19

Notes:

- PFAS Per- and Poly-Fluorinated Alkyl Substances
- PFOS Perfluorooctanesulfonic acid
- PFOA Perfluorooctanoic acid
- ng/L nanograms per liter, equivalent to parts per trillion (ppt)
- µg/L micrograms per liter, equivalent to parts per billion (ppb)
- ND Not Detected
- NS Not Sampled due to not enough recovery volume in the well

**GROUNDWATER
SAMPLING FIELD LOGS**

PLUMLEY ENGINEERING, P.C.
GROUNDWATER SAMPLING FIELD LOG

Client/Site: Quanta Project No.: 2015127
 Monitoring Location: _____ Date: 10/8/2020
 Source Description: MW-1D Sampler: MTM

Well & Water Level Data: Total Depth of Well: 50.44 feet
 Initial Depth to Water: 32.99 feet
 Length of Water Column (LWC): 17.45 feet

Purge Volume Calculation:

Well Diameter (inches):	Calculated Well Volume To Be Removed
1	LWC * 0.041 * 3 = _____ Gallons
1.25	LWC * 0.064 * 3 = _____ Gallons
1.5	LWC * 0.092 * 3 = _____ Gallons
2	LWC * 0.163 * 3 = <u>8.5</u> Gallons
3	LWC * 0.367 * 3 = _____ Gallons
4	LWC * 0.653 * 3 = _____ Gallons
6	LWC * 1.469 * 3 = _____ Gallons

Free Product Check: Free Product Present: Yes No
 Measured Thickness/Comment: _____

Purge Data: Purge Date: 10/8/20
 Purging Time: From: 13:10 To: 13:29
 Type of Purging Equipment Used: Whale Pump
 Purged Water Comments: some silt -> clear

Sampling Data: Depth to Water at Sampling: 33.07 feet
 Color of Sample: clear Sample Date: 10/8/20
 Turbidity: _____ Sample Time: 3:15
 Type of Sampling Equipment Used: Beler

Field Indicators Present During Sample Collection: Odor _____
 Sheen _____
 Free Product _____
 None

Notes:

Weather: Temperature °F 60 Sunny Cloudy Rain Snow

PLUMLEY ENGINEERING, P.C.
GROUNDWATER SAMPLING FIELD LOG

Client/Site: Quanta Project No.: 2015127
 Monitoring Location: _____ Date: 10/8/2020
 Source Description: MW-2 Sampler: MTM

Well & Water Level Data: Total Depth of Well: 39.77 feet
 Initial Depth to Water: 30.18 feet
 Length of Water Column (LWC): 9.59 feet

Purge Volume Calculation:

Well Diameter (inches):	Calculated Well Volume To Be Removed
1	LWC * 0.041 * 3 = _____ Gallons
1.25	LWC * 0.064 * 3 = _____ Gallons
1.5	LWC * 0.092 * 3 = <u>5</u> Gallons
2	LWC * 0.163 * 3 = _____ Gallons
3	LWC * 0.367 * 3 = _____ Gallons
4	LWC * 0.653 * 3 = _____ Gallons
6	LWC * 1.469 * 3 = _____ Gallons

Free Product Check: Free Product Present: Yes No
 Measured Thickness/Comment: _____

Purge Data: Purge Date: 10/8/20
 Purging Time: From: 12:42 To: 13:05
 Type of Purging Equipment Used: Whisk Pump
 Purged Water Comments: odor - no sheen

Sampling Data: Depth to Water at Sampling: 30.07 feet
 Color of Sample: clear Sample Date: 10/8/20
 Turbidity: _____ Sample Time: 3:25
 Type of Sampling Equipment Used: Bailer

Field Indicators Present During Sample Collection: Odor ✓
 Sheen _____
 Free Product _____
 None _____

Notes:

Weather: Temperature °F 60 Sunny Cloudy Rain Snow

PLUMLEY ENGINEERING, P.C.
GROUNDWATER SAMPLING FIELD LOG

Client/Site: Quanta **Project No.:** 2015127
Monitoring Location: _____ **Date:** 10/8/2020
Source Description: MW-5 **Sampler:** MTM

Well & Water Level Data: **Total Depth of Well:** 38.31 feet
Initial Depth to Water: 23.90 feet
Length of Water Column (LWC): 14.41 feet

Purge Volume Calculation:

Well Diameter (inches):	Calculated Well Volume To Be Removed
1	LWC * 0.041 * 3 = _____ Gallons
1.25	LWC * 0.064 * 3 = _____ Gallons
1.5	LWC * 0.092 * 3 = <u>7.5</u> Gallons
2	LWC * 0.163 * 3 = _____ Gallons
3	LWC * 0.367 * 3 = _____ Gallons
4	LWC * 0.653 * 3 = _____ Gallons
6	LWC * 1.469 * 3 = _____ Gallons

Free Product Check: **Free Product Present:** Yes No
Measured Thickness/Comment: _____

Purge Data: **Purge Date:** 10/8/20
Purging Time: **From:** 11:15 **To:** 11:37
Type of Purging Equipment Used: Whale Pump
Purged Water Comments: clear

Sampling Data: **Depth to Water at Sampling:** 23.99 feet
Color of Sample: clear **Sample Date:** 10/8/20
Turbidity: — **Sample Time:** 2:45
Type of Sampling Equipment Used: Bailer

Field Indicators Present During Sample Collection: **Odor** _____
Sheen _____
Free Product _____
None

Notes:
eqp missing

Weather: **Temperature °F** _____ **Sunny** **Cloudy** **Rain** **Snow**

PLUMLEY ENGINEERING, P.C.
GROUNDWATER SAMPLING FIELD LOG

Client/Site: Quanta Project No.: 2015127
Monitoring Location: _____ Date: 10/8/2020
Source Description: MW-6 Sampler: MTM

Well & Water Level Data: Total Depth of Well: 42.47 feet
Initial Depth to Water: 33.74 feet
Length of Water Column (LWC): 8.73 feet

Purge Volume Calculation:

Well Diameter (inches):	Calculated Well Volume To Be Removed
1	LWC * 0.041 * 3 = _____ Gallons
1.25	LWC * 0.064 * 3 = _____ Gallons
1.5	LWC * 0.092 * 3 = _____ Gallons
2	LWC * 0.163 * 3 = <u>5</u> Gallons
3	LWC * 0.367 * 3 = _____ Gallons
4	LWC * 0.653 * 3 = _____ Gallons
6	LWC * 1.469 * 3 = _____ Gallons

Free Product Check: Free Product Present: Yes No
Measured Thickness/Comment: _____

Purge Data: Purge Date: 10/8/20
Purging Time: From: 12:00 To: 12:27
Type of Purging Equipment Used: Whale Pump
Purged Water Comments: _____

Sampling Data: Depth to Water at Sampling: 33.91 feet
Color of Sample: clear Sample Date: 10/8/20
Turbidity: _____ Sample Time: 3:00
Type of Sampling Equipment Used: Bailer

Field Indicators Present During Sample Collection: Odor _____
Sheen _____
Free Product _____
None

Notes:

Weather: Temperature °F 60 Sunny Cloudy Rain Snow

PLUMLEY ENGINEERING, P.C.
GROUNDWATER SAMPLING FIELD LOG

Client/Site: Quanta Project No.: 2015127
 Monitoring Location: _____ Date: 10/8/2020
 Source Description: MW-9 Sampler: MTM

Well & Water Level Data: Total Depth of Well: 37.34 feet
 Initial Depth to Water: 30.77 feet
 Length of Water Column (LWC): 6.57 feet

Purge Volume Calculation:

Well Diameter (inches):	Calculated Well Volume To Be Removed
1	LWC * 0.041 * 3 = _____ Gallons
1.25	LWC * 0.064 * 3 = _____ Gallons
1.5	LWC * 0.092 * 3 = _____ Gallons
<u>2</u>	LWC * 0.163 * 3 = <u>3.5</u> Gallons
3	LWC * 0.367 * 3 = _____ Gallons
4	LWC * 0.653 * 3 = _____ Gallons
6	LWC * 1.469 * 3 = _____ Gallons

≈ 1.2 dry

Free Product Check: Free Product Present: Yes No
 Measured Thickness/Comment: _____

Purge Data: Purge Date: 10/8/20
 Purging Time: From: 9:32 To: 9:57
 Type of Purging Equipment Used: Diaphragm Bladder Pump
 Purged Water Comments: _____

Sampling Data: Depth to Water at Sampling: 36.72 feet
 Color of Sample: _____ Sample Date: 10/8/20
 Turbidity: ~ Sample Time: 2:00 pm
 Type of Sampling Equipment Used: Bailer

Field Indicators Present During Sample Collection: Odor _____
 Sheen _____
 Free Product _____
 None ✓

Notes: Well did not recover after purge
only enough sample for VOL

Weather: Temperature °F 60 Sunny Cloudy Rain Snow

PLUMLEY ENGINEERING, P.C.
GROUNDWATER SAMPLING FIELD LOG

Client/Site: Quanta Project No.: 2015127
 Monitoring Location: _____ Date: 10/8/2020
 Source Description: MW-10 Sampler: MTM

Well & Water Level Data: Total Depth of Well: NM feet - *Film*
 Initial Depth to Water: 27.30 feet
 Length of Water Column (LWC): _____ feet

Purge Volume Calculation:

Well Diameter (inches):	Calculated Well Volume To Be Removed
1	LWC * 0.041 * 3 = _____ Gallons
1.25	LWC * 0.064 * 3 = _____ Gallons
1.5	LWC * 0.092 * 3 = _____ Gallons
<u>2</u>	LWC * 0.163 * 3 = <u>5</u> Gallons
3	LWC * 0.367 * 3 = _____ Gallons
4	LWC * 0.653 * 3 = _____ Gallons
6	LWC * 1.469 * 3 = _____ Gallons

Free Product Check: Free Product Present: Yes No
 Measured Thickness/Comment: _____

Purge Data: Purge Date: 10/8/20
 Purging Time: From: 10:07 To: 10:37
 Type of Purging Equipment Used: Bladder Pump
 Purged Water Comments: clear - some film on Bailor dt check

Sampling Data: Depth to Water at Sampling: 27.41 feet
 Color of Sample: clear Sample Date: 10/8/20
 Turbidity: - Sample Time: 2:12
 Type of Sampling Equipment Used: Bailor

Field Indicators Present During Sample Collection: Odor
 Sheen
 Free Product
 None

Notes: Film on Bailor - no recoverable Product

Weather: Temperature °F 60 Sunny Cloudy Rain Snow

PLUMLEY ENGINEERING, P.C.
GROUNDWATER SAMPLING FIELD LOG

Client/Site: Quanta Project No.: 2015127
 Monitoring Location: _____ Date: 10/8/2020
 Source Description: MW-12 Sampler: MTM

Well & Water Level Data: Total Depth of Well: 38.12 feet
 Initial Depth to Water: 29.14 feet
 Length of Water Column (LWC): 8.98 feet

Purge Volume Calculation:

Well Diameter (inches):	Calculated Well Volume To Be Removed
1	LWC * 0.041 * 3 = _____ Gallons
1.25	LWC * 0.064 * 3 = _____ Gallons
1.5	LWC * 0.092 * 3 = _____ Gallons
2	LWC * 0.163 * 3 = <u>5.45</u> Gallons
3	LWC * 0.367 * 3 = _____ Gallons
4	LWC * 0.653 * 3 = _____ Gallons
6	LWC * 1.469 * 3 = _____ Gallons

Free Product Check: Free Product Present: Yes No
 Measured Thickness/Comment: _____

Purge Data: Purge Date: 10/8/20
 Purging Time: From: 10:42 To: 10:11:07
 Type of Purging Equipment Used: Bladder Pump Bailer
 Purged Water Comments: _____

Sampling Data: Depth to Water at Sampling: 29.24 feet
 Color of Sample: clear Sample Date: _____
 Turbidity: - Sample Time: 2:35
 Type of Sampling Equipment Used: Bailer

Field Indicators Present During Sample Collection: Odor _____
 Sheen _____
 Free Product _____
 None

Notes: Man Hole cover missing in proximity to well
cap missing on stick up

Weather: Temperature °F 60 Sunny Cloudy Rain Snow