

October 30, 2019

Jennifer Dodds  
U.S. Environmental Protection Agency, Region 5  
Land, Chemicals and Redevelopment Division  
77 West Jackson Blvd, LR-16J  
Chicago, IL 60604-3590

RE: Bi-Weekly Summary Report for Pump Down Program  
Tyco Fire Products LP Site  
Marinette, WI

Dear Ms. Dodds:

The information provided herein is a summary of activities conducted at the Tyco Fire Products LP (Tyco) site associated with the Pump Down Program (PDP) for the former Salt Vault and 8<sup>th</sup> Street Slip areas. The PDP is required as part of the Administrative Order on Consent between Tyco and the U.S. Environmental Protection Agency (USEPA). This summary report covers the period from October 12, 2019 through October 25, 2019.

### **Summary of Work during Reporting Period**

Work conducted during the reporting period included:

- Manual water level readings at the designated monitoring points and extraction wells were collected at least weekly during the reporting period. The average water level, based on the most recent water level measurements (October 24, 2019) during the reporting period, in the former Salt Vault was 579.39 feet above mean seal level (ft. AMSL), or 1.49 feet above the target level. The average water level in the former 8<sup>th</sup> Street Slip was 574.51 ft. AMSL, or 3.39 feet below the target level. A cumulative summary of manual water level readings and corrected elevations is attached as Table 1.
- During pumping operations, total groundwater recovery rates in the former Salt Vault area averaged 2.45 gallons per minute (gpm) from the four extraction wells during the reporting period and 2.82 gpm from extraction well EW-8 and EW-9 in the former 8<sup>th</sup> Street Slip. During this reporting period, based on the water level within the former 8<sup>th</sup> Street Slip being below target level, extraction well EW-8 was

periodically operated while all other extraction wells operated continuously. Pumps for each of the other extraction wells in each area were reported to have operated continuously as planned during the reporting period without any mechanical issues.

- Off-site transportation of recovered groundwater was conducted during the reporting period. Off-site disposal operations are limited to five days per week with generally one (1) to two (2) trucks (approximately 5,000 gallons) per day necessary to maintain tank levels allowing for continuous pumping from the extraction wells.

A summary of pumping and disposal operations for the 2019 season is provided below.

#### **Summary of Pump Down Operations (October 25, 2019)**

	Gallons Pumped	Gallons Treated at GWTS <sup>1</sup>	Gallons Transported for Off Site Disposal
This Period	~80,200	~0	~70,000
2019 Operations to Date	~1,062,900	~0	~1,050,100 <sup>2</sup>

All quantities are estimated

#### **Issues Encountered During Reporting Period**

No operational issues occurred during the reporting period.

#### **Issues To Be Resolved During Next Reporting Period**

No issues that require resolution have been identified at this time.

#### **Anticipated Work During Next Reporting Period**

It is anticipated that the temporary system will be temporarily shut down to allow for modification of the collection and storage system to allow for continued winter operation. Manual water level measurements will continue to be collected from the designated monitoring wells and extraction wells on at least a weekly basis. Extracted groundwater will continue to be transported to Vickery for disposal.

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<sup>1</sup> GWTS – Groundwater Treatment System

<sup>2</sup> Volume includes stormwater recovered in secondary containment structure

If you have any questions regarding this report, please contact me at 414-524-3344 or [jeffrey.howard.danko@jci.com](mailto:jeffrey.howard.danko@jci.com).

Sincerely,



Jeffrey Danko  
EHS Manager – Environmental Remediation

Attachments:

Table 1 –Pump Down Program Groundwater Elevation Monitoring

cc: Angela Carey – WDNR  
Trevor Moen - WDNR  
Joseph Janeczek – Johnson Controls  
Ryan Suennen – Tyco Fire Products  
Heather Ziegelbauer – Jacobs  
Kirk Kapfhammer – Endpoint Solutions

**Table 1. 2019 Pump Down Program Groundwater Elevation Monitoring**  
 Tyco Fire Products LP, Marinette, Wisconsin

Target Elevation	577.9
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Well ID	January 16, 2019		February 14, 2019		March 26, 2019		April 10, 2019		April 16, 2019		April 18, 2019		April 23, 2019		April 25, 2019		April 30, 2019		May 2, 2019		May 7, 2019		May 10, 2019		May 14, 2019		May 16, 2019		
	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	
MW001M	6.87	580.30	NM	-	6.29	580.88	5.55	581.62	8.25	578.92	8.53	578.64	7.31	579.86	7.48	579.69	8.20	578.97	7.42	579.75	8.63	578.54	7.85	579.32	8.69	578.48	8.33	578.84	
MW001S	6.95	580.31	NM	-	NM	-	6.54	580.72	10.14	577.12	7.54	579.72	7.30	579.96	7.45	579.81	7.05	580.21	6.63	580.63	7.55	579.71	7.78	579.48	7.71	579.55	7.24	580.02	
MW002M-R	10.09	580.65	10.22	580.51	9.61	581.14	8.78	581.98	10.23	580.50	10.56	580.17	10.39	580.34	10.48	580.25	10.04	580.70	9.68	581.06	10.56	580.17	11.06	579.66	10.74	579.98	10.27	580.46	
MW002S-R	10.02	580.30	10.14	580.18	9.5	580.82	8.68	581.64	10.15	580.17	10.49	579.83	10.30	580.02	10.44	579.88	9.55	580.77	9.58	580.74	10.47	579.85	11	579.32	10.62	579.70	10.16	580.16	
MW031M	7.49	580.54	7.77	580.26	7.05	580.99	6.29	581.75	7.36	580.67	7.92	580.11	7.61	580.42	7.73	580.30	7.25	580.78	6.97	581.07	6.73	581.31	8.59	579.44	9.97	578.05	7.7	580.33	
MW031S	8.47	580.43	8.80	580.10	7.97	580.93	7.24	581.66	8.48	580.42	8.66	580.24	8.57	580.33	8.69	580.21	8.16	580.74	7.77	581.13	8.13	580.77	8.36	580.54	9.02	579.88	8.56	580.34	
MW113S	9.97	580.32	10.04	580.25	9.43	580.86	8.62	581.67	10.15	580.14	10.51	579.78	10.28	580.01	10.73	579.56	9.56	580.73	9.53	580.76	10.48	579.81	10.95	579.34	10.63	579.66	10.16	580.13	
MW113M	9.11	581.19	9.25	581.05	8.58	581.72	7.96	582.34	9.73	580.57	9.80	580.50	9.56	580.74	9.88	580.42	9.51	580.79	8.58	581.72	9.51	580.79	9.89	580.41	9.87	580.43	9.45	580.85	
MW115P	8.49	580.60	9.66	579.43	8.12	580.97	6.12	582.98	6.23	582.87	6.09	583.01	6.16	582.94	6.28	582.82	6.26	582.84	6.09	583.01	6.37	582.73	6.46	582.64	6.49	582.61	6.43	582.67	
MW115S	8.68	580.32	8.78	580.22	8.15	580.85	7.32	581.68	9.10	579.90	9.47	579.53	9.40	579.60	9.50	579.50	9.10	579.90	8.81	580.19	9.62	579.38	9.73	579.27	9.81	579.19	9.36	579.64	
MW116P	10.17	579.74	10.36	579.55	9.30	580.62	8.22	581.70	7.84	582.08	7.73	582.19	7.70	582.22	7.79	582.13	8.21	581.71	7.76	582.16	8.19	581.73	7.93	581.99	8.17	581.75	8.17	581.75	
MW116S	9.56	580.35	9.64	580.27	9.02	580.90	8.17	581.75	9.66	580.25	10.00	579.91	9.94	579.97	9.99	579.92	9.70	580.21	9.3	580.61	10.61	579.30	10.44	579.47	10.38	579.53	9.96	579.95	
MW119D	10.53	578.21	9.36	579.38	8.54	580.20	8.32	580.42	8.20	580.54	8.15	580.59	8.09	580.65	8.22	580.52	8.00	580.74	7.94	580.80	7.89	580.85	7.81	580.93	7.76	580.98	7.73	581.01	
EW-3	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
EW-10	NM	-	NM	-	NM	-	5.45	582.34	21.28	566.48	21.50	566.26	21.44	566.32	21.73	566.03	21.45	566.31	11.95	575.83	11.7	576.08	11.88	575.90	21.89	565.87	23.04	564.72	
EW-11	6.06	581.28	NM	-	5.57	581.77	4.7	582.64	21.53	565.78	22.39	564.92	21.88	565.43	22.51	564.80	23.35	563.96	10.15	577.18	13.2	574.12	13.58	573.74	22.86	564.45	23.16	564.15	
EW-13	4.75	581.06	NM	-	4.28	581.53	3.35	582.47	20.76	564.99	20.95	564.80	21.01	564.74	21.13	564.62	20.68	565.07	7.2	578.60	9.11	576.69	9.36	576.43	20.38	565.37	20.04	565.72	
EW-14	5.8	580.98	NM	-	5.16	581.62	3.96	582.83	20.50	566.21	20.03	566.68	20.98	565.73	21.21	565.50	20.11	566.60	10.62	576.14	11.03	575.72	12.1	574.65	21.64	565.06	20.28	566.43	
MW034M	12.76	575.49	12.52	575.73	12.16	576.09	11.69	576.56	13.10	575.15	12.16	576.09	12.65	575.60	12.77	575.48	12.78	575.47	12.05	576.20	11.26	576.99	11.79	576.46	12.42	575.83	10.28	577.97	
MW034S	13.07	575.15	12.85	575.37	12.57	575.65	12.00	576.22	13.30	574.92	12.66	575.56	12.93	575.29	13.14	575.08	12.99	575.23	12.43	575.79	11.57	576.65	12.32	575.90	12.63	575.59	11.75	576.47	
MW036M	13.72	574.85	13.41	575.16	13.21	575.36	12.76	575.82	12.53	576.06	12.84	575.74	12.86	575.72	13.12	575.46	12.96	575.62	12.6	575.99	11.92	576.68	12.38	576.21	12.44	576.15	11.92	576.68	
MW036S	13.19	575.08	12.91	575.36	12.68	575.59	12.24	576.03	13.12	575.15	12.30	575.97	12.26	576.01	12.53	575.74	12.39	575.88	12.05	576.22	11.38	576.89	11.76	576.51	11.81	576.46	11.35	576.92	
MW038M	12.69	575.00	12.43	575.26	12.13	575.56	11.58	576.11	12.09	575.60	11.49	574.54	11.60	574.43	11.89	574.14	11.76	574.27	11.26	574.77	10.43	575.60	10.85	575.18	11.06	574.97	10.38	575.65	
MW038S	12.74	574.96	12.36	575.34	12.19	575.51	11.60	576.11	12.16	575.54	11.45	574.57	11.65	574.37	11.96	574.06	11.81	574.21	11.23	574.79	10.39	575.64	10.79	575.23	11.08	574.94	10.33	575.70	
MW120D	7.99	580.84	7.61	581.22	7.50	581.34	7.41	581.43	7.41	581.43	6.98	581.86	6.78	582.06	6.90	581.94	6.55	582.29	6.7	582.14	6.78	582.06	6.54	582.30	6.73	582.11	6.52	582.32	
MW120M	13.56	575.37	13.39	575.54	13.16	575.77	12.49	576.46	12.58	576.36	12.51	576.44	12.45	576.50	12.59	576.35	12.53	576.42	12.33	576.62	12.05	576.90	12.26	576.69	12.29	576.66	11.99	576.96	
MW120S	13.33	575.26	13.16	575.43	13.08	575.51	12.00	576.59	11.60	576.99	11.54	577.05	11.60	576.99	11.73	576.86	11.80	576.79	11.65	576.94	11.77	576.82	11.61	576.98	11.49	577.11	11.38	577.22	
EW-2	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
EW-8	NM	-	NM	-	10.09	576.69	9.55	577.23	14.64	572.13	9.55	577.23	10.58	576.20	13.56	573.21	13.70	573.07	9.37	577.41	9.78	577.00	9.96	576.82	12.96	573.81	18.43	568.33	
EW-9	9.91	575.79	NM	-	9.39	576.31	8.85	576.85	15.57	570.12	10.47	575.23	11.03	574.67	11.16	574.54	17.48	568.20	9	576.70	10.06	575.64	10.16	575.54	16.58	569.11	8.62	577.08	
MW004M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
MW004S	5.77	582.81	6.44	582.14	5.22	583.36	4.41	584.17	4.02	584.56	3.83	583.09	3.81	583.11	3.92	583.00	4.00	582.92	3.83	583.09	1.51	585.41	3.83	583.09	4.02	582.90	4.07	582.85	
MW032M	6.44	581.78	6.59	581.63	5.64	582.59	5.38	582.85	5.10	583.12	4.79	581.77	4.94	581.62	5.03	581.53	5.02	581.54	4.8	581.76	5.21	581.35	4.82	581.74	5.05	581.51	5.01	581.55	
MW032S	5.62	582.74	6.24	582.12	4.91	583.45	4.60	583.76	4.42	583.94	4.32	582.37	4.27	582.42	4.37	582.32	4.32	582.37	4.29	582.40	4.39	582.30	4.26	582.43	4.22	582.47	4.32	582.37	
MW033M	4.73	584.07	5.34	583.45	4.06	584.75	3.35	585.47	3.04	585.79	2.86	585.97	2.87	585.96	2.96	585.87	3.08	585.75	2.88	585.95	3.22	585.61	2.85	585.98	3.06	585.77	3.11	585.72	
MW033S	4.36	582.81	5.11	582.06	3.78	583.39	3.11	584.06	2.89	584.28	2.50	584.67	2.52	584.65	2.65	584.52	2.73	584.44	2.54	584.63	2.85	584.32	2.44	584.73	2.69	584.48	2.81	584.36	
MW039M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
MW039S	2.57	583.52	NM	-	2.63	583.46	1.85	584.24	1.49	584.60	1.29	584.80	1.25	584.84	1.37	584.72	1.46	584.63	1.3	584.79	1.21	584.79	1.28	584.81	1.51	584.58	1.54	584.55	
MW035M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
MW035S	6.20	581.47	6.73	580.94	5.45	582.22	5.58	582.09	5.61	582.06	5.42	582.25	NM	-	5.58	582.09	5.49	582.18	5.4	582.27	5.58	582.27	5.45	582.22	5.54	582.13	5.46	582.21	
MW037M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
MW037S	5.53	581.55	6.14	580.94	4.43	582.65	5.50	581.58	5.51	581.57	5.43	581.65	5.43																

**Table 1. 2019 Pump Down Program Groundwater Elevation Monitoring**  
 Tyco Fire Products LP, Marinette, Wisconsin

Target Elevation	577.9
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Well ID	May 21, 2019		May 23, 2019		May 28, 2019		May 30, 2019		June 4, 2019		June 6, 2019		June 11, 2019		June 13, 2019		June 18, 2019		June 20, 2019		June 24, 2019		June 27, 2019		July 2, 2019		July 9, 2019	
	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)
MW001M	8.64	578.53	8.72	578.45	6.79	580.38	8.56	578.61	8.39	578.78	8.87	578.30	5.45	581.72	8.56	578.61	8.8	578.37	8.76	578.41	8.63	578.54	9.01	578.16	8.7	578.47	8.39	578.78
MW001S	7.56	579.70	7.63	579.63	5.7	581.56	7.56	579.70	7.31	579.95	7.83	579.43	5.51	581.75	7.52	579.74	7.81	579.45	7.88	579.38	7.64	579.62	8.01	579.25	7.75	579.51	7.41	579.85
MW002M-R	10.6	580.13	10.64	580.09	8.5	582.27	10.66	580.07	10.38	580.35	10.94	579.78	8.68	582.08	10.55	580.18	10.89	579.83	10.85	579.87	10.72	580.00	11.23	579.48	10.89	579.83	10.46	580.27
MW002S-R	10.53	579.79	10.56	579.76	8.4	581.92	10.49	579.83	10.33	579.99	10.86	579.46	8.55	581.77	10.46	579.86	10.8	579.52	10.71	579.61	10.62	579.70	11.01	579.31	10.72	579.60	10.39	579.93
MW031M	7.69	580.34	8.17	579.86	5.78	582.26	8.01	580.02	7.73	580.30	8.33	579.70	6.25	581.79	7.93	580.10	8.38	579.65	8.3	579.73	8.23	579.80	8.58	579.45	8.29	579.74	7.75	580.28
MW031S	8.88	580.02	9.04	579.86	6.65	582.25	9	579.90	8.82	580.08	9.35	579.55	7.19	581.71	8.95	579.95	9.22	579.68	9.33	579.57	9.32	579.58	9.59	579.31	9.38	579.52	8.78	580.12
MW113S	10.53	579.76	10.57	579.72	8.42	581.87	10.53	579.76	10.25	580.04	10.82	579.47	8.56	581.73	10.41	579.88	10.75	579.54	10.58	579.71	11.02	579.27	10.74	579.55	10.31	579.98		
MW113M	9.69	580.61	9.39	580.91	7.55	582.75	9.72	580.58	9.69	580.61	9.99	580.31	7.8	582.50	9.76	580.54	9.92	580.38	9.91	580.39	9.87	580.43	10.11	580.19	9.96	580.34	9.82	580.48
MW115P	6.53	582.57	6.55	582.55	6.23	582.87	6.79	582.31	7.45	581.65	7.67	581.42	7.17	581.93	7.7	581.39	8.11	580.98	8.15	580.94	8	581.09	8.51	580.58	8.25	580.84	8.14	580.95
MW115S	9.71	579.29	9.68	579.32	7.97	581.03	9.64	579.36	9.44	579.56	9.95	579.05	7.23	581.77	9.56	579.44	9.84	579.16	9.77	579.23	9.63	579.37	9.99	579.01	9.65	579.35	9.31	579.69
MW116P	8.33	581.59	8.39	581.53	8.01	581.91	8.2	581.72	8.21	581.71	8.51	581.41	8.3	581.62	8.32	581.60	8.77	581.15	8.8	581.12	8.78	581.14	9.15	580.77	9.06	580.86	8.96	580.96
MW116S	10.3	579.61	10.31	579.60	8.4	581.52	10.26	579.65	10.04	579.87	10.54	579.37	7.82	582.10	10.15	579.76	10.46	579.45	10.42	579.49	10.24	579.67	10.68	579.23	10.36	579.55	9.99	579.92
MW119D	7.64	581.10	7.59	581.15	7.49	581.25	7.45	581.29	7.41	581.33	7.39	581.35	7.33	581.41	7.29	581.45	7.23	581.51	7.19	581.55	7.18	581.56	7.14	581.60	7.07	581.67	7.01	581.73
EW-3	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-10	22.56	565.20	22.93	564.83	21.35	566.41	23.6	564.15	23.42	564.33	23.38	564.37	3.38	584.42	14.63	573.14	14.93	572.84	23.8	563.95	25.12	562.63	25.56	562.19	21.34	566.42	16.22	571.55
EW-11	21.89	565.42	22.03	565.28	24.49	562.82	23.93	563.38	23.37	563.94	22.91	564.40	4.65	582.69	25.24	562.07	25.41	561.90	25.21	562.10	23.71	563.60	23.56	563.75	25.21	562.10	25.1	562.21
EW-13	20.21	565.54	20.41	565.34	18.45	567.31	20.56	565.19	21.01	564.74	22.18	563.57	3.3	582.52	21.49	564.26	21.37	564.38	19.09	566.67	16.98	568.79	19.69	566.07	17.56	568.20	17.88	567.88
EW-14	20.1	566.61	20.23	566.48	20.15	566.56	20.66	566.05	20.26	566.45	21.15	565.56	4.37	582.42	20.94	565.77	21.1	565.61	19.86	566.85	20.87	565.84	21.26	565.45	20.02	566.69	14.55	572.19
MW034M	12.22	576.03	12.26	575.99	11.66	576.59	11.23	577.02	12.3	575.95	12.49	575.76	11.16	577.09	12.19	576.06	12.24	576.01	12.53	575.72	12.55	575.70	12.84	575.41	12.93	575.32	12.83	575.42
MW034S	12.41	575.81	12.52	575.70	11.76	576.46	11.65	576.57	12.44	575.78	12.77	575.45	11.56	576.66	12.4	575.82	12.49	575.73	12.75	575.47	12.83	575.39	13.1	575.12	13.2	575.02	13	575.22
MW036M	12.25	576.34	12.44	576.15	11.75	576.85	11.95	576.65	12.34	576.25	12.74	575.84	11.95	576.65	12.45	576.14	12.57	576.02	12.93	575.65	12.67	575.91	13.32	575.25	13.42	575.15	13.2	575.37
MW036S	11.61	576.66	11.84	576.43	11.14	577.13	NM	-	11.74	576.53	12.15	576.12	11.4	576.87	11.81	576.46	11.93	576.34	12.3	575.97	12.09	576.18	12.73	575.54	12.85	575.42	12.65	575.62
MW038M	10.85	575.18	11.05	574.98	10.38	575.65	10.42	575.61	11.09	574.94	11.6	574.43	10.58	575.45	11.31	574.72	11.41	574.62	11.89	574.14	11.4	574.63	12.36	573.67	12.44	573.59	12.19	573.84
MW038S	10.81	575.21	11.08	574.94	10.4	575.63	10.38	575.65	11.13	574.89	11.68	574.34	10.57	575.45	11.38	574.64	11.49	574.53	12	574.02	11.49	574.53	12.48	573.54	12.56	573.46	12.3	573.72
MW120D	6.49	582.35	6.09	582.75	6.09	582.75	6.42	582.42	6.27	582.57	6.32	582.52	6.34	582.50	6.24	582.60	6	582.84	6.01	582.83	5.83	583.01	6.13	582.71	6.09	582.75	6.01	582.83
MW120M	12.11	576.84	12.16	576.79	11.79	577.17	11.9	577.06	12.19	576.76	12.42	576.53	12.08	576.87	12.16	576.79	12.22	576.73	12.4	576.55	12.48	576.47	12.88	576.06	12.99	575.95	12.94	576.00
MW120S	11.44	577.16	11.41	577.19	11.3	577.30	11.35	577.25	11.41	577.19	11.71	576.88	11.71	576.88	11.5	577.10	11.45	577.15	11.56	577.03	11.7	576.89	12.06	576.53	12.1	576.49	12.17	576.42
EW-2	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-8	18.16	568.60	18.65	568.11	12.2	574.57	8.44	578.34	10.78	576.00	10.82	575.96	8.59	578.19	13.17	573.60	13.21	573.56	13.81	572.96	12.83	573.94	14.24	572.53	14.12	572.65	13.72	573.05
EW-9	18.33	567.35	18.28	567.40	15.7	569.99	8.61	577.09	17.91	567.77	18.22	567.46	8.47	577.23	16.72	568.97	16.43	569.26	18.88	566.80	20.2	565.48	19.92	565.76	19.93	565.75	19.91	565.77
MW004M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW004S	3.94	582.98	3.79	583.13	3.69	583.23	3.84	583.08	4.23	582.69	4.42	582.50	4.64	582.28	4.26	582.66	4.24	582.68	4.41	582.51	4.67	582.25	4.76	582.16	4.62	582.30	4.94	581.98
MW032M	4.93	581.63	4.62	581.95	4.55	582.02	4.74	581.82	5.05	581.51	5.18	581.38	5.28	581.28	5.03	581.53	4.95	581.61	5.04	581.52	5.11	581.45	5.29	581.27	5.57	580.99	5.35	581.21
MW032S	4.34	582.35	4.17	582.52	4.19	582.50	4.05	582.64	4.4	582.29	4.6	582.09	4.86	581.83	4.69	582.00	4.48	582.21	4.5	582.19	4.81	581.88	4.87	581.82	5.9	580.79	5	581.69
MW033M	2.97	585.86	2.73	586.11	2.79	586.04	2.57	586.27	3.31	585.52	3.45	585.37	3.7	585.12	3.38	585.44	3.27	585.56	3.44	585.38	3.69	585.13	3.82	585.00	3.7	585.12	3.97	584.84
MW033S	2.6	584.57	2.38	584.79	2.47	584.70	2.49	584.68	3.2	583.97	3.1	584.07	3.39	583.78	3.02	584.15	3.08	584.09	3.1	584.07	3.38	583.79	3.47	583.70	3.46	583.71	3.65	583.52
MW039M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW039S	1.39	584.70	1.24	584.85	1.11	584.98	1.3	584.79	1.69	584.40	1.84	584.25	2.08	584.01	1.69	584.40	1.69	584.40	1.87	584.22	2.11	583.98	2.24	583.85	2.03	584.06	2.37	583.72
MW035M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW035S	5.45	582.22	5.21	582.46	5.55	582.12	5.36	582.31	5.27	582.40	5.28	582.39	5.26	582.41	5.11	582.56	4.99	582.68	5.1	582.57	4.91	582.76	5.12	582.55	4.96	582.71	5.06	582.61
MW037M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW037S	4.8	582.28	4.62	582.46	4.5	582.58	4.75	582.33	4.67	5																		

**Table 1. 2019 Pump Down Program Groundwater Elevation Monitoring**  
 Tyco Fire Products LP, Marinette, Wisconsin

Target Elevation	577.9
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Well ID	July 11, 2019		July 16, 2019		July 18, 2019		July 23, 2019		July 25, 2019		July 30, 2019		August 1, 2019		August 6, 2019		August 8, 2019		August 13, 2019		August 15, 2019		August 20, 2019		August 22, 2019		August 27, 2019	
	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)
MW001M	8.7	578.47	5.56	581.61	7.39	579.78	7.43	579.74	8.12	579.05	8.1	579.07	8.42	578.75	7.2	579.97	7.36	579.81	7.38	579.79	8.61	578.56	8.79	578.38	8.74	578.43	8.44	578.73
MW001S	7.52	579.74	5.7	581.56	6.17	581.09	6.21	581.05	6.91	580.35	7.14	580.12	7.44	579.82	7.25	580.01	7.29	579.97	7.31	579.95	7.63	579.63	7.71	579.55	7.8	579.46	7.47	579.79
MW002M-R	10.81	579.91	8.85	581.91	9.29	581.46	9.35	581.40	10.21	580.52	10.1	580.64	10.45	580.28	10.37	580.36	10.41	580.32	10.4	580.33	10.74	579.98	10.92	579.80	10.94	579.78	10.59	580.14
MW002S-R	10.64	579.68	8.68	581.64	9.17	581.15	9.21	581.11	10.31	580.01	9.94	580.38	10.3	580.02	10.19	580.13	10.27	580.05	10.29	580.03	10.62	579.70	10.79	579.53	10.83	579.49	10.13	580.19
MW031M	8.12	579.91	6.36	581.68	6.59	581.45	6.66	581.38	7.45	580.58	7.32	580.71	7.81	580.22	7.77	580.26	7.77	580.26	7.79	580.24	8.14	579.89	8.32	579.71	8.31	579.72	7.99	580.04
MW031S	9.11	579.79	7.07	581.83	7.57	581.33	7.63	581.27	8.5	580.40	8.35	580.55	8.38	580.52	8.72	580.18	8.72	580.18	8.74	580.16	9.12	579.78	9.29	579.61	9.29	579.61	9.05	579.85
MW113S	10.62	579.67	8.61	581.68	9.12	581.17	9.17	581.12	10.09	580.20	9.93	580.36	10.32	579.97	10.18	580.11	10.25	580.04	10.29	580.00	10.53	579.76	10.71	579.58	10.8	579.49	10.43	579.86
MW113M	10	580.30	7.84	582.46	9.19	581.11	8.63	581.67	9.69	580.61	9.53	580.77	9.77	580.53	9.75	580.55	9.76	580.54	9.75	580.55	9.98	580.32	10.14	580.16	10.17	580.13	9.91	580.39
MW115P	8.29	580.80	7.66	581.43	7.25	581.85	7.38	581.72	7.7	581.39	7.71	581.38	7.76	581.33	7.85	581.24	7.93	581.16	7.89	581.20	8.4	580.69	8.55	580.54	8.6	580.49	8.35	580.74
MW115S	9.58	579.42	7.27	581.73	8.13	580.87	8.25	580.75	9.02	579.98	8.94	580.06	9.27	579.73	9.13	579.87	9.24	579.76	9.23	579.77	9.58	579.42	9.68	579.32	10.42	578.58	9.42	579.58
MW116P	9	580.92	8.76	581.16	8.37	581.55	8.35	581.57	8.44	581.48	8.46	581.46	8.64	581.28	8.66	581.26	8.73	581.19	8.71	581.21	9.11	580.81	9.33	580.59	9.36	580.56	9.18	580.74
MW116S	10.31	579.60	8.23	581.69	8.79	581.13	8.91	581.01	9.69	580.22	9.58	580.33	9.93	579.98	9.83	580.08	9.9	580.01	9.88	580.03	10.23	579.68	10.44	579.47	9.75	580.16	10.04	579.87
MW119D	7.02	581.72	7.01	581.73	7	581.74	6.96	581.78	6.95	581.79	6.92	581.82	6.86	581.88	6.84	581.90	6.83	581.91	6.81	581.93	6.83	581.91	6.89	581.85	6.82	581.92	6.78	581.96
EW-3	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-10	16.67	571.10	5.42	582.37	23.28	564.47	23.322	564.43	19.72	568.04	20.89	566.87	20.8	566.96	18.79	568.97	18.98	568.78	18.79	568.97	18.81	568.95	18.3	569.47	23.81	563.94	23.78	563.97
EW-11	25.15	562.16	4.73	582.61	25.12	562.19	25.2	562.11	23.95	563.36	25.65	561.66	25.62	561.69	25.25	562.06	25.26	562.05	25.63	561.68	25.32	561.99	25.02	562.29	25.09	562.22	24.85	562.46
EW-13	16.95	568.82	3.14	582.68	20.91	564.84	20.79	564.96	18.33	567.43	19.89	565.87	21.3	564.45	16.8	568.97	16.91	568.86	16.83	568.94	17.13	568.64	18.12	567.64	20.74	565.01	20.71	565.04
EW-14	13.67	573.07	4.72	582.06	21.28	565.43	21.33	565.38	19.95	566.76	21.43	565.28	21.41	565.30	21.48	565.23	21.44	565.27	21.46	565.25	21.71	564.99	21.43	565.28	21.42	565.29	21.46	565.25
MW034M	13	575.25	12.2	576.05	12.98	575.27	12.99	575.26	13.23	575.02	13.15	575.10	13.3	574.95	13.22	575.03	13.36	574.89	13.36	574.89	13.5	574.75	13.64	574.61	13.68	574.57	13.63	574.62
MW034S	13.24	574.98	12.74	575.48	13.24	574.98	13.15	575.07	13.5	574.72	13.38	574.84	13.6	574.62	13.46	574.76	13.65	574.57	13.72	574.50	13.81	574.41	13.95	574.27	13.99	574.23	13.98	574.24
MW036M	13.52	575.05	13.41	575.16	13.65	574.92	13.64	574.93	13.95	574.61	13.82	574.74	14.04	574.52	13.92	574.64	14.17	574.39	14.2	574.36	14.3	574.26	14.4	574.15	13.46	575.11	14.1	574.46
MW036S	12.96	575.31	12.9	575.37	13.1	575.17	13.1	575.17	13.39	574.88	13.92	574.35	13.5	574.77	13.88	574.39	13.61	574.66	13.56	574.71	13.75	574.52	13.84	574.43	13.94	574.33	13.68	574.59
MW038M	12.62	573.41	12.43	573.60	12.8	573.23	12.7	573.33	13.11	572.92	12.91	573.12	13.23	572.80	13.05	572.98	13.34	572.69	13.36	572.67	13.56	572.47	13.48	572.55	13.69	572.34	13.09	572.94
MW038S	12.77	573.25	12.54	573.48	12.97	573.05	12.82	573.20	13.25	572.77	13.03	572.99	13.39	572.63	13.2	572.82	13.53	572.49	13.51	572.51	13.72	572.30	13.59	572.43	13.89	572.13	13.19	572.83
MW120D	6.19	582.65	5.94	582.90	6.01	582.83	6.08	582.76	6.08	582.76	6.08	582.76	5.89	582.95	6.25	582.59	6.18	582.66	6.2	582.64	6.03	582.81	6.58	582.26	6.35	582.49	6.11	582.73
MW120M	13.08	575.86	12.98	575.96	12.99	575.95	13.12	575.82	13.32	575.61	13.32	575.61	13.42	575.51	13.35	575.58	13.46	575.47	13.33	575.60	13.61	575.32	13.8	575.12	13.8	575.12	13.82	575.10
MW120S	12.25	576.34	12.26	576.33	12.1	576.49	12.36	576.23	12.48	576.11	12.54	576.05	12.56	576.03	12.55	576.04	12.61	575.98	12.57	576.02	12.77	575.82	12.89	575.70	12.89	575.70	13.04	575.55
EW-2	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-8	14.45	572.32	10.4	576.38	14.84	571.93	14.73	572.04	15.39	571.38	15.16	571.61	15.82	570.94	15.75	571.01	15.91	570.85	15.87	570.89	16.01	570.75	18.55	568.21	18.93	567.83	10.99	575.78
EW-9	19.92	565.76	9.49	576.21	19.58	566.10	19.62	566.06	20.09	565.59	20.13	565.55	19.09	566.59	20.61	565.07	20.81	564.87	20.74	564.94	20.83	564.85	20.81	564.87	20.81	564.87	20.79	564.89
MW004M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW004S	5.02	581.90	4.66	582.26	4.61	582.31	4.65	582.27	4.59	582.33	4.7	582.22	4.89	582.03	4.92	582.00	4.83	582.09	4.82	582.10	5.23	581.69	5.32	581.60	5.43	581.49	5.2	581.72
MW032M	5.54	581.02	5.01	581.55	5.03	581.53	5.02	581.54	5.15	581.41	5.21	581.35	5.36	581.20	5.26	581.30	5.21	581.35	5.23	581.33	5.49	581.07	5.69	580.87	5.72	580.84	5.43	581.13
MW032S	5.09	581.60	4.92	581.77	4.82	581.87	4.68	582.01	4.97	581.72	4.79	581.90	4.97	581.72	5.06	581.63	5.03	581.66	5.03	581.66	5.26	581.43	5.36	581.33	5.38	581.31	5.41	581.28
MW033M	3.71	585.11	3.7	585.12	3.69	585.13	3.65	585.17	3.66	585.16	3.79	585.03	3.91	584.90	3.92	584.89	4.05	584.76	4.01	584.80	4.19	584.62	4.37	584.44	4.41	584.40	4.23	584.58
MW033S	4.08	583.09	3.43	583.74	3.43	583.74	3.31	583.86	3.31	583.86	3.4	583.77	3.4	583.77	3.65	583.52	3.82	583.35	3.72	583.45	3.89	583.28	4.01	583.16	4.09	583.08	4.18	582.99
MW039M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW039S	2.42	583.67	2.04	584.05	2.17	583.92	2.2	583.89	2	584.09	2.13	583.96	2.3	583.79	2.34	583.75	2.38	583.71	2.35	583.74	2.68	583.41	2.75	583.34	2.85	583.24	2.62	583.47
MW035M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW035S	5.09	582.58	4.91	582.76	4.91	582.76	5.11	582.56	5.03	582.64	5.16	582.51	5.08	582.59	5.08	582.59	5.06	582.61	5.08	582.59	5.09	582.58	5.26	582.41	5.3	582.37	5.37	582.30
MW037M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW037S	4.49	582.59	4.27	582.81	4.38	582.																						



**Table 1. 2019 Pump Down Program Groundwater Elevation Monitoring**  
 Tyco Fire Products LP, Marinette, Wisconsin

Target Elevation	577.9
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Well ID	October 17, 2019		October 22, 2019		October 24, 2019	
	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)	DTW	Corrected Groundwater Elevation (for equivalent fresh water)
MW001M	8.8	578.37	8.46	578.71	8.75	578.42
MW001S	7.94	579.32	7.55	579.71	7.79	579.47
MW002M-R	11.11	579.61	10.69	580.03	11.4	579.31
MW002S-R	10.93	579.39	9.18	581.14	11.36	578.96
MW031M	8.4	579.63	8.02	580.01	8.34	579.69
MW031S	9.48	579.42	9.11	579.79	9.45	579.45
MW113S	10.91	579.38	10.53	579.76	11.28	579.01
MW113M	10.09	580.21	9.76	580.54	10.33	579.97
MW115P	8.84	580.25	8.58	580.51	9.43	579.66
MW115S	9.88	579.12	9.51	579.49	9.38	579.62
MW116P	10.54	579.37	9.64	580.28	9.73	580.19
MW116S	9.87	580.04	10.18	579.73	9.91	580.00
MW119D	6.83	581.91	6.78	581.96	6.82	581.92
EW-3	NM	-	NM	-	NM	-
EW-10	23.92	563.83	22.06	565.70	21.83	565.93
EW-11	26.91	560.39	25.69	561.61	26.19	561.11
EW-13	19.24	566.52	20.27	565.48	20.91	564.84
EW-14	20.82	565.89	21.02	565.69	21.25	565.46
MW034M	13.54	574.71	13.44	574.81	13.38	574.87
MW034S	13.83	574.39	13.76	574.46	13.73	574.49
MW036M	14.09	574.47	13.61	574.96	13.9	574.66
MW036S	13.52	574.75	13.18	575.09	13.45	574.82
MW038M	13.04	572.99	12.3	573.73	12.74	573.29
MW038S	13.16	572.86	12.33	573.69	12.82	573.20
MW120D	6.19	582.65	6.2	582.64	6.19	582.65
MW120M	13.83	575.09	13.81	575.11	13.76	575.16
MW120S	13.18	575.41	13.19	575.40	13.03	575.56
EW-2	NM	-	NM	-	NM	-
EW-8	11.58	575.19	14.53	572.24	14.86	571.91
EW-9	22.05	563.62	20.87	564.81	20.65	565.03
MW004M	NM	-	NM	-	NM	-
MW004S	4.24	582.68	4.22	582.70	4.52	582.40
MW032M	4.98	581.58	4.75	581.81	5.12	581.44
MW032S	4.5	582.19	4.49	582.20	4.6	582.09
MW033M	3.33	585.49	3.26	585.57	3.47	585.35
MW033S	2.96	584.21	2.93	584.24	3.12	584.05
MW039M	NM	-	NM	-	NM	-
MW039S	1.68	584.41	1.64	584.45	1.95	584.14
MW035M	NM	-	NM	-	NM	-
MW035S	5.23	582.44	5.05	582.62	5.11	582.56
MW037M	NM	-	NM	-	NM	-
MW037S	4.63	582.45	4.59	582.49	4.6	582.48
SG4	6.52	582.33	6.51	582.34	6.89	581.96
<b>Rough Target Elevation Calc SV*</b>		579.45		579.89		579.39
<b>Rough Target Elevation Calc 8SS*</b>		574.33		574.66		574.51
<b>Target Elevation (NAVD88)</b>		577.90		577.90		577.90
<b>SV Variance</b>		1.55		1.99		1.49
<b>8SS Variance</b>		-3.57		-3.24		-3.39

**Notes:**

Measurements were collected from top of casing (TOC). All depth measurements are in feet.

Elevations are reported in feet above mean sea level (AMSL) relative to the North American Vertical Datum 1988 (NAVD88)

Shaded = Well part of evaluation during Drawdown and Interim Phases

**Bold** = Well part of Target Elevation calculation

- = Information not applicable or not collected

Area Definitions - SV - Salt Vault, 8SS - 8th Street Slip

\*Wells identified for target elevation calculation are for during the drawdown and interim phases. Only wells outside the steepest portion of the cone of depression will be included in the calculation of the average elevations. The average elevation of all suitable measured wells will be considered the calculated elevation to compare against the target elevation. The number of post-drawdown phase wells used for this calculation may be reduced and will be determined based on results observed during the drawdown phase.

\*\*Staff gauge damaged; Re-installed and updated elevations following survey data from August 22, 2019

ID = identification; DTW = depth to water

NM = Not Measured; MW = Monitoring Well