

November 13, 2020

Mr. Christopher Black
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 Mr. Black:

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 8th 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 24, 2020 through November 6, 2020.

Summary of Work during Reporting Period

Work conducted during the reporting period included:

- Collection of manual water level readings at the designated monitoring points and extraction wells on October 26, 2020 and November 3, 2020. The average water level, based on the most recent water level measurements during the reporting period, in the former Salt Vault was 579.92 feet above mean seal level (ft. AMSL), or 2.02 feet above the target level. The average water level in the former 8th Street Slip was 574.74 ft. AMSL, or 3.16 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 and 8th Street Slip areas averaged 3.42 gallons per minute (gpm) from the five extraction wells when operated. With the exception of EW-13, the extraction wells within the former Salt Vault have been continuously operating during the reporting period with periodic, short-term cessation during the week / weekends until the holding tanks can be emptied, but also note. Also, during this reporting period,

operation of the extraction wells within the 8th Street Slip area have been on a more intermittent basis to maintain water levels which are presently below target levels.

- Off-site transportation of recovered groundwater was conducted during the reporting period Monday through Friday of each week.

A summary of pumping and disposal operations for the 2020 season is provided below.

Summary of Pump Down Operations (November 6, 2020)

	Gallons Pumped	Gallons Treated at GWTS ¹	Gallons Transported for Off Site Disposal
This Period	~50,400	~0	~50,400
2020 Operations to Date	~1,166,680	~0	~1,165,680

All quantities are estimated.

Issues Encountered During Reporting Period

During this reporting period, the primary disposal facility for the arsenic impacted groundwater, Waste Management's Vickery, Ohio facility, continues to limit capacity for accepting of wastes due to maintenance issues. Therefore, the overall volume of water pumped and transported off site for disposal has decreased until such time that disposal capacity is restored at the Waste Management facility. However, water levels in the former 8th Street Slip remain below target levels and the pumps within the former Salt Vault have been operating continuously. Additionally, pumping of groundwater from extraction well EW-13 did not occur during the majority of this reporting period due to a mechanical issue with that well pump, but repairs were completed with operations resuming on November 5th. Modifications to the system, including winterization of the piping runs from EW-8 and EW-9 were also made and the extraction system discharge piping was altered such that groundwater from the wells within the former 8th Street Slip now discharge to Tank #1 and groundwater from the wells within the former Salt Vault now discharge to Tank #2. Finally, policies and procedures are being evaluated on an ongoing basis to address the COVID-19 outbreak. Otherwise, no issues were encountered during the reporting period that require resolution.

¹ GWTS – Groundwater Treatment System

Issues To Be Resolved During Next Reporting Period

Pumping operations will be maximized in the area of the former Salt Vault to the extent possible. Finally, policies and procedures are being evaluated on an ongoing basis to address the COVID-19 outbreak.

Anticipated Work During Next Reporting Period

The PDP extraction system consisting of the wells within the former Salt Vault will be operated on a continuous basis. Extraction wells within the former 8th Street Slip will be operated on an intermittent basis to maintain water levels below target elevations. Finally, manual water level measurements will continue to be collected from the designated monitoring wells and extraction wells on a weekly basis.

If you have any questions regarding this report, please contact me at 262-349-2528 or 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
Ryan Suennen – Tyco Fire Products
Heather Ziegelbauer – Jacobs
Kirk Kapfhammer – Endpoint Solutions Corp.

Table 1. 2020 Pump Down Program Groundwater Elevation Monitoring
 Tyco Fire Products LP, Marinette, Wisconsin

Target Elevation	577.9
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Well ID	January 8, 2020		January 15, 2020		January 31, 2020		February 5, 2020		February 12, 2020		February 19, 2020		February 28, 2020		March 4, 2020		March 11, 2020		March 17, 2020		April 1, 2020		April 8, 2020		April 15, 2020		April 22, 2020		
	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	5.02	582.10	7.81	579.31	8.33	578.79	8.27	578.85	8.32	578.80	8.92	578.20	8.72	578.40	8.68	578.44	8.42	578.70	8.30	578.82	7.35	579.77	6.90	580.22	7.30	579.82	7.62	579.50	
MW001S	5.06	582.14	NM	-	NM	-	7.21	579.99	7.34	579.86	7.94	579.26	7.79	579.41	7.63	579.57	7.55	579.65	7.43	579.77	6.26	580.94	5.89	581.31	6.41	580.79	6.70	580.50	
MW002M-R	8.26	582.29	9.93	580.60	10.53	580.00	10.51	580.02	10.52	580.01	11.14	579.38	10.97	579.55	10.85	579.67	10.69	579.84	10.64	579.89	9.50	581.04	9.11	581.43	9.62	580.92	9.24	581.30	
MW002S-R	8.11	582.17	9.78	580.50	10.08	580.20	10.30	579.98	10.04	580.24	10.98	579.30	10.81	579.47	10.79	579.49	10.56	579.72	10.52	579.76	9.31	580.97	8.95	581.33	9.51	580.77	9.05	581.23	
MW031M	5.54	582.51	7.29	580.75	7.91	580.12	7.95	580.08	7.99	580.04	8.46	579.57	8.38	579.65	8.32	579.71	8.16	579.87	7.96	580.07	6.96	581.08	6.52	581.52	7.04	581.00	7.30	580.74	
MW031S	6.37	582.50	8.40	580.47	8.85	580.02	8.84	580.03	8.95	579.92	9.46	579.41	9.28	579.59	8.91	579.96	9.04	579.83	8.71	580.16	7.83	581.04	7.34	581.53	7.88	580.99	8.15	580.72	
MW113S	8.03	582.25	9.76	580.52	10.31	579.97	10.33	579.95	10.34	579.94	10.97	579.31	10.44	579.84	10.34	579.94	10.52	579.76	10.41	579.87	9.27	581.01	9.90	580.38	9.41	580.87	9.22	581.06	
MW113M	7.57	582.71	9.79	580.49	10.07	580.21	10.07	580.21	10.09	580.19	10.51	579.77	10.77	579.51	10.48	579.80	10.11	580.17	9.98	580.30	8.95	581.33	9.12	581.16	9.41	580.87	9.69	580.59	
MW115P	6.35	582.73	7.09	581.99	8.12	580.96	8.16	580.92	8.34	580.74	9.15	579.93	8.75	580.33	8.56	580.52	7.51	581.57	7.50	581.58	6.54	582.54	6.29	582.79	6.50	582.58	6.75	582.33	
MW115S	6.68	582.29	8.38	580.59	9.44	579.53	9.26	579.71	9.41	579.56	9.65	579.32	9.91	579.06	9.84	579.13	9.64	579.33	9.50	579.47	7.91	581.06	7.60	581.37	8.55	580.42	8.74	580.23	
MW116P	7.68	582.19	8.39	581.48	8.91	580.96	8.98	580.89	9.01	580.86	9.62	580.25	9.52	580.35	9.45	580.42	9.28	580.59	9.02	580.85	7.94	581.93	7.75	582.12	7.91	581.96	8.23	581.64	
MW116S	7.63	582.25	9.24	580.63	9.97	579.90	9.90	579.97	9.02	580.86	10.55	579.32	10.48	579.39	10.38	579.49	10.15	579.72	10.02	579.85	8.93	580.95	8.55	581.33	8.96	580.92	9.39	580.48	
MW119D	6.69	582.03	6.66	582.06	6.69	582.03	6.75	581.97	6.75	581.97	6.80	581.92	6.80	581.92	6.76	581.96	6.88	581.84	7.00	581.72	6.92	581.80	6.89	581.83	6.85	581.87	6.82	581.90	
EW-3	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
EW-10	4.91	582.15	24.64	562.38	23.64	563.38	20.28	566.75	12.62	574.43	17.35	569.69	22.46	564.57	22.62	564.41	22.26	564.77	24.73	562.29	24.49	562.53	24.63	562.39	24.51	562.51	24.42	562.60	
EW-11	4.23	582.46	27.06	559.59	26.97	559.68	27.09	559.56	27.02	559.63	28.02	558.63	22.24	564.42	23.03	563.63	27.18	559.47	27.24	559.41	27.22	559.43	22.82	563.84	22.83	563.83	22.71	559.44	
EW-13	2.85	582.28	4.46	580.66	24.18	560.87	8.07	577.04	25.32	559.73	5.91	579.21	22.37	562.69	22.41	562.65	24.63	560.42	22.14	562.92	24.24	560.81	13.72	571.37	24.84	560.21	25.41	559.64	
EW-14	4.51	581.58	5.31	580.78	21.93	564.08	22.44	563.57	6.23	579.86	22.17	563.84	18.72	567.31	16.83	569.21	20.12	565.90	22.02	563.99	21.63	564.38	14.42	571.63	14.81	571.24	21.51	564.51	
MW034M	11.51	576.71	11.33	576.89	11.14	577.08	11.14	577.08	10.95	577.27	11.15	577.07	10.89	577.33	10.90	577.32	10.39	577.83	10.03	578.19	9.29	578.93	9.02	579.20	8.82	579.40	7.77	580.45	
MW034S	11.82	576.36	11.64	576.54	11.47	576.71	11.45	576.73	11.35	576.83	11.42	576.76	11.24	576.94	11.10	577.08	10.77	577.41	10.43	577.75	9.65	578.53	9.32	578.86	9.13	579.05	9.06	579.12	
MW036M	12.50	576.07	12.24	576.33	12.02	576.56	12.01	576.57	10.01	578.60	11.91	576.67	11.80	576.78	12.04	576.54	11.52	577.07	11.30	577.29	10.10	578.51	8.91	579.72	9.48	579.14	9.45	579.17	
MW036S	11.96	576.29	11.66	576.59	11.43	576.82	11.43	576.82	11.32	576.93	11.40	576.85	11.22	577.03	11.42	576.83	10.83	577.42	10.55	577.70	9.46	578.79	9.10	579.15	8.83	579.43	8.73	579.53	
MW038M	11.34	576.46	11.01	576.79	10.84	576.96	10.78	577.02	10.58	577.22	10.82	576.98	10.62	577.18	10.53	577.27	10.26	577.54	9.78	578.02	8.42	579.38	8.00	579.80	7.79	580.01	7.76	580.04	
MW038S	11.33	576.49	11.00	576.82	10.85	576.97	10.80	577.02	10.59	577.23	10.82	577.00	10.55	577.27	10.46	577.36	10.24	577.59	9.71	578.12	8.30	579.53	7.89	579.94	7.65	580.18	7.65	580.18	
MW120D	6.94	581.66	6.26	582.34	6.25	582.35	6.59	582.01	6.66	581.94	6.91	581.69	6.74	581.86	6.61	581.99	6.63	581.97	6.80	581.80	6.14	582.46	6.10	582.50	6.14	582.46	6.38	582.22	
MW120M	12.47	576.47	12.30	576.64	12.21	576.74	12.21	576.74	12.00	576.95	12.20	576.75	11.98	576.97	12.04	576.91	11.43	577.53	11.12	577.85	9.37	579.63	9.13	579.88	9.99	579.00	9.91	579.08	
MW120S	12.02	576.50	11.85	576.67	11.85	576.67	11.73	576.79	11.69	576.83	11.81	576.71	11.61	576.91	11.77	576.75	11.04	577.49	10.55	577.98	9.63	578.90	9.46	579.07	9.38	579.15	9.48	579.05	
EW-2	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
EW-8	9.23	576.43	8.90	576.76	8.77	576.89	8.65	577.01	7.50	578.16	8.87	576.79	8.47	577.19	8.61	577.05	8.14	577.52	7.72	577.94	6.45	579.21	6.01	579.66	5.75	579.92	5.75	579.92	
EW-9	8.63	576.38	8.42	576.59	8.33	576.68	8.25	576.76	8.10	576.91	8.24	576.77	8.02	576.99	8.37	576.64	7.53	577.48	7.27	577.75	6.45	578.57	6.13	578.89	5.94	579.08	5.91	579.11	
MW004M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
MW004S	4.45	584.29	4.78	583.96	5.01	583.73	4.71	584.03	5.01	583.73	5.35	583.39	5.00	583.74	4.97	583.77	4.50	584.24	4.31	584.43	3.88	584.86	3.88	584.86	4.04	584.70	4.30	584.44	
MW032M	5.29	583.07	5.29	583.07	5.34	583.02	5.29	583.07	5.43	582.93	5.92	582.44	5.61	582.75	5.34	583.02	5.02	583.34	5.12	583.24	4.88	583.48	4.76	583.60	5.00	583.36	4.53	583.84	
MW032S	4.71	583.79	4.36	584.14	4.94	583.56	4.81	583.69	4.94	583.56	5.39	583.11	5.15	583.35	5.10	583.40	4.57	583.93	4.60	583.90	4.37	584.13	4.28	584.22	4.32	584.18	4.56	583.94	
MW033M	3.51	584.25	3.79	583.97	3.97	583.78	3.73	584.03	3.95	583.80	4.00	583.75	4.23	583.52	4.01	583.74	3.51	584.25	3.36	584.40	2.87	584.90	2.91	584.86	3.00	584.77	3.31	584.46	
MW033S	3.11	584.22	3.46	583.87	3.64	583.69	3.40	583.93	3.67	583.66	4.33	583.00	3.89	583.44	3.87	583.46	3.20	584.13	2.93	584.40	2.50	584.83	2.62	584.71	2.67	584.66	2.95	584.38	
MW039M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
MW039S	1.92	584.28	2.22	583.98	2.42	583.78	2.15	584.05	2.45	583.75	2.82	583.38	2.64	583.56	2.31	583.89	1.89	584.31	1.78	584.42	1.35	584.85	1.33	584.87	1.51	584.69	1.75	584.45	
MW035M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
MW035S	5.44	582.21	5.32	582.33	5.26	582.39	5.29	582.36	5.32	582.33	5.33	582.32	5.34	582.31	5.27	582.38	5.09	582.56	5.36	582.29	5.20	582.45	5.11	582.54	5.28	582.37	5.28	582.37	
MW037M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM
MW037S	4.69	582.38	4.70	582.37	4.7																								

Table 1. 2020 Pump Down Program Groundwater Elevation Monitoring
 Tyco Fire Products LP, Marinette, Wisconsin

Target Elevation	577.9
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Well ID	November 3, 2020	
	DTW	Corrected Groundwater Elevation (for equivalent fresh water)
MW001M	7.92	579.20
MW001S	7.17	580.03
MW002M-R	10.25	580.28
MW002S-R	10.48	579.80
MW031M	7.67	580.36
MW031S	8.71	580.16
MW113S	10.27	580.01
MW113M	10.57	579.71
MW115P	8.81	580.27
MW115S	9.10	579.87
MW116P	9.57	580.30
MW116S	10.08	579.79
MW119D	6.69	582.03
EW-3	NM	-
EW-10	24.89	562.13
EW-11	22.89	563.77
EW-13	5.28	579.84
EW-14	21.22	564.80
MW034M	13.30	574.92
MW034S	13.53	574.65
MW036M	14.16	574.38
MW036S	13.69	574.56
MW038M	11.73	574.41
MW038S	13.58	574.24
MW120D	6.51	582.09
MW120M	13.65	575.27
MW120S	13.05	575.47
EW-2	NM	-
EW-8	19.28	566.36
EW-9	10.07	574.94
MW004M	NM	-
MW004S	5.88	582.86
MW032M	5.83	582.53
MW032S	5.76	582.74
MW033M	4.83	582.91
MW033S	4.55	582.78
MW039M	NM	-
MW039S	3.33	582.87
MW035M	NM	-
MW035S	5.52	582.13
MW037M	NM	-
MW037S	4.86	582.21
SG4	5.30	582.15
Rough Target Elevation Calc SV*		579.92
Rough Target Elevation Calc 8S*		574.74
Target Elevation (NAVD88)		577.90
SV Variance		2.02
8S Variance		-3.16

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 top the North American Vertical Datum 1988 (NAVD88)
 As of this November 3, 2020 table update, the 2020 elevations have been updated with the September 2020 monitoring well TOC survey data
 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.
 ID = identification; DTW = depth to water
 NM = Not Measured; MW = Monitoring Well