

June 9, 2021

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 May 22, 2021 through June 4, 2021.

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. The average water level, based on the most recent water level measurements (June 3rd, 2021) during the reporting period, in the former Salt Vault was 577.84 feet above mean sea level (ft. AMSL), or 0.06 feet below the target level. The average water level in the former 8th Street Slip was 576.29 ft. AMSL, or 1.61 feet below the target level. A cumulative summary of manual water level readings and corrected elevations is attached as Table 1.
- Pump testing of the newly installed horizontal wells HW-01 and HW-02 has been ongoing, resulting in no need for operation of the four extraction wells. No operation of the four extraction wells within the former Salt Vault (EW-10, EW-11, EW-13 and EW-14) occurred during this reporting period.
- No groundwater has been extracted from the wells (EW-8 and EW-9) within the 8th Street Slip since April 6, 2021 when the pump testing associated with the newly

installed horizontal wells was initiated. Water levels in the 8th Street Slip remain well below the target elevation.

- Extraction of groundwater from the newly installed horizontal well HW-02, installed within the former Salt Vault, averaged 2.0 gallons per minute (gpm) over the reporting time period. No groundwater has been extracted from horizontal well HW-01 during the reporting period in an effort to assess the optimal extraction rate to maintain water levels below the target elevation. Water levels in the former Salt Vault varied from slightly above to below the target elevation during this time.
- Off-site transportation of recovered groundwater was conducted during the reporting period Monday through Friday of each week as needed to maintain operations.

A summary of pumping and disposal operations for the 2021 season is provided below.

Summary of Pump Down Operations (June 4, 2021)

	Gallons Pumped	Gallons Treated at GWTS ¹	Gallons Transported for Off Site Disposal
This Period	~40,300	~0	~48,500
2021 Operations to Date	~478,650	~0	~477,200

All quantities are estimated.

Issues Encountered During Reporting Period

No issues were encountered during this reporting period that require resolution.

¹ GWTS – Groundwater Treatment System

Issues To Be Resolved During Next Reporting Period

No operational issues were encountered during this reporting period that require resolution.

Anticipated Work During Next Reporting Period

Pumping operations within the area of the former Salt Vault will be maintained using the horizontal extraction wells, however; current extraction rates may be adjusted in an effort to further assess the effectiveness of the horizontal well extraction system. It is also expected that operation of the extraction wells within the 8th Street Slip will be intermittent 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. 2021 Pump Down Program Groundwater Elevation Monitoring
 Tyco Fire Products LP, Marinette, Wisconsin

Target Elevation	577.9
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Well ID	April 8, 2021		April 13, 2021		April 20, 2021		May 6, 2021		May 11, 2021		May 18, 2021		May 25, 2021		May 27, 2021		June 3, 2021	
	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	8.24	578.88	9.37	577.75	9.52	577.60	9.51	577.61	9.66	577.46	9.36	577.76	9.10	578.02	9.48	577.64	9.43	577.69
MW001S	8.45	578.75	9.63	577.57	9.71	577.49	9.73	577.47	9.89	577.31	9.57	577.63	9.31	577.89	9.69	577.51	9.67	577.53
MW002M-R	11.53	578.99	12.65	577.85	12.82	577.68	12.83	577.67	13.02	577.48	12.69	577.81	12.44	578.07	12.84	577.66	12.77	577.73
MW002S-R	11.42	578.86	12.62	577.66	12.75	577.53	12.73	577.55	12.94	577.34	12.60	577.68	12.38	577.90	12.79	577.49	12.70	577.58
MW031M	8.85	579.18	10.06	577.96	10.61	577.40	10.26	577.76	10.31	577.71	9.90	578.12	9.71	578.31	10.26	577.76	10.15	577.87
MW031S	9.94	578.93	10.93	577.94	11.67	577.20	11.35	577.52	11.39	577.48	10.98	577.89	10.69	578.18	11.39	577.48	11.32	577.55
MW113S	11.33	578.95	12.53	577.74	12.69	577.58	12.68	577.59	12.86	577.41	12.52	577.75	12.28	577.99	12.72	577.55	12.62	577.65
MW113M	9.78	580.50	10.47	579.81	10.83	579.44	10.57	579.71	10.71	579.57	10.55	579.73	10.35	579.93	10.74	579.54	10.64	579.64
MW115P	8.62	580.46	9.04	580.04	10.28	578.80	11.62	577.45	10.73	578.35	10.47	578.61	10.22	578.86	10.71	578.37	10.51	578.57
MW115S	10.07	578.90	11.27	577.70	11.68	577.29	11.41	577.56	11.54	577.43	11.18	577.79	10.96	578.01	11.47	577.50	11.36	577.61
MW116P	9.53	580.34	10.32	579.54	10.75	579.11	10.99	578.87	11.08	578.78	11.02	578.84	10.89	578.97	11.12	578.74	11.04	578.82
MW116S	10.96	578.91	12.13	577.73	12.28	577.58	12.32	577.54	12.48	577.38	12.17	577.69	11.93	577.93	12.34	577.52	12.28	577.58
MW119D	7.70	581.02	7.71	581.01	7.77	580.95	7.85	580.87	7.87	580.85	7.89	580.83	7.88	580.84	7.88	580.84	7.89	580.83
EW-3	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-10	8.21	578.85	9.34	577.71	9.80	577.25	9.56	577.49	9.63	577.42	9.31	577.74	9.06	578.00	9.56	577.49	9.48	577.57
EW-11	7.03	579.65	7.99	578.69	8.30	578.38	8.29	578.39	8.42	578.26	8.16	578.52	7.95	578.73	8.36	578.32	8.32	578.36
EW-13	6.25	578.87	7.38	577.73	7.71	577.40	7.58	577.53	7.82	577.29	7.33	577.78	7.10	578.01	7.56	577.55	7.46	577.65
EW-14	6.79	579.29	8.17	577.91	8.85	577.22	8.59	577.49	8.59	577.49	8.15	577.93	7.98	578.10	8.59	577.49	8.45	577.63
MW034M	13.32	574.90	13.18	575.04	12.91	575.31	12.41	575.81	12.32	575.90	12.16	576.06	11.94	576.28	11.93	576.29	11.70	576.52
MW034S	13.87	574.31	13.68	574.50	13.36	574.82	12.85	575.33	12.72	575.46	12.56	575.62	12.33	575.85	12.29	575.89	12.05	576.13
MW036M	14.54	573.99	14.26	574.28	13.93	574.61	13.35	575.20	13.12	575.44	12.93	575.63	12.69	575.87	12.71	575.85	12.43	576.14
MW036S	14.15	574.10	13.88	574.37	13.50	574.75	12.90	575.35	12.67	575.58	12.42	575.83	12.20	576.05	12.18	576.07	11.93	576.32
MW038M	12.31	573.83	11.63	574.51	11.22	574.92	10.48	575.66	10.28	575.86	10.03	576.11	9.74	576.40	9.78	576.36	9.50	576.64
MW038S	13.75	574.07	13.42	574.40	12.96	574.86	12.18	575.64	12.00	575.82	11.73	576.09	11.45	576.37	11.48	576.34	11.23	576.59
MW120D	7.01	581.59	7.32	581.28	7.50	581.10	7.40	581.20	7.33	581.27	7.45	581.15	7.15	581.45	7.34	581.26	7.38	581.22
MW120M	14.14	574.77	14.04	574.87	13.86	575.05	13.52	575.40	13.36	575.56	13.22	575.71	13.02	575.91	13.04	575.89	12.82	576.11
MW120S	13.58	574.94	13.61	574.91	13.46	575.06	13.17	575.35	13.12	575.40	13.02	575.50	12.83	575.69	12.86	575.66	12.65	575.87
EW-2	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
EW-8	11.54	574.11	11.44	574.21	10.83	574.83	8.64	577.02	8.43	577.23	8.23	577.43	7.96	577.70	7.99	577.67	7.68	577.98
EW-9	10.66	574.35	10.48	574.53	10.15	574.86	8.08	576.93	7.92	577.09	7.81	577.20	7.58	577.43	7.51	577.50	7.32	577.70
MW004M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW004S	5.13	583.61	4.93	583.81	5.01	583.73	4.75	583.99	4.92	583.82	5.16	583.58	4.97	583.77	5.17	583.57	5.08	583.66
MW032M	5.75	582.61	5.69	582.67	5.96	582.40	5.68	582.68	5.83	582.53	5.93	582.43	5.72	582.64	6.03	582.33	5.82	582.54
MW032S	5.12	583.38	4.92	583.58	5.01	583.49	4.73	583.77	4.86	583.64	5.12	583.38	5.06	583.44	5.21	583.29	5.20	583.30
MW033M	4.02	583.73	3.82	583.94	3.97	583.78	3.71	584.05	3.87	583.89	4.10	583.65	3.93	583.82	4.13	583.62	4.03	583.72
MW033S	3.76	583.57	3.57	583.76	3.69	583.64	3.41	583.92	3.52	583.81	3.82	583.51	3.66	583.67	3.87	583.46	3.77	583.56
MW039M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW039S	2.78	583.42	2.38	583.82	2.47	583.73	2.20	584.00	2.39	583.81	2.62	583.58	2.42	583.78	2.63	583.57	2.53	583.67
MW035M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW035S	5.62	582.03	5.58	582.07	5.79	581.86	5.65	582.00	5.82	581.83	5.96	581.69	5.86	581.79	6.11	581.54	5.98	581.67
MW037M	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-	NM	-
MW037S	4.96	582.11	4.88	582.19	5.01	582.06	4.91	582.16	5.05	582.02	5.24	581.83	5.17	581.90	5.43	581.64	5.46	581.61
SG4	5.80	581.65	6.22	581.23	5.50	581.95	6.89	580.56	6.00	581.45	6.00	581.45	5.90	581.55	6.21	581.24	6.00	581.45
Rough Target Elevation Calc SV*		579.08		577.97		577.68		577.80		577.66		577.76		578.22		577.76		577.84
Rough Target Elevation Calc 8S*		574.36		574.61		574.92		575.47		575.63		575.82		576.05		576.05		576.29
Target Elevation (NAVD88)		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90		577.90
SV Variance		1.18		0.07		-0.22		-0.10		-0.24		0.08		0.32		-0.14		-0.06
8S Variance		-3.54		-3.29		-2.98		-2.43		-2.27		-2.08		-1.85		-1.85		-1.61

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.

ID = identification; DTW = depth to water

NM = Not Measured; MW = Monitoring Well