FLEIS&VANDENBRINK

DESIGN. BUILD. OPERATE.

August 19, 2022

Bridgett Carver
Surface Water Quality Division
Michigan Department of EGLE
301 East Louis Glick Highway
Jackson, Michigan 49201

Re: Monitoring Report #303
July 1 – July 31, 2022

Dear Ms. Carver:

Pursuant to the National Pollutant Discharge Elimination System (NPDES) Permit No. MI0048453, please find the enclosed Monitoring Report for the period of July 1 through July 31, 2022.

Should you have any questions or concerns regarding this report, please contact me at 269-993-7585.

Sincerely,

FLEIS & VANDENBRINK

Jim Brode, CPG
Senior Project Manager

cc: Dan Hamel, EGLE
Supervisor, Scio Twp.
City of Ann Arbor

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TABLE #1

UNIT D2 UPGRADIENT EXTRACTION DATA

Month of: Jul-22

	Horizontal Well Extraction			TW-9			TW-5			TW-21			Daily Flow	Daily Total
Date	HW-S Gallons	GPM	Run Hrs.	TW-9 Gallons	GPM	Run Hrs.	TW-5 Gallons	GPM	Run Hrs.	TW-21 Gallons	GPM	Run Hrs.	GPM	Gallons
Fri-7/1/22	-		-	36,880	26	24.00	49,757	35	24.00	144,379	100	24.00	160	231,016
Sat-7/2/22	-		-	36,694	25	24.00	49,659	34	24.00	144,383	100	24.00	160	230,736
Sun-7/3/22	-		-	36,451	25	24.00	49,584	34	24.00	144,384	100	24.00	160	230,419
Mon-7/4/22	-		-	36,242	25	24.00	49,602	34	24.00	144,435	100	24.00	160	230,279
Tue-7/5/22	-		-	36,266	25	24.00	48,965	34	24.00	144,431	100	24.00	159	229,662
Wed-7/6/22	-		-	36,779	26	24.00	48,822	34	24.00	75,476	100	12.57	112	161,077
Thu-7/7/22	-		-	35,285	25	24.00	48,843	34	24.00	-		-	58	84,128
Fri-7/8/22	-		-	35,026	24	24.00	48,798	34	24.00	-		-	58	83,824
Sat-7/9/22	-		-	35,172	24	24.00	48,678	34	24.00	-		-	58	83,850
Sun-7/10/22	-		-	35,367	25	24.00	48,626	34	24.00	-		-	58	83,993
Mon-7/11/22	-		-	35,207	24	24.00	48,487	34	24.00	-		-	58	83,694
Tue-7/12/22	-		-	26,166	25	17.75	39,148	36	18.03	73,389	100	12.23	96	138,703
Wed-7/13/22	-		-	36,674	25	24.00	72,465	50	24.00	150,810	105	24.00	181	259,949
Thu-7/14/22	-		-	37,266	26	24.00	72,436	50	24.00	153,458	107	24.00	183	263,160
Fri-7/15/22	-		-	54,641	38	24.00	92,252	64	24.00	151,737	107	23.73	207	298,630
Sat-7/16/22	-		-	70,972	49	24.00	108,531	75	24.00	70,010	106	10.97	173	249,513
Sun-7/17/22	-		-	79,032	55	24.00	108,530	75	24.00	80,195	107	12.53	186	267,757
Mon-7/18/22	-		-	86,489	60	24.00	108,544	75	24.00	153,631	107	24.00	242	348,664
Tue-7/19/22	-		-	86,654	60	24.00	108,545	75	24.00	153,592	107	24.00	242	348,791
Wed-7/20/22	-		-	64,563	45	24.00	88,750	62	24.00	148,239	103	24.00	209	301,552
Thu-7/21/22	-		-	36,086	25	24.00	72,401	50	24.00	123,813	100	20.57	161	232,300
Fri-7/22/22	-		-	35,602	25	24.00	72,371	50	24.00	144,422	100	24.00	175	252,395
Sat-7/23/22	-		-	36,315	25	24.00	72,372	50	24.00	144,406	100	24.00	176	253,093
Sun-7/24/22	-		-	36,774	26	24.00	72,378	50	24.00	144,383	100	24.00	176	253,535
Mon-7/25/22	-		-	36,649	25	24.00	72,394	50	24.00	144,390	100	24.00	176	253,433
Tue-7/26/22	-		-	36,252	25	24.00	72,394	50	24.00	144,394	100	24.00	176	253,040
Wed-7/27/22	-		-	35,726	25	24.00	72,400	50	24.00	144,372	100	24.00	175	252,498
Thu-7/28/22	-		-	37,538	26	24.00	77,520	54	24.00	70,257	100	11.68	129	185,315
Fri-7/29/22	-		-	57,799	40	24.00	109,958	76	24.00	144,371	100	24.00	217	312,128
Sat-7/30/22	-		-	58,535	41	24.00	72,356	50	24.00	142,987	100	23.77	190	273,878
Sun-7/31/22	-		-	58,770	41	24.00	72,376	50	24.00	144,399	100	24.00	191	275,545
TOTALS	-		-	1,403,872	32	737.75	2,177,942	49	738.03	3,424,743	102	560.05	157	7,006,557

TOTAL VOLUME EXTRACTED :	7,006,557 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	156.96 GPM

7/6/22-7/12/22 - TW-21 was shut down for maintenance.
7/12/22 - TW-9 and TW-5 were shut down due to a DTE power outage.
7/16/22-7/17/22 - TW-21 was shut down due to a Comcast internet outage.
7/21/22 - TW-21 was shut down briefly for maintenance.
7/28/22 - TW-21 was shut down due to a Comcast internet outage.

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TABLE #2

UNIT D2 DOWNGRADIENT EXTRACTION DATA

Month of: Jul-22

Date	LB-1 Gallons	GPM	Run Hrs.	LB-4 Gallons	GPM	Run Hrs.	Daily Flow GPM	Daily Total Gallons
Fri-7/1/22	-		-	144,237	100	24.00	100	144,237
Sat-7/2/22	-		-	144,180	100	24.00	100	144,180
Sun-7/3/22	-		-	144,194	100	24.00	100	144,194
Mon-7/4/22	-		-	144,234	100	24.00	100	144,234
Tue-7/5/22	-		-	144,222	100	24.00	100	144,222
Wed-7/6/22	-		-	144,196	100	24.00	100	144,196
Thu-7/7/22	-		-	144,205	100	24.00	100	144,205
Fri-7/8/22	-		-	144,242	100	24.00	100	144,242
Sat-7/9/22	-		-	144,199	100	24.00	100	144,199
Sun-7/10/22	-		-	144,171	100	24.00	100	144,171
Mon-7/11/22	-		-	144,218	100	24.00	100	144,218
Tue-7/12/22	-		-	144,218	100	24.00	100	144,218
Wed-7/13/22	-		-	144,207	100	24.00	100	144,207
Thu-7/14/22	-		-	144,236	100	24.00	100	144,236
Fri-7/15/22	-		-	144,233	100	24.00	100	144,233
Sat-7/16/22	-		-	144,205	100	24.00	100	144,205
Sun-7/17/22	-		-	144,187	100	24.00	100	144,187
Mon-7/18/22	-		-	144,191	100	24.00	100	144,191
Tue-7/19/22	-		-	144,179	100	24.00	100	144,179
Wed-7/20/22	-		-	144,211	100	24.00	100	144,211
Thu-7/21/22	-		-	122,001	100	20.30	85	122,001
Fri-7/22/22	-		-	144,180	100	24.00	100	144,180
Sat-7/23/22	-		-	144,190	100	24.00	100	144,190
Sun-7/24/22	-		-	144,194	100	24.00	100	144,194
Mon-7/25/22	-		-	144,196	100	24.00	100	144,196
Tue-7/26/22	-		-	144,199	100	24.00	100	144,199
Wed-7/27/22	-		-	144,241	100	24.00	100	144,241
Thu-7/28/22	-		-	144,163	100	24.00	100	144,163
Fri-7/29/22	-		-	144,223	100	24.00	100	144,223
Sat-7/30/22	-		-	144,216	100	24.00	100	144,216
Sun-7/31/22	-		-	144,190	100	24.00	100	144,190
TOTALS	-		-	4,448,158	100	740.30	100	4,448,158

TOTAL VOLUME EXTRACTED :	4,448,158 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	99.65 GPM

7/21/22 - LB-4 was shut down briefly for maintenance.

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TABLE #3

CORE AREA EXTRACTION DATA

Month of: Jul-22

Core Area Well Extraction

Date	TW-1 Gallons	TW-1 GPM	TW-1 Run Hrs.	TW-2 (Dolph) Gallons	TW-2 GPM	TW-2 Run Hrs.	TW-3 Gallons	TW-3 GPM	TW-3 Run Hrs.	TW-10 Gallons	TW-10 GPM	TW-10 Run Hrs.	TW-14 Gallons	TW-14 GPM	TW-14 Run Hrs.	TW-20 Gallons	TW-20 GPM	TW-20 Run Hrs.	TW-24 Gallons	TW-24 GPM	TW-24 Run Hrs.	TW-25 Gallons	TW-25 GPM	TW-25 Run Hrs.	Daily Flow GPM	Daily Total Gallons
Fri-7/1/22	-		-	38,817	27	24.00	-		-	-		-	-		-	36,078	25	24.00	13,644	9	24.00	13,500	9	24.00	61	88,539
Sat-7/2/22	-		-	42,255	29	24.00	-		-	-		-	-		-	36,041	25	24.00	13,539	9	24.00	12,898	9	24.00	64	91,835
Sun-7/3/22	-		-	45,336	31	24.00	-		-	-		-	-		-	36,029	25	24.00	13,449	9	24.00	12,467	9	24.00	66	94,814
Mon-7/4/22	-		-	45,308	31	24.00	-		-	-		-	-		-	36,036	25	24.00	13,523	9	24.00	12,899	9	24.00	66	94,867
Tue-7/5/22	-		-	45,222	31	24.00	-		-	-		-	-		-	35,949	25	24.00	13,682	10	24.00	13,931	10	24.00	66	94,853
Wed-7/6/22	-		-	39,273	32	20.48	-		-	-		-	-		-	35,889	25	24.00	13,552	9	24.00	13,121	9	24.00	62	88,714
Thu-7/7/22	-		-	47,913	33	24.00	-		-	-		-	-		-	35,872	25	24.00	13,522	9	24.00	12,936	9	24.00	68	97,307
Fri-7/8/22	-		-	47,997	33	24.00	-		-	-		-	-		-	35,860	25	24.00	13,480	9	24.00	13,006	9	24.00	68	97,337
Sat-7/9/22	-		-	48,017	33	24.00	-		-	-		-	-		-	35,837	25	24.00	13,443	9	24.00	12,780	9	24.00	68	97,297
Sun-7/10/22	-		-	48,002	33	24.00	-		-	-		-	-		-	35,893	25	24.00	13,553	9	24.00	13,440	9	24.00	68	97,448
Mon-7/11/22	-		-	47,979	33	24.00	-		-	-		-	-		-	35,894	25	24.00	13,733	10	24.00	14,574	10	24.00	68	97,606
Tue-7/12/22	-		-	43,432	33	21.65	-		-	-		-	-		-	31,058	25	20.68	9,654	10	16.93	12,267	10	20.95	58	84,144
Wed-7/13/22	-		-	48,627	34	24.00	-		-	-		-	-		-	36,548	25	24.00	13,661	9	24.00	13,178	9	24.00	69	98,836
Thu-7/14/22	-		-	48,689	34	24.00	-		-	-		-	-		-	36,529	25	24.00	13,606	9	24.00	12,596	9	24.00	69	98,824
Fri-7/15/22	-		-	48,185	34	23.67	-		-	29,884	41	12.18	-		-	36,502	25	24.00	13,616	9	24.00	12,627	9	24.00	89	128,187
Sat-7/16/22	-		-	48,642	34	23.75	-		-	59,422	41	24.00	-		-	36,469	25	24.00	13,582	9	24.00	12,404	9	24.00	110	158,115
Sun-7/17/22	-		-	49,027	34	23.80	-		-	59,623	41	24.00	-		-	47,755	33	24.00	13,578	9	24.00	12,502	9	24.00	118	169,983
Mon-7/18/22	-		-	49,602	34	24.00	-		-	59,698	41	24.00	-		-	57,829	40	24.00	13,488	9	24.00	12,084	8	24.00	125	180,617
Tue-7/19/22	-		-	49,546	34	24.00	-		-	58,398	41	24.00	-		-	51,279	36	24.00	13,423	9	24.00	11,929	8	24.00	120	172,646
Wed-7/20/22	-		-	46,338	35	22.38	-		-	32,239	39	13.63	-		-	43,445	30	24.00	13,648	9	24.00	12,884	9	24.00	94	135,670
Thu-7/21/22	-		-	49,814	35	24.00	-		-	-		-	17,468	60	4.88	43,375	30	24.00	13,650	9	24.00	22,449	16	22.95	86	124,307
Fri-7/22/22	-		-	49,820	35	24.00	-		-	-		-	-		-	43,349	30	24.00	13,514	9	24.00	37,842	26	24.00	74	106,683
Sat-7/23/22	-		-	49,832	35	24.00	-		-	-		-	-		-	43,327	30	24.00	13,421	9	24.00	38,518	27	24.00	74	106,580
Sun-7/24/22	-		-	49,531	34	24.00	-		-	-		-	-		-	43,307	30	24.00	13,554	9	24.00	40,294	28	24.00	74	106,392
Mon-7/25/22	-		-	49,316	34	24.00	-		-	-		-	-		-	43,310	30	24.00	13,463	9	24.00	22,055	17	21.90	74	106,089
Tue-7/26/22	-		-	49,328	34	24.00	-		-	-		-	-		-	43,279	30	24.00	13,503	9	24.00	19,206	13	24.00	74	106,110
Wed-7/27/22	-		-	49,314	34	24.00	-		-	-		-	-		-	43,261	30	24.00	13,630	9	24.00	21,754	15	24.00	74	106,205
Thu-7/28/22	-		-	19,560	34	9.52	-		-	4,643	39	1.97	4,173	35	1.98	43,243	30	24.00	13,638	9	24.00	21,838	15	24.00	59	85,257
Fri-7/29/22	-		-	32,389	35	15.50	-		-	52,865	40	21.83	46,402	35	21.82	43,204	30	24.00	13,362	9	24.00	21,637	15	24.00	131	188,222
Sat-7/30/22	-		-	50,112	35	24.00	-		-	-		-	-		-	43,179	30	24.00	13,356	9	24.00	21,352	15	24.00	74	106,647
Sun-7/31/22	-		-	50,103	35	24.00	-		-	-		-	-		-	43,180	30	24.00	13,525	9	24.00	21,565	15	24.00	74	106,808
TOTALS	-		-	1,427,326	33	712.75	-		-	356,772	41	148.62	68,043	43	28.68	1,248,806	28	740.68	415,992	9	736.93	546,533	12	737.80	79	3,516,939

TOTAL VOLUME EXTRACTED :	3,516,939 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	78.78 GPM

7/1/22-7/15/22 - TW-10 was shut down for maintenance.
7/1/22-7/31/22 - TW-14 was shut down for maintenance.
7/6/22 - TW-2 was shut down briefly due to a Comcast internet outage.
7/12/22 - TW-2, TW-20, TW-24, and TW-25 were shut down due to a DTE power outage.
7/20/22 - TW-2 was shut down briefly due to a Comcast internet outage.
7/20/22-7/31/22 - TW-10 was shut down for maintenance.
7/21/22 - TW-25 was shut down briefly for maintenance.
7/25/22 - TW-25 was shut down briefly for maintenance.
7/28/22-7/29/22 - TW-2 was shut down due to a Comcast internet outage.

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MARSHY AREA EXTRACTION DATA

Month of: Jul-22

Marshy Well Extraction				Daily	Daily
Date	PW-1 Gallons	GPM	Run Hrs.	Flow GPM	Total Gallons
Fri-7/1/22	2,574	2	24.00	2	2,574
Sat-7/2/22	2,579	2	24.00	2	2,579
Sun-7/3/22	2,570	2	24.00	2	2,570
Mon-7/4/22	2,579	2	24.00	2	2,579
Tue-7/5/22	2,382	2	24.00	2	2,382
Wed-7/6/22	2,405	2	24.00	2	2,405
Thu-7/7/22	2,575	2	24.00	2	2,575
Fri-7/8/22	2,578	2	24.00	2	2,578
Sat-7/9/22	2,582	2	24.00	2	2,582
Sun-7/10/22	2,574	2	24.00	2	2,574
Mon-7/11/22	2,568	2	24.00	2	2,568
Tue-7/12/22	2,193	2	20.67	2	2,193
Wed-7/13/22	2,567	2	24.00	2	2,567
Thu-7/14/22	2,567	2	24.00	2	2,567
Fri-7/15/22	2,558	2	24.00	2	2,558
Sat-7/16/22	2,557	2	24.00	2	2,557
Sun-7/17/22	2,556	2	24.00	2	2,556
Mon-7/18/22	2,558	2	24.00	2	2,558
Tue-7/19/22	2,558	2	24.00	2	2,558
Wed-7/20/22	2,554	2	24.00	2	2,554
Thu-7/21/22	2,563	2	24.00	2	2,563
Fri-7/22/22	2,570	2	24.00	2	2,570
Sat-7/23/22	2,565	2	24.00	2	2,565
Sun-7/24/22	2,575	2	24.00	2	2,575
Mon-7/25/22	2,570	2	24.00	2	2,570
Tue-7/26/22	2,489	2	24.00	2	2,489
Wed-7/27/22	2,483	2	24.00	2	2,483
Thu-7/28/22	2,463	2	24.00	2	2,463
Fri-7/29/22	2,425	2	24.00	2	2,425
Sat-7/30/22	2,387	2	24.00	2	2,387
Sun-7/31/22	2,223	2	24.00	2	2,223
TOTALS	77,947	2	740.67	2	77,947

TOTAL VOLUME EXTRACTED :	77,947 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	1.75 GPM

7/12/22 - PW-1 was shut down briefly due to a DTE power outage.

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TABLE #5

SOUTHWEST AREA EXTRACTION DATA

Month of: Jul-22

SouthWest Well Extraction							Daily	Daily
	TW22			TW28			Flow	Total
Date	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	GPM	Gallons
Fri-7/1/22	2,737	2	24.00	36,054	25	24.00	27	38,791
Sat-7/2/22	2,742	2	24.00	36,005	25	24.00	27	38,747
Sun-7/3/22	2,730	2	24.00	35,979	25	24.00	27	38,709
Mon-7/4/22	2,765	2	24.00	35,986	25	24.00	27	38,751
Tue-7/5/22	3,013	2	24.00	35,915	25	24.00	27	38,928
Wed-7/6/22	3,061	2	24.00	35,797	25	24.00	27	38,858
Thu-7/7/22	3,066	2	24.00	35,893	25	24.00	27	38,959
Fri-7/8/22	3,031	2	24.00	36,236	25	24.00	27	39,267
Sat-7/9/22	3,093	2	24.00	36,163	25	24.00	27	39,256
Sun-7/10/22	3,207	2	24.00	36,108	25	24.00	27	39,315
Mon-7/11/22	3,219	2	24.00	36,125	25	24.00	27	39,344
Tue-7/12/22	2,726	2	20.68	31,184	25	20.68	27	33,910
Wed-7/13/22	2,939	2	24.00	36,118	25	24.00	27	39,057
Thu-7/14/22	2,864	2	24.00	36,124	25	24.00	27	38,988
Fri-7/15/22	2,828	2	24.00	36,115	25	24.00	27	38,943
Sat-7/16/22	2,904	2	24.00	36,038	25	24.00	27	38,942
Sun-7/17/22	2,997	2	24.00	35,985	25	24.00	27	38,982
Mon-7/18/22	2,931	2	24.00	35,998	25	24.00	27	38,929
Tue-7/19/22	2,918	2	24.00	35,972	25	24.00	27	38,890
Wed-7/20/22	2,980	2	23.87	35,961	25	24.00	27	38,941
Thu-7/21/22	2,907	2	24.00	35,911	25	24.00	27	38,818
Fri-7/22/22	2,889	2	24.00	35,881	25	24.00	27	38,770
Sat-7/23/22	2,894	2	24.00	35,853	25	24.00	27	38,747
Sun-7/24/22	2,896	2	24.00	35,842	25	24.00	27	38,738
Mon-7/25/22	2,892	2	24.00	35,838	25	24.00	27	38,730
Tue-7/26/22	2,890	2	24.00	35,831	25	24.00	27	38,721
Wed-7/27/22	2,887	2	24.00	35,832	25	24.00	27	38,719
Thu-7/28/22	2,890	2	24.00	35,905	25	24.00	27	38,795
Fri-7/29/22	2,563	2	21.48	36,044	25	24.00	27	38,607
Sat-7/30/22	2,949	2	23.60	36,124	25	24.00	27	39,073
Sun-7/31/22	2,999	2	24.00	36,212	25	24.00	27	39,211
TOTALS	**90,407**	**2**	**737.63**	**1,111,029**	**25**	**740.68**	**27**	**1,201,436**

TOTAL VOLUME EXTRACTED :	1,201,436 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	26.91 GPM

7/12/22 - TW-22 and TW-28 were shut down briefly due to a DTE power outage.
7/29/22 - TW-22 was shut down briefly for maintenance.

GelmanSciences

TABLE #6

UNIT "E" EXTRACTION DATA

Month of: Jul-22

Date	TW-11 Gallons	GPM	Run Hrs.	TW-17 Gallons	GPM	Run Hrs.	TW-18 Gallons	GPM	Run Hrs.	TW-29 Gallons	GPM	Run Hrs.	TW-23 Gallons	GPM	Run Hrs.	Daily Flow GPM	Daily Total Gallons
Fri-7/1/22	-		-	86,527	60	24.00	147,481	102	24.00	109,220	76	24.00	34,617	50	11.51	262	377,845
Sat-7/2/22	-		-	86,554	60	24.00	147,469	102	24.00	71,970	50	24.00	72,116	50	24.00	263	378,109
Sun-7/3/22	-		-	86,574	60	24.00	147,480	102	24.00	71,967	50	24.00	72,055	50	24.00	263	378,076
Mon-7/4/22	-		-	86,732	60	24.00	147,531	102	24.00	71,982	50	24.00	72,051	50	24.00	263	378,296
Tue-7/5/22	-		-	86,640	60	24.00	147,530	102	24.00	71,977	50	24.00	72,126	50	24.00	263	378,273
Wed-7/6/22	-		-	86,541	60	24.00	217,169	151	24.00	71,879	50	24.00	71,941	50	24.00	311	447,530
Thu-7/7/22	-		-	86,580	60	24.00	293,801	204	24.00	71,974	50	24.00	71,982	50	24.00	364	524,337
Fri-7/8/22	-		-	86,675	60	24.00	293,810	204	24.00	71,961	50	24.00	72,239	50	24.00	364	524,685
Sat-7/9/22	-		-	86,683	60	24.00	293,783	204	24.00	71,975	50	24.00	72,210	50	24.00	364	524,651
Sun-7/10/22	-		-	86,674	60	24.00	293,772	204	24.00	72,015	50	24.00	72,264	50	24.00	364	524,725
Mon-7/11/22	-		-	86,636	60	24.00	293,840	204	24.00	72,005	50	24.00	72,270	50	24.00	364	524,751
Tue-7/12/22	-		-	75,552	60	20.97	187,911	145	21.63	65,021	50	21.66	65,156	50	21.66	273	393,640
Wed-7/13/22	-		-	86,682	60	24.00	43,219	102	7.03	71,711	50	23.90	71,558	50	23.90	190	273,170
Thu-7/14/22	-		-	86,667	60	24.00	-		-	71,959	50	24.00	71,938	50	24.00	160	230,564
Fri-7/15/22	-		-	89,196	62	24.00	-		-	71,001	50	23.65	70,978	50	23.65	161	231,175
Sat-7/16/22	-		-	93,850	65	24.00	-		-	71,119	50	23.70	71,019	50	23.70	164	235,988
Sun-7/17/22	-		-	93,814	65	24.00	-		-	71,953	50	24.00	71,886	50	24.00	165	237,653
Mon-7/18/22	-		-	93,876	65	24.00	-		-	72,010	50	24.00	71,773	50	24.00	165	237,659
Tue-7/19/22	-		-	93,823	65	24.00	-		-	71,995	50	24.00	71,744	50	24.00	165	237,562
Wed-7/20/22	-		-	77,546	54	24.00	87,495	103	14.15	72,007	50	24.00	71,803	50	24.00	214	308,851
Thu-7/21/22	-		-	43,533	30	24.00	148,393	103	24.00	60,894	50	20.30	60,813	50	20.28	218	313,633
Fri-7/22/22	-		-	43,303	30	24.00	148,462	103	24.00	72,022	50	24.00	72,122	50	24.00	233	335,909
Sat-7/23/22	-		-	43,560	30	24.00	148,484	103	24.00	72,052	50	24.00	72,040	50	24.00	233	336,136
Sun-7/24/22	-		-	43,118	30	24.00	148,455	103	24.00	72,009	50	24.00	71,987	50	24.00	233	335,569
Mon-7/25/22	-		-	43,129	30	24.00	148,424	103	24.00	72,017	50	24.00	72,095	50	24.00	233	335,665
Tue-7/26/22	-		-	43,398	30	24.00	148,400	103	24.00	72,023	50	24.00	72,080	50	24.00	233	335,901
Wed-7/27/22	-		-	43,505	30	24.00	148,410	103	24.00	72,050	50	24.00	72,151	50	24.00	233	336,116
Thu-7/28/22	-		-	45,526	32	24.00	72,234	103	11.70	28,790	50	9.58	28,885	50	9.58	122	175,435
Fri-7/29/22	-		-	70,318	49	24.00	148,377	103	24.00	46,425	50	15.48	46,477	50	15.48	216	311,597
Sat-7/30/22	-		-	50,657	35	24.00	148,393	103	24.00	71,595	50	23.86	71,515	50	23.86	238	342,160
Sun-7/31/22	-		-	50,616	35	24.00	148,355	103	24.00	71,920	50	24.00	72,019	50	24.00	238	342,910
TOTALS	-		-	2,264,485	51	740.97	4,298,678	127	558.52	2,179,498	51	714.13	2,105,910	50	701.62	243	10,848,571

TOTAL VOLUME EXTRACTED :	10,848,571 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	243.02 GPM

7/1/22 - TW-23 was shut down for maintenance.
7/12/22 - TW-17, TW-18, TW-29, and TW-23 were shut down briefly due to a DTE power outage.
7/13/22-7/20/22 - TW-18 was shut down for maintenance.
7/21/22 - TW-29 and TW-23 were shut down briefly for maintenance.
7/28/22 - TW-18 was shut down due to a Comcast internet outage.
7/28/22-7/29/22 - TW-29 and TW-23 were shut down due to a Comcast internet outage.

GelmanSciences

TABLE #7

Little Lake Area System

MW-53i	
Date	1,4-Dioxane ug/L
04/04/22	36
05/06/22	26
06/03/22	21
07/05/22	23

GelmanSciences

TABLE #8

INDIVIDUAL PURGE WELL CONCENTRATIONS

SAMPLE ID	Date Sampled	1,4-DIOXANE (ppb)
TW-10-07-20-22-10:30-1	07/20/22	890
TW-10-07-29-22-09:40-1	07/29/22	850
TW-14-07-29-22-09:30-1	07/29/22	75
TW-18-07-21-22-10:50-1	07/21/22	250

GelmanSciences

TABLE #9

RED POND DATA

Month of: Jul-22

Date	Time	Notes	Red Pond Pond Visual Chk	Level Feet	Aeration Hours	Influent Hours	Influent GPM
Fri-7/1/22	04:00:00.000		Y	4.1	-	24.00	613
Sat-7/2/22	04:00:00.000	(1)		4.1	-	24.00	615
Sun-7/3/22	04:00:00.000	(1)		4.0	-	24.00	617
Mon-7/4/22	04:00:00.000		Y	4.0	-	24.00	617
Tue-7/5/22	04:00:00.000		Y	4.1	-	24.00	617
Wed-7/6/22	04:00:00.000		Y	4.1	-	24.00	613
Thu-7/7/22	04:00:00.000		Y	3.8	-	24.00	619
Fri-7/8/22	04:00:00.000		Y	3.9	-	24.00	619
Sat-7/9/22	04:00:00.000	(1)		3.9	-	24.00	619
Sun-7/10/22	04:00:00.000	(1)		3.8	-	24.00	620
Mon-7/11/22	04:00:00.000		Y	3.5	-	24.00	620
Tue-7/12/22	04:00:00.000		Y	5.6	-	24.00	553
Wed-7/13/22	04:00:00.000		Y	4.8	-	24.00	568
Thu-7/14/22	04:00:00.000		Y	3.7	-	24.00	541
Fri-7/15/22	04:00:00.000		Y	3.8	-	24.00	586
Sat-7/16/22	04:00:00.000	(1)		2.9	-	24.00	576
Sun-7/17/22	04:00:00.000	(1)		2.9	-	24.00	598
Mon-7/18/22	04:00:00.000		Y	4.1	-	24.00	662
Tue-7/19/22	04:00:00.000		Y	5.2	-	24.00	656
Wed-7/20/22	04:00:00.000		Y	5.9	-	24.00	647
Thu-7/21/22	04:00:00.000		Y	5.6	-	24.00	579
Fri-7/22/22	04:00:00.000		Y	5.7	-	24.00	611
Sat-7/23/22	04:00:00.000	(1)		5.7	-	24.00	612
Sun-7/24/22	04:00:00.000	(1)		5.6	-	24.00	612
Mon-7/25/22	04:00:00.000		Y	5.9	-	24.00	612
Tue-7/26/22	04:00:00.000		Y	5.9	-	24.00	611
Wed-7/27/22	04:00:00.000		Y	5.8	-	24.00	611
Thu-7/28/22	08:30:00.000		Y	3.2	-	24.00	438
Fri-7/29/22	06:45:00.000		Y	4.5	-	24.00	693
Sat-7/30/22	05:00:00.000	(1)		4.7	-	24.00	631
Sun-7/31/22	04:00:00.000	(1)		4.8	-	24.00	633
		TOTALS	-		-	744	

Daily readings are collected by the Operator at various times of the day, resulting in varied readings and calculations.

(1) Manual readings were not taken due to weekend and/or holiday.

GelmanSciences

TABLE #10

RED POND CONCENTRATIONS

SAMPLE ID	Date Sampled	1,4-DIOXANE (ppb)
Red Pond-07-05-22-07:50-1	7/5/2022	390
Red Pond-07-14-22-09:30-1	7/14/2022	380
Red Pond-07-18-22-08:00-1	7/18/2022	460
Red Pond-07-25-22-08:50-1	7/25/2022	430

Analyte value quantified from a dilution, reporting limit is raised to reflect dilution

GelmanSciences

TABLE #11

OZONE OPERATION REPORT

Month of: Jul-22

			SYSTEM-1A		SYSTEM-1B		SYSTEM-2A		SYSTEM-2B	
Date	Time	Notes	Flow GPM	Run Hours	Flow GPM	Run Hours	Flow GPM	Run Hours	Flow GPM	Run Hours
Fri-7/1/22	04:00:00.000		243	24.00	0	0.00	381	24.00	0	0.00
Sat-7/2/22	04:00:00.000	(1)	238	24.00	0	0.00	381	24.00	0	0.00
Sun-7/3/22	04:00:00.000	(1)	240	24.00	0	0.00	381	24.00	0	0.00
Mon-7/4/22	04:00:00.000		240	24.00	0	0.00	381	24.00	0	0.00
Tue-7/5/22	04:00:00.000		242	23.95	0	0.00	380	23.93	0	0.00
Wed-7/6/22	04:00:00.000		241	24.00	0	0.00	380	24.00	0	0.00
Thu-7/7/22	04:00:00.000		242	24.00	0	0.00	380	24.00	0	0.00
Fri-7/8/22	04:00:00.000		241	24.00	0	0.00	380	24.00	0	0.00
Sat-7/9/22	04:00:00.000	(1)	241	24.00	0	0.00	382	24.00	0	0.00
Sun-7/10/22	04:00:00.000	(1)	240	24.00	0	0.00	381	24.00	0	0.00
Mon-7/11/22	04:00:00.000		238	24.00	0	0.00	381	24.00	0	0.00
Tue-7/12/22	04:00:00.000		237	16.05	0	0.00	381	15.88	0	0.00
Wed-7/13/22	04:00:00.000		243	23.83	0	0.00	380	24.00	0	0.00
Thu-7/14/22	04:00:00.000		243	24.00	0	0.00	381	24.00	0	0.00
Fri-7/15/22	04:00:00.000		239	24.00	0	0.00	380	24.00	0	0.00
Sat-7/16/22	04:00:00.000	(1)	239	24.00	0	0.00	382	24.00	0	0.00
Sun-7/17/22	04:00:00.000	(1)	239	24.00	0	0.00	380	24.00	0	0.00
Mon-7/18/22	04:00:00.000		241	24.00	0	0.00	381	24.00	0	0.00
Tue-7/19/22	04:00:00.000		238	24.00	0	0.00	381	24.00	0	0.00
Wed-7/20/22	04:00:00.000		242	24.00	0	0.00	380	24.00	0	0.00
Thu-7/21/22	04:00:00.000		241	23.65	0	0.00	381	23.68	0	0.00
Fri-7/22/22	04:00:00.000		241	24.00	0	0.00	381	24.00	0	0.00
Sat-7/23/22	04:00:00.000	(1)	242	24.00	0	0.00	381	24.00	0	0.00
Sun-7/24/22	04:00:00.000	(1)	240	24.00	0	0.00	381	24.00	0	0.00
Mon-7/25/22	04:00:00.000		238	23.27	0	0.00	381	24.00	0	0.00
Tue-7/26/22	04:00:00.000		240	24.00	0	0.00	382	24.00	0	0.00
Wed-7/27/22	04:00:00.000		238	24.00	0	0.00	380	24.00	0	0.00
Thu-7/28/22	08:30:00.000		241	24.00	0	0.00	380	24.00	0	0.00
Fri-7/29/22	06:45:00.000		239	24.00	0	0.00	380	24.00	0	0.00
Sat-7/30/22	05:00:00.000	(1)	237	24.00	0	0.00	380	24.00	0	0.00
Sun-7/31/22	04:00:00.000	(1)	236	24.00	0	0.00	381	24.00	0	0.00

Daily readings are collected by the Operator at various times of the day, resulting in varied readings and calculations.

(1) Manual readings were not taken due to weekend and/or holiday.

7/12/22 - Treatment was shut down due to a DTE power outage.

GelmanSciences

TABLE #12

GREEN POND / DISCHARGE DATA

Month of: Jul-22

			Green Pond																
			Pond					Pond Discharge			Bypass Discharge			Recirc Thru UV to Pond			Recirc Thru UV to Disch		
Date	Time	Notes	Visual Chk	Level Feet	Aeration Hours	Influent Hours	Influent GPM	GPM	Gallons	Hours	GPM	Gallons	Hours	GPM	Gallons	Hours	GPM	Gallons	Hours
Fri-7/1/22	04:00:00.000		Y	-	-						645	928,660	24.00	-	-	-	-	-	-
Sat-7/2/22	04:00:00.000	(1)		-	-						645	928,746	24.00	-	-	-	-	-	-
Sun-7/3/22	04:00:00.000	(1)		-	-						645	928,727	24.00	-	-	-	-	-	-
Mon-7/4/22	04:00:00.000		Y	-	-						645	928,923	24.00	-	-	-	-	-	-
Tue-7/5/22	04:00:00.000		Y	-	-						642	908,828	23.60	-	-	-	-	-	-
Wed-7/6/22	04:00:00.000		Y	-	-						645	928,828	24.00	-	-	-	-	-	-
Thu-7/7/22	04:00:00.000		Y	-	-						645	928,858	24.00	-	-	-	-	-	-
Fri-7/8/22	04:00:00.000		Y	-	-						645	928,904	24.00	-	-	-	-	-	-
Sat-7/9/22	04:00:00.000	(1)		-	-						645	928,733	24.00	-	-	-	-	-	-
Sun-7/10/22	04:00:00.000	(1)		-	-						645	928,751	24.00	-	-	-	-	-	-
Mon-7/11/22	04:00:00.000		Y	-	-						645	929,114	24.00	-	-	-	-	-	-
Tue-7/12/22	04:00:00.000		Y	-	-						644	622,817	16.12	-	-	-	-	-	-
Wed-7/13/22	04:00:00.000		Y	-	-						643	914,510	23.70	-	-	-	-	-	-
Thu-7/14/22	04:00:00.000		Y	-	-						644	927,082	24.00	-	-	-	-	-	-
Fri-7/15/22	04:00:00.000		Y	-	-						644	927,050	24.00	-	-	-	-	-	-
Sat-7/16/22	04:00:00.000	(1)		-	-						644	927,133	24.00	-	-	-	-	-	-
Sun-7/17/22	04:00:00.000	(1)		-	-						644	927,290	24.00	-	-	-	-	-	-
Mon-7/18/22	04:00:00.000		Y	-	-						644	927,365	24.00	-	-	-	-	-	-
Tue-7/19/22	04:00:00.000		Y	-	-						644	927,309	24.00	-	-	-	-	-	-
Wed-7/20/22	04:00:00.000		Y	-	-						644	927,432	24.00	-	-	-	-	-	-
Thu-7/21/22	04:00:00.000		Y	-	-						642	911,502	23.65	-	-	-	-	-	-
Fri-7/22/22	04:00:00.000		Y	-	-						644	927,514	24.00	-	-	-	-	-	-
Sat-7/23/22	04:00:00.000	(1)		-	-						644	927,397	24.00	-	-	-	-	-	-
Sun-7/24/22	04:00:00.000	(1)		-	-						644	927,407	24.00	-	-	-	-	-	-
Mon-7/25/22	04:00:00.000		Y	-	-						635	914,780	24.00	-	-	-	-	-	-
Tue-7/26/22	04:00:00.000		Y	-	-						643	926,499	24.00	-	-	-	-	-	-
Wed-7/27/22	04:00:00.000		Y	-	-						643	926,063	24.00	-	-	-	-	-	-
Thu-7/28/22	08:30:00.000		Y	-	-						642	924,988	24.00	-	-	-	-	-	-
Fri-7/29/22	06:45:00.000		Y	-	-						642	924,900	24.00	-	-	-	-	-	-
Sat-7/30/22	05:00:00.000	(1)		-	-						642	924,700	24.00	-	-	-	-	-	-
Sun-7/31/22	04:00:00.000	(1)		-	-						642	924,645	24.00	-	-	-	-	-	-
		TOTALS			-	-			-	-		28,385,455	735		-	-		-	-

Daily readings are collected by the Operator at various times of the day, resulting in varied readings and calculations.

(1) Manual readings were not taken due to weekend and/or holiday.

GelmanSciences

TABLE #13
Daily Discharge Monitoring Report

	(Daily)	(Annually)	(Annually)	(Effluent - Outfall)	(Influent - Red Pond)	(Effluent - Outfall)	(Effluent - Outfall)	(Weekly)	(2 x Week)	(4 x Week)	(4 x Week)	(5 X Week)	(2 X Week)
PARAMETER NAME	Flow	Total Barium	Total Barium	1,4-Dioxane	1,4-Dioxane	Hydrogen Peroxide	Hydrogen Peroxide	Outfall Observation	Equipment Inspection	pH (Min. Daily)	pH (Max. Daily)	Bromate	Sodium Bisulfite Dose Rate
PARAMETER CODE	50050	1007	1007	82388	82388	00139	00139	84130	46478	00400	00400	99814	99798
MONITORING PT.	001A	001A	001A	001A	001A	001A	001A	001A	001A	001A	001A	001A	001A
STAGE CODE	1	1	1	1	G	1	1	1	1	1	1	1	1
UNIT	MGD	ug/l	lbs/day	ug/l	mg/l	ug/l	lbs/day	yes/no	yes/no	S.U.	S.U.	ug/l	mg/l
7/1/2022	0.929	*G	*G			<50	<0.16	no	no	6.9	6.9		42
7/2/2022	0.929												
7/3/2022	0.929			5.0								6.9	
7/4/2022	0.929			4.9		<50	<0.16	no	no			6.8	
7/5/2022	0.909			4.6	0.390	<50	<0.16	yes	yes	6.9	6.9	9.1	32
7/6/2022	0.929			4.6		<50	<0.16	no	no	6.9	6.9	8.4	
7/7/2022	0.929			4.5		<50	<0.16	no	yes	6.9	6.9	9.1	32
7/8/2022	0.929					<50	<0.16	no	no	6.9	6.9		
7/9/2022	0.929												
7/10/2022	0.929			4.5								7.6	
7/11/2022	0.929			5.0		<50	<0.16	yes	yes	6.8	6.8	7.6	30
7/12/2022	0.623			4.5		<50	<0.16	no	no	6.9	6.9	8.6	
7/13/2022	0.915			4.8		<50	<0.16	no	yes	6.8	6.8	8.8	50
7/14/2022	0.927			5.6	0.380	<50	<0.16	no	no	6.8	6.8	8.4	
7/15/2022	0.927					<50	<0.16	no	no	6.8	6.8		
7/16/2022	0.927												
7/17/2022	0.927			6.1								7.2	
7/18/2022	0.927			5.7	0.460	<50	<0.16	yes	yes	6.8	6.8	7.5	35
7/19/2022	0.927			5.7		<50	<0.16	no	no	6.9	6.9	6.4	
7/20/2022	0.927			5.7		<50	<0.16	no	yes	6.9	6.9	6.5	30
7/21/2022	0.912			5.8		<50	<0.16	no	no	6.9	6.9	6.9	
7/22/2022	0.928					<50	<0.16	no	no	7.0	7.0		
7/23/2022	0.927												
7/24/2022	0.927			5.9								9.1	
7/25/2022	0.915			5.5	0.430	<50	<0.16	yes	yes	7.0	7.0	8.0	30
7/26/2022	0.926			5.3		<50	<0.16	no	no	7.0	7.0	8.0	
7/27/2022	0.926			5.9		<50	<0.16	no	yes	6.8	6.8	6.4	50
7/28/2022	0.925			5.2		<50	<0.16	no	no	6.8	6.8	7.8	
7/29/2022	0.925					<50	<0.16	no	no	6.8	6.8		
7/30/2022	0.925												
7/31/2022	0.925			5.8								7.8	
Discharged	**28.385**												
Monthly Avg	**0.916**			**5.3**								**7.8**	

7/4/22 - July 4th Holiday.