FLEIS&VANDENBRINK

DESIGN. BUILD. OPERATE.

September 20, 2022

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

Re: Monitoring Report #304
August 1 – August 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 August 1 through August 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: Aug-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
Mon-8/1/22	-		-	58,502	41	24.00	72,392	50	24.00	144,388	100	24.00	191	275,282
Tue-8/2/22	-		-	58,405	41	24.00	59,811	42	24.00	144,411	100	24.00	182	262,627
Wed-8/3/22	-		-	57,145	40	24.00	50,830	35	24.00	144,414	100	24.00	175	252,389
Thu-8/4/22	-		-	57,052	40	24.00	50,690	35	24.00	135,804	100	22.57	169	243,546
Fri-8/5/22	-		-	57,282	40	24.00	50,625	35	24.00	144,415	100	24.00	175	252,322
Sat-8/6/22	-		-	57,566	40	24.00	50,629	35	24.00	144,447	100	24.00	175	252,642
Sun-8/7/22	-		-	57,503	40	24.00	50,747	35	24.00	144,428	100	24.00	175	252,678
Mon-8/8/22	-		-	57,306	40	24.00	50,666	35	24.00	144,431	100	24.00	175	252,403
Tue-8/9/22	-		-	56,935	40	24.00	50,596	35	24.00	144,392	100	24.00	175	251,923
Wed-8/10/22	-		-	56,882	40	24.00	17,806	35	8.60	144,401	100	24.00	152	219,089
Thu-8/11/22	-		-	54,900	40	23.13	29,070	35	13.97	139,331	100	23.17	155	223,301
Fri-8/12/22	-		-	57,209	40	24.00	50,672	35	24.00	144,369	100	24.00	175	252,250
Sat-8/13/22	-		-	57,168	40	24.00	50,588	35	24.00	144,209	100	24.00	175	251,965
Sun-8/14/22	-		-	56,843	39	24.00	50,654	35	24.00	144,324	100	24.00	175	251,821
Mon-8/15/22	-		-	57,495	40	24.00	50,708	35	24.00	144,395	100	24.00	175	252,598
Tue-8/16/22	-		-	57,932	40	24.00	50,657	35	24.00	144,386	100	24.00	176	252,975
Wed-8/17/22	-		-	57,952	40	24.00	50,671	35	24.00	144,373	100	24.00	176	252,996
Thu-8/18/22	-		-	57,458	40	24.00	50,672	35	24.00	144,393	100	24.00	175	252,523
Fri-8/19/22	-		-	57,426	40	24.00	50,690	35	24.00	144,405	100	24.00	175	252,521
Sat-8/20/22	-		-	57,288	40	24.00	50,692	35	24.00	144,400	100	24.00	175	252,380
Sun-8/21/22	-		-	56,556	39	24.00	50,683	35	24.00	144,367	100	24.00	175	251,606
Mon-8/22/22	-		-	57,502	40	24.00	50,713	35	24.00	144,391	100	24.00	175	252,606
Tue-8/23/22	-		-	59,105	44	22.60	47,698	35	22.93	144,385	100	24.00	174	251,188
Wed-8/24/22	-		-	34,670	50	11.48	22,105	35	10.63	144,416	100	24.00	140	201,191
Thu-8/25/22	-		-	40,632	50	13.63	30,970	35	14.90	144,411	100	24.00	150	216,013
Fri-8/26/22	-		-	72,501	50	24.00	50,687	35	24.00	144,377	100	24.00	186	267,565
Sat-8/27/22	-		-	72,139	50	24.00	50,639	35	24.00	144,387	100	24.00	186	267,165
Sun-8/28/22	-		-	71,198	49	24.00	50,691	35	24.00	144,391	100	24.00	185	266,280
Mon-8/29/22	-		-	65,914	50	22.03	44,247	34	21.97	133,160	100	22.15	169	243,321
Tue-8/30/22	-		-	-		-	-		-	-		-		
Wed-8/31/22	-		-	-		-	-		-	-		-		
TOTALS	-		-	1,676,466	42	668.88	1,388,299	36	645.00	4,162,401	100	691.89	173	7,227,166

TOTAL VOLUME EXTRACTED :	7,227,166 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	161.90 GPM

8/4/22 - TW-21 was shut down briefly due to internet outage - Comcast.
8/10/22-8/11/22 - TW-5 was shut down for maintenance.
8/23/22-8/25/22 - TW-9 and TW-5 were shut down for maintenance.
8/29/22-8/31/22 - TW-9, TW-5, and TW-21 were shut down due to a power outage - DTE.

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TABLE #2

UNIT D2 DOWNGRADIENT EXTRACTION DATA

Month of: Aug-22

Date	LB-1 Gallons	GPM	Run Hrs.	LB-4 Gallons	GPM	Run Hrs.	Daily Flow GPM	Daily Total Gallons
Mon-8/1/22	-		-	144,203	100	24.00	100	144,203
Tue-8/2/22	-		-	144,230	100	24.00	100	144,230
Wed-8/3/22	-		-	144,205	100	24.00	100	144,205
Thu-8/4/22	-		-	144,193	100	24.00	100	144,193
Fri-8/5/22	-		-	144,212	100	24.00	100	144,212
Sat-8/6/22	-		-	144,191	100	24.00	100	144,191
Sun-8/7/22	-		-	144,167	100	24.00	100	144,167
Mon-8/8/22	-		-	144,199	100	24.00	100	144,199
Tue-8/9/22	-		-	144,204	100	24.00	100	144,204
Wed-8/10/22	-		-	144,225	100	24.00	100	144,225
Thu-8/11/22	-		-	144,208	100	24.00	100	144,208
Fri-8/12/22	-		-	144,214	100	24.00	100	144,214
Sat-8/13/22	-		-	144,185	100	24.00	100	144,185
Sun-8/14/22	-		-	144,161	100	24.00	100	144,161
Mon-8/15/22	-		-	144,195	100	24.00	100	144,195
Tue-8/16/22	-		-	144,214	100	24.00	100	144,214
Wed-8/17/22	-		-	144,218	100	24.00	100	144,218
Thu-8/18/22	-		-	144,215	100	24.00	100	144,215
Fri-8/19/22	-		-	144,220	100	24.00	100	144,220
Sat-8/20/22	-		-	144,223	100	24.00	100	144,223
Sun-8/21/22	-		-	144,208	100	24.00	100	144,208
Mon-8/22/22	-		-	144,210	100	24.00	100	144,210
Tue-8/23/22	-		-	135,446	100	22.55	94	135,446
Wed-8/24/22	-		-	68,945	100	11.48	48	68,945
Thu-8/25/22	-		-	81,905	100	13.61	57	81,905
Fri-8/26/22	-		-	144,195	100	24.00	100	144,195
Sat-8/27/22	-		-	144,235	100	24.00	100	144,235
Sun-8/28/22	-		-	144,166	100	24.00	100	144,166
Mon-8/29/22	-		-	132,083	100	22.00	92	132,083
Tue-8/30/22	-		-	-		-		
Wed-8/31/22	-		-	-		-		
TOTALS	-		-	4,023,475	100	669.64	96	4,023,475

TOTAL VOLUME EXTRACTED :	4,023,475 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	90.13 GPM

8/23/22-8/25/22 - LB-4 was shut down for maintenance.
8/29/22-8/31/22 - LB-4 was shut down due to a power outage.

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TABLE #3

CORE AREA EXTRACTION DATA

Month of: Aug-22

Core Area Well Extraction

Date	TW-1 Gallons	GPM	Run Hrs.	TW-2 (Dolph) Gallons	GPM	Run Hrs.	TW-3 Gallons	GPM	Run Hrs.	TW-10 Gallons	GPM	Run Hrs.	TW-14 Gallons	GPM	Run Hrs.	TW-20 Gallons	GPM	Run Hrs.	TW-24 Gallons	GPM	Run Hrs.	TW-25 Gallons	GPM	Run Hrs.	Daily Flow GPM	Daily Total Gallons
Mon-8/1/22	-		-	50,041	35	24.00	-		-	-		-	-		-	43,175	30	24.00	13,712	10	24.00	21,932	15	24.00	74	106,928
Tue-8/2/22	-		-	50,059	35	24.00	-		-	-		-	-		-	43,152	30	24.00	17,766	12	24.00	21,733	15	24.00	77	110,977
Wed-8/3/22	-		-	50,026	35	24.00	-		-	-		-	-		-	43,125	30	24.00	21,331	15	24.00	21,849	15	24.00	80	114,482
Thu-8/4/22	-		-	46,884	35	22.52	-		-	-		-	-		-	43,080	30	24.00	21,264	15	24.00	21,562	15	24.00	77	111,228
Fri-8/5/22	-		-	49,813	35	24.00	-		-	-		-	-		-	43,067	30	24.00	21,230	15	24.00	21,430	15	24.00	79	114,110
Sat-8/6/22	-		-	49,820	35	24.00	-		-	-		-	-		-	43,045	30	24.00	21,258	15	24.00	21,545	15	24.00	79	114,123
Sun-8/7/22	-		-	49,761	35	24.00	-		-	-		-	-		-	43,015	30	24.00	21,288	15	24.00	21,695	15	24.00	79	114,064
Mon-8/8/22	-		-	49,742	35	24.00	-		-	-		-	-		-	43,019	30	24.00	21,356	15	24.00	21,921	15	24.00	79	114,117
Tue-8/9/22	-		-	49,793	35	24.00	-		-	-		-	-		-	43,010	30	24.00	21,242	15	24.00	21,525	15	24.00	79	114,045
Wed-8/10/22	-		-	49,773	35	24.00	-		-	-		-	-		-	43,005	30	24.00	21,239	15	24.00	21,529	15	24.00	79	114,017
Thu-8/11/22	-		-	47,912	35	23.08	-		-	-		-	-		-	41,555	30	23.17	20,333	15	23.17	20,749	15	23.17	76	109,800
Fri-8/12/22	-		-	49,851	35	24.00	-		-	-		-	-		-	42,989	30	24.00	20,729	14	24.00	21,352	15	24.00	79	113,569
Sat-8/13/22	-		-	49,836	35	24.00	-		-	-		-	-		-	43,360	30	24.00	21,009	15	24.00	21,461	15	24.00	79	114,205
Sun-8/14/22	-		-	49,836	35	24.00	-		-	-		-	-		-	42,982	30	24.00	21,183	15	24.00	21,628	15	24.00	79	114,001
Mon-8/15/22	-		-	49,822	35	24.00	-		-	-		-	-		-	43,047	30	24.00	21,139	15	24.00	21,381	15	24.00	79	114,008
Tue-8/16/22	-		-	49,851	35	24.00	-		-	-		-	-		-	43,451	30	24.00	21,110	15	24.00	21,331	15	24.00	79	114,412
Wed-8/17/22	-		-	49,845	35	24.00	-		-	-		-	-		-	43,404	30	24.00	21,110	15	24.00	21,453	15	24.00	79	114,359
Thu-8/18/22	-		-	49,833	35	24.00	-		-	-		-	-		-	43,185	30	24.00	21,151	15	24.00	21,437	15	24.00	79	114,169
Fri-8/19/22	-		-	49,834	35	24.00	-		-	-		-	-		-	43,163	30	24.00	21,127	15	24.00	21,505	15	24.00	79	114,124
Sat-8/20/22	-		-	49,823	35	24.00	-		-	-		-	-		-	43,146	30	24.00	21,130	15	24.00	21,535	15	24.00	79	114,099
Sun-8/21/22	-		-	49,816	35	24.00	-		-	-		-	-		-	43,251	30	24.00	21,175	15	24.00	21,525	15	24.00	79	114,242
Mon-8/22/22	-		-	49,839	35	24.00	-		-	-		-	-		-	43,148	30	24.00	21,161	15	24.00	21,574	15	24.00	79	114,148
Tue-8/23/22	-		-	45,124	33	22.60	-		-	-		-	-		-	42,981	30	24.00	21,172	15	24.00	21,595	15	24.00	76	109,277
Wed-8/24/22	-		-	28,662	31	15.42	-		-	-		-	-		-	6,895	30	3.85	13,599	15	15.37	21,602	15	24.00	34	49,156
Thu-8/25/22	-		-	25,423	31	13.58	-		-	-		-	-		-	24,546	30	13.57	11,961	15	13.57	21,585	15	24.00	43	61,930
Fri-8/26/22	-		-	44,952	31	24.00	-		-	-		-	-		-	43,410	30	24.00	21,070	15	24.00	21,706	15	24.00	76	109,432
Sat-8/27/22	-		-	44,978	31	24.00	-		-	-		-	-		-	43,320	30	24.00	20,988	15	24.00	21,955	15	24.00	76	109,286
Sun-8/28/22	-		-	44,936	31	24.00	-		-	-		-	-		-	43,272	30	24.00	21,044	15	24.00	21,928	15	24.00	76	109,252
Mon-8/29/22	-		-	41,450	31	22.17	-		-	-		-	-		-	40,611	30	22.52	19,362	15	22.03	20,386	15	22.30	70	101,423
Tue-8/30/22	-		-	-		-	-		-	-		-	-		-	-		-	-		-	-		-		-
Wed-8/31/22	-		-	-		-	-		-	-		-	-		-	-		-	-		-	-		-		-
TOTALS	-		-	1,367,335	34	671.37	-		-	-		-	-		-	1,192,409	30	663.10	583,239	14	674.13	624,409	15	693.47	75	3,142,983

TOTAL VOLUME EXTRACTED :	3,142,983 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	70.41 GPM

8/4/22 - TW-2 (Dolph) was shut down briefly due to internet outage - Comcast.
8/23/22-8/25/22 - TW-2 (Dolph) was shut down for maintenance.
8/24/22-8/25/22 - TW-20 and TW-24 were shut down for maintenance.
8/29/22-8/31/22 - TW-2 (Dolph), TW-20, TW-24, and TW-25 were shut down due to a power outage - DTE.

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MARSHY AREA EXTRACTION DATA

Month of: Aug-22

Marshy Well Extraction				Daily	Daily
Date	PW-1 Gallons	GPM	Run Hrs.	Flow GPM	Total Gallons
Mon-8/1/22	1,898	1	24.00	1	1,898
Tue-8/2/22	1,944	1	24.00	1	1,944
Wed-8/3/22	1,981	1	24.00	1	1,981
Thu-8/4/22	1,980	1	24.00	1	1,980
Fri-8/5/22	1,990	1	24.00	1	1,990
Sat-8/6/22	1,996	1	24.00	1	1,996
Sun-8/7/22	2,021	1	24.00	1	2,021
Mon-8/8/22	2,046	1	24.00	1	2,046
Tue-8/9/22	2,160	2	24.00	2	2,160
Wed-8/10/22	2,171	2	24.00	2	2,171
Thu-8/11/22	2,166	2	23.17	2	2,166
Fri-8/12/22	2,336	2	24.00	2	2,336
Sat-8/13/22	2,348	2	24.00	2	2,348
Sun-8/14/22	2,351	2	24.00	2	2,351
Mon-8/15/22	2,303	2	24.00	2	2,303
Tue-8/16/22	2,127	1	24.00	1	2,127
Wed-8/17/22	2,142	1	24.00	1	2,142
Thu-8/18/22	2,151	1	24.00	1	2,151
Fri-8/19/22	2,150	1	24.00	1	2,150
Sat-8/20/22	2,150	1	24.00	1	2,150
Sun-8/21/22	2,148	1	24.00	1	2,148
Mon-8/22/22	2,246	2	24.00	2	2,246
Tue-8/23/22	2,351	2	24.00	2	2,351
Wed-8/24/22	2,276	2	24.00	2	2,276
Thu-8/25/22	2,313	2	24.00	2	2,313
Fri-8/26/22	2,314	2	24.00	2	2,314
Sat-8/27/22	2,304	2	24.00	2	2,304
Sun-8/28/22	2,279	2	24.00	2	2,279
Mon-8/29/22	2,103	2	22.47	1	2,103
Tue-8/30/22	-		-		-
Wed-8/31/22	-		-		-
TOTALS	62,745	2	693.63	2	62,745

TOTAL VOLUME EXTRACTED :	62,745 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	1.41 GPM

8/29/22-8/31/22 - PW-1 was shut down due to a power outage - DTE.

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TABLE #5

SOUTHWEST AREA EXTRACTION DATA

Month of: Aug-22

SouthWest Well Extraction							Daily	Daily
	TW22			TW28			Flow	Total
Date	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	GPM	Gallons
Mon-8/1/22	2,985	2	24.00	36,218	25	24.00	27	39,203
Tue-8/2/22	2,985	2	24.00	36,186	25	24.00	27	39,171
Wed-8/3/22	2,988	2	24.00	36,178	25	24.00	27	39,166
Thu-8/4/22	2,992	2	24.00	36,159	25	24.00	27	39,151
Fri-8/5/22	2,986	2	24.00	36,134	25	24.00	27	39,120
Sat-8/6/22	2,979	2	24.00	36,121	25	24.00	27	39,100
Sun-8/7/22	2,973	2	24.00	36,110	25	24.00	27	39,083
Mon-8/8/22	2,971	2	24.00	36,110	25	24.00	27	39,081
Tue-8/9/22	2,969	2	24.00	36,090	25	24.00	27	39,059
Wed-8/10/22	2,969	2	24.00	36,084	25	24.00	27	39,053
Thu-8/11/22	2,663	2	23.15	34,882	25	23.15	27	37,545
Fri-8/12/22	2,622	2	24.00	36,135	25	24.00	27	38,757
Sat-8/13/22	2,552	2	24.00	36,036	25	24.00	27	38,588
Sun-8/14/22	2,449	2	24.00	35,998	25	24.00	27	38,447
Mon-8/15/22	2,447	2	24.00	35,989	25	24.00	27	38,436
Tue-8/16/22	2,447	2	24.00	35,967	25	24.00	27	38,414
Wed-8/17/22	2,449	2	24.00	35,956	25	24.00	27	38,405
Thu-8/18/22	2,452	2	24.00	35,946	25	24.00	27	38,398
Fri-8/19/22	2,454	2	24.00	35,929	25	24.00	27	38,383
Sat-8/20/22	2,455	2	24.00	35,905	25	24.00	27	38,360
Sun-8/21/22	2,458	2	24.00	35,889	25	24.00	27	38,347
Mon-8/22/22	2,519	2	24.00	36,046	25	24.00	27	38,565
Tue-8/23/22	2,608	2	23.90	34,191	25	22.63	27	36,799
Wed-8/24/22	3,027	2	24.00	17,248	25	11.50	27	20,275
Thu-8/25/22	3,014	2	23.75	20,295	25	13.63	27	23,309
Fri-8/26/22	2,903	2	24.00	35,656	25	24.00	27	38,559
Sat-8/27/22	2,882	2	24.00	35,948	25	24.00	27	38,830
Sun-8/28/22	2,869	2	24.00	36,171	25	24.00	27	39,040
Mon-8/29/22	2,656	2	22.25	33,578	25	22.25	27	36,234
Tue-8/30/22	-	0	-	-	0	-	0	-
Wed-8/31/22	-	0	-	-	0	-	0	-
TOTALS	79,723	2	693.05	1,005,155	23	669.17	25	1,084,878

TOTAL VOLUME EXTRACTED :	1,084,878 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	24.30 GPM

8/23/22-8/25/22 - TW-28 was shut down for maintenance.
8/29/22-8/31/22 - TW-22 and TW-28 were shut down due to a power outage - DTE.

GelmanSciences

TABLE #6

UNIT "E" EXTRACTION DATA

Month of: Aug-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
Mon-8/1/22	-		-	50,531	35	24.00	148,366	103	24.00	71,942	50	24.00	72,091	50	24.00	238	342,930
Tue-8/2/22	-		-	50,693	35	24.00	148,363	103	24.00	71,941	50	24.00	72,026	50	24.00	238	343,023
Wed-8/3/22	-		-	50,588	35	24.00	148,377	103	24.00	71,934	50	24.00	72,055	50	24.00	238	342,954
Thu-8/4/22	-		-	50,582	35	24.00	139,495	103	22.58	67,197	50	22.41	67,205	50	22.41	225	324,479
Fri-8/5/22	-		-	50,596	35	24.00	148,418	103	24.00	71,926	50	24.00	71,986	50	24.00	238	342,926
Sat-8/6/22	-		-	50,555	35	24.00	148,474	103	24.00	71,956	50	24.00	72,224	50	24.00	238	343,209
Sun-8/7/22	-		-	50,573	35	24.00	148,500	103	24.00	71,968	50	24.00	72,211	50	24.00	238	343,252
Mon-8/8/22	-		-	50,502	35	24.00	148,542	103	24.00	71,942	50	24.00	72,231	50	24.00	238	343,217
Tue-8/9/22	-		-	50,505	35	24.00	148,504	103	24.00	71,954	50	24.00	72,185	50	24.00	238	343,148
Wed-8/10/22	-		-	50,566	35	24.00	148,508	103	24.00	71,984	50	24.00	72,176	50	24.00	238	343,234
Thu-8/11/22	186	31	0.10	48,633	35	23.12	142,741	103	23.07	69,305	50	23.10	69,312	50	23.10	229	330,177
Fri-8/12/22	-		-	50,342	35	24.00	148,487	103	24.00	71,983	50	24.00	71,864	50	24.00	238	342,676
Sat-8/13/22	-		-	50,561	35	23.95	148,293	103	24.00	71,984	50	24.00	72,102	50	24.00	238	342,940
Sun-8/14/22	-		-	50,764	35	24.00	148,428	103	24.00	71,944	50	24.00	72,033	50	24.00	238	343,169
Mon-8/15/22	-		-	50,822	35	24.00	148,454	103	24.00	71,922	50	24.00	71,939	50	24.00	238	343,137
Tue-8/16/22	-		-	50,806	35	24.00	148,411	103	24.00	71,953	50	24.00	71,905	50	24.00	238	343,075
Wed-8/17/22	-		-	50,762	35	24.00	148,391	103	24.00	71,940	50	24.00	71,894	50	24.00	238	342,987
Thu-8/18/22	-		-	50,657	35	24.00	148,436	103	24.00	71,943	50	24.00	71,876	50	24.00	238	342,912
Fri-8/19/22	-		-	44,618	31	24.00	148,456	103	24.00	71,969	50	24.00	72,076	50	24.00	234	337,119
Sat-8/20/22	-		-	36,234	25	24.00	148,436	103	24.00	71,960	50	24.00	72,272	50	24.00	228	328,902
Sun-8/21/22	-		-	36,262	25	24.00	148,422	103	24.00	71,939	50	24.00	72,301	50	24.00	228	328,924
Mon-8/22/22	-		-	36,404	25	24.00	148,469	103	24.00	71,346	50	23.78	71,706	50	23.80	228	327,925
Tue-8/23/22	-		-	34,181	25	22.57	148,499	103	24.00	67,554	50	22.51	67,918	50	22.51	221	318,152
Wed-8/24/22	-		-	30,338	25	20.10	148,352	103	24.00	34,385	50	11.46	34,456	50	11.46	172	247,531
Thu-8/25/22	-		-	36,261	25	24.00	148,489	103	24.00	40,804	50	13.60	41,017	50	13.60	185	266,571
Fri-8/26/22	-		-	36,144	25	24.00	148,431	103	24.00	71,936	50	24.00	72,113	50	24.00	228	328,624
Sat-8/27/22	-		-	36,153	25	24.00	148,472	103	24.00	71,969	50	24.00	72,034	50	24.00	228	328,628
Sun-8/28/22	-		-	35,899	25	24.00	148,475	103	24.00	71,958	50	24.00	72,047	50	24.00	228	328,379
Mon-8/29/22	-		-	33,555	25	22.27	137,245	103	22.15	61,991	50	20.66	62,183	50	20.67	205	294,974
Tue-8/30/22	-		-	-		-	-		-	-		-	-		-		
Wed-8/31/22	-		-	-		-	-		-	-		-	-		-		
TOTALS	186	31	0.10	1,305,087	32	688.00	4,278,934	103	691.80	1,995,529	50	665.52	1,999,438	50	665.55	229	9,579,174

TOTAL VOLUME EXTRACTED :	9,579,174 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	214.59 GPM

8/4/22 - TW-18, TW-29, and TW-23 were shut down briefly due to internet outage - Comcast.
8/23/22-8/24/22 - TW-17 was shut down for maintenance.
8/23/22-8/25/22 - TW-29 and TW-23 were shut down for maintenance.
8/29/22-8/31/22 - TW-17, TW-18, TW-29, and TW-23 were shut down due to a power outage - DTE.

GelmanSciences

TABLE #7

Little Lake Area System

MW-53i	
Date	1,4-Dioxane ug/L
05/06/22	26
06/03/22	21
07/05/22	23
08/02/22	22

GelmanSciences

TABLE #8

INDIVIDUAL PURGE WELL CONCENTRATIONS

SAMPLE ID	Date Sampled	1,4-DIOXANE (ppb)
DOLPH-08-22-22-14:35-1	08/22/22	120
TW-20-08-22-22-11:25-1	08/22/22	770
TW-24-08-22-22-14:40-1	08/22/22	2100
TW-25-08-22-22-11:30-1	08/22/22	2600
LB-4-08-22-22-13:15-1	08/22/22	440
TW-21-08-22-22-14:00-1	08/22/22	220
TW-5-08-22-22-14:15-1	08/22/22	680
TW-9-08-22-22-11:40-1	08/22/22	460
TW-17-08-22-22-11:35-1	08/22/22	56
TW-18-08-22-22-14:05-1	08/22/22	210
TW-23-08-22-22-13:30-1	08/22/22	400
TW-29-08-22-22-13:50-1	08/22/22	300
PW-1-08-22-22-14:30-1	08/22/22	860
TW-22-08-22-22-13:00-1	08/22/22	450
TW-28-08-22-22-11:50-1	08/22/22	640

GelmanSciences

TABLE #9

RED POND DATA

Month of: Aug-22

			Red Pond				
			Pond	Level	Aeration	Influent	Influent
Date	Time	Notes	Visual Chk	Feet	Hours	Hours	GPM
Mon-8/1/22	04:00:00.000		Y	5.0	-	24.00	632
Tue-8/2/22	04:00:00.000		Y	5.1	-	24.00	626
Wed-8/3/22	04:00:00.000		Y	5.3	-	24.00	622
Thu-8/4/22	04:00:00.000		Y	5.1	-	24.00	600
Fri-8/5/22	04:00:00.000		Y	5.1	-	24.00	621
Sat-8/6/22	04:00:00.000	(1)		5.2	-	24.00	622
Sun-8/7/22	04:00:00.000	(1)		5.2	-	24.00	622
Mon-8/8/22	04:00:00.000		Y	5.3	-	24.00	622
Tue-8/9/22	04:00:00.000		Y	5.4	-	24.00	621
Wed-8/10/22	04:00:00.000		Y	5.0	-	24.00	598
Thu-8/11/22	04:00:00.000		Y	5.3	-	24.00	588
Fri-8/12/22	04:00:00.000		Y	5.3	-	24.00	621
Sat-8/13/22	04:00:00.000	(1)		5.4	-	24.00	621
Sun-8/14/22	04:00:00.000	(1)		5.5	-	24.00	621
Mon-8/15/22	04:00:00.000		Y	5.5	-	24.00	621
Tue-8/16/22	04:00:00.000		Y	5.5	-	24.00	622
Wed-8/17/22	04:00:00.000		Y	5.6	-	24.00	622
Thu-8/18/22	04:00:00.000		Y	5.6	-	24.00	621
Fri-8/19/22	04:00:00.000		Y	5.6	-	24.00	617
Sat-8/20/22	04:00:00.000	(1)		5.6	-	24.00	611
Sun-8/21/22	04:00:00.000	(1)		5.5	-	24.00	611
Mon-8/22/22	04:00:00.000		Y	5.4	-	24.00	611
Tue-8/23/22	04:00:00.000		Y	6.4	-	24.00	593
Wed-8/24/22	04:00:00.000		Y	6.4	-	24.00	409
Thu-8/25/22	04:00:00.000		Y	5.9	-	24.00	453
Fri-8/26/22	04:00:00.000		Y	5.9	-	24.00	619
Sat-8/27/22	04:00:00.000	(1)		5.9	-	24.00	618
Sun-8/28/22	04:00:00.000	(1)		6.0	-	24.00	618
Mon-8/29/22	04:00:00.000		Y	6.0	-	22.47	601
Tue-8/30/22	04:00:00.000		Y	-	-	-	-
Wed-8/31/22	04:00:00.000		Y	-	-	-	-
		TOTALS	-		-	694	

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-08-01-22-07:35-1	8/1/2022	390
Red Pond-08-08-22-08:00-1	8/8/2022	470
Red Pond-08-15-22-07:50-1	8/15/2022	480
Red Pond-08-22-22-07:50-1	8/22/2022	420
Red Pond-08-29-22-08:00-1	8/29/2022	400

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

GelmanSciences

TABLE #11

OZONE OPERATION REPORT

Month of: Aug-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
Mon-8/1/22	04:00:00.000		238	24.00	0	0.00	380	24.00	0	0.00
Tue-8/2/22	04:00:00.000		243	24.00	0	0.00	380	24.00	0	0.00
Wed-8/3/22	04:00:00.000		238	24.00	0	0.00	380	24.00	0	0.00
Thu-8/4/22	04:00:00.000		241	24.00	0	0.00	380	24.00	0	0.00
Fri-8/5/22	04:00:00.000		237	24.00	0	0.00	380	24.00	0	0.00
Sat-8/6/22	04:00:00.000	(1)	239	24.00	0	0.00	381	24.00	0	0.00
Sun-8/7/22	04:00:00.000	(1)	242	24.00	0	0.00	380	24.00	0	0.00
Mon-8/8/22	04:00:00.000		242	24.00	0	0.00	380	24.00	0	0.00
Tue-8/9/22	04:00:00.000		242	24.00	0	0.00	381	24.00	0	0.00
Wed-8/10/22	04:00:00.000		236	24.00	0	0.00	381	24.00	0	0.00
Thu-8/11/22	04:00:00.000		240	22.08	0	0.00	381	22.73	0	0.00
Fri-8/12/22	04:00:00.000		240	24.00	0	0.00	381	24.00	0	0.00
Sat-8/13/22	04:00:00.000	(1)	237	23.75	0	0.00	380	23.75	0	0.00
Sun-8/14/22	04:00:00.000	(1)	238	24.00	0	0.00	380	24.00	0	0.00
Mon-8/15/22	04:00:00.000		238	24.00	0	0.00	380	24.00	0	0.00
Tue-8/16/22	04:00:00.000		240	24.00	0	0.00	380	24.00	0	0.00
Wed-8/17/22	04:00:00.000		237	24.00	0	0.00	381	24.00	0	0.00
Thu-8/18/22	04:00:00.000		235	24.00	0	0.00	380	24.00	0	0.00
Fri-8/19/22	04:00:00.000		241	24.00	0	0.00	381	24.00	0	0.00
Sat-8/20/22	04:00:00.000	(1)	238	24.00	0	0.00	380	24.00	0	0.00
Sun-8/21/22	04:00:00.000	(1)	237	24.00	0	0.00	381	24.00	0	0.00
Mon-8/22/22	04:00:00.000		242	24.00	0	0.00	380	24.00	0	0.00
Tue-8/23/22	04:00:00.000		238	23.42	0	0.35	0	18.42	0	0.00
Wed-8/24/22	04:00:00.000		242	23.75	0	0.00	0	9.72	0	0.00
Thu-8/25/22	04:00:00.000		239	24.00	0	0.00	380	17.37	0	0.00
Fri-8/26/22	04:00:00.000		240	24.00	0	0.00	380	24.00	0	0.00
Sat-8/27/22	04:00:00.000	(1)	243	24.00	0	0.00	381	24.00	0	0.00
Sun-8/28/22	04:00:00.000	(1)	242	24.00	0	0.00	380	24.00	0	0.00
Mon-8/29/22	04:00:00.000		0	22.17	0	0.00	0	22.17	0	0.00
Tue-8/30/22	04:00:00.000		0	0.00	0	0.00	0	0.00	0	0.00
Wed-8/31/22	04:00:00.000		0	0.00	0	0.00	0	0.00	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.

8/11/22 - Treatment was shut down briefly for maintenance.
8/23/22-8/25/22 - Treatment System 2A was shut down for maintenance.
8/29/22-8/31/22 - Treatment was shut down due to a power outage - DTE.

GelmanSciences

TABLE #12

GREEN POND / DISCHARGE DATA

Month of: Aug-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
Mon-8/1/22	04:00:00.000		Y	-	-						642	924,999	24.00	-	-	-	-	-	-
Tue-8/2/22	04:00:00.000		Y	-	-						642	925,103	24.00	-	-	-	-	-	-
Wed-8/3/22	04:00:00.000		Y	-	-						643	925,431	24.00	-	-	-	-	-	-
Thu-8/4/22	04:00:00.000		Y	-	-						643	925,225	24.00	-	-	-	-	-	-
Fri-8/5/22	04:00:00.000		Y	-	-						642	925,069	24.00	-	-	-	-	-	-
Sat-8/6/22	04:00:00.000	(1)		-	-						643	925,330	24.00	-	-	-	-	-	-
Sun-8/7/22	04:00:00.000	(1)		-	-						643	925,590	24.00	-	-	-	-	-	-
Mon-8/8/22	04:00:00.000		Y	-	-						643	925,977	24.00	-	-	-	-	-	-
Tue-8/9/22	04:00:00.000		Y	-	-						643	925,798	24.00	-	-	-	-	-	-
Wed-8/10/22	04:00:00.000		Y	-	-						643	925,826	24.00	-	-	-	-	-	-
Thu-8/11/22	04:00:00.000		Y	-	-						635	859,649	22.57	-	-	-	-	-	-
Fri-8/12/22	04:00:00.000		Y	-	-						642	924,548	24.00	-	-	-	-	-	-
Sat-8/13/22	04:00:00.000	(1)		-	-						641	912,473	23.73	-	-	-	-	-	-
Sun-8/14/22	04:00:00.000	(1)		-	-						642	924,597	24.00	-	-	-	-	-	-
Mon-8/15/22	04:00:00.000		Y	-	-						642	924,778	24.00	-	-	-	-	-	-
Tue-8/16/22	04:00:00.000		Y	-	-						642	924,754	24.00	-	-	-	-	-	-
Wed-8/17/22	04:00:00.000		Y	-	-						642	924,736	24.00	-	-	-	-	-	-
Thu-8/18/22	04:00:00.000		Y	-	-						642	924,862	24.00	-	-	-	-	-	-
Fri-8/19/22	04:00:00.000		Y	-	-						640	922,220	24.00	-	-	-	-	-	-
Sat-8/20/22	04:00:00.000	(1)		-	-						642	924,890	24.00	-	-	-	-	-	-
Sun-8/21/22	04:00:00.000	(1)		-	-						642	924,898	24.00	-	-	-	-	-	-
Mon-8/22/22	04:00:00.000		Y	-	-						643	925,371	24.00	-	-	-	-	-	-
Tue-8/23/22	04:00:00.000		Y	-	-						557	779,692	23.32	-	-	-	-	-	-
Wed-8/24/22	04:00:00.000		Y	-	-						425	605,067	23.73	-	-	-	-	-	-
Thu-8/25/22	04:00:00.000		Y	-	-						516	742,708	24.00	-	-	-	-	-	-
Fri-8/26/22	04:00:00.000		Y	-	-						644	927,440	24.00	-	-	-	-	-	-
Sat-8/27/22	04:00:00.000	(1)		-	-						644	927,213	24.00	-	-	-	-	-	-
Sun-8/28/22	04:00:00.000	(1)		-	-						644	927,358	24.00	-	-	-	-	-	-
Mon-8/29/22	04:00:00.000		Y	-	-						644	851,885	22.05	-	-	-	-	-	-
Tue-8/30/22	04:00:00.000		Y	-	-							-	-	-	-	-	-	-	-
Wed-8/31/22	04:00:00.000		Y	-	-							-	-	-	-	-	-	-	-
		TOTALS			-	-			-	-		26,033,487	691		-	-		-	-

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
8/1/2022	0.925	*G	*G	6.0	0.390	<50	<0.16	yes	yes	7.0	7.0	9.2	44
8/2/2022	0.925			5.2		<50	<0.16	no	no	7.0	7.0	9.6	
8/3/2022	0.925			5.6		<50	<0.16	no	yes	6.9	6.9	8.5	32
8/4/2022	0.925			6.4		<50	<0.16	no	no	7.0	7.0	7.0	
8/5/2022	0.925					<50	<0.16	no	no	7.0	7.0		
8/6/2022	0.925												
8/7/2022	0.926			5.9								8.6	
8/8/2022	0.926			6.3	0.470	<50	<0.16	yes	yes	6.8	6.8	9.0	30
8/9/2022	0.926			6.1		<50	<0.16	no	no	6.9	6.9	8.0	
8/10/2022	0.926			6.0		<50	<0.16	no	yes	6.9	6.9	8.2	32
8/11/2022	0.860			5.9		<50	<0.16	no	no	7.0	7.0	8.5	
8/12/2022	0.925					<50	<0.16	no	no	6.8	6.8		
8/13/2022	0.912												
8/14/2022	0.925			5.8								7.7	
8/15/2022	0.925			5.9	0.480	<50	<0.16	yes	yes	6.8	6.8	7.8	40
8/16/2022	0.925			5.3		<50	<0.16	no	no	6.8	6.8	8.6	
8/17/2022	0.925			5.0		<50	<0.16	no	yes	6.8	6.8	7.2	46
8/18/2022	0.925			6.2		<50	<0.16	no	no	6.9	6.9	9.6	
8/19/2022	0.922					<50	<0.16	no	no	6.9	6.9		
8/20/2022	0.925												
8/21/2022	0.925			4.9								8.7	
8/22/2022	0.925			5.8	0.420	<50	<0.16	yes	yes	6.9	6.9	6.8	30
8/23/2022	0.780			4.9		<50	<0.16	no	no	6.9	6.9	9.4	
8/24/2022	0.605			4.6		<50	<0.16	no	yes	6.9	6.9	7.2	30
8/25/2022	0.743			4.6		<50	<0.16	no	no	6.9	6.9	8.9	
8/26/2022	0.927					<50	<0.16	no	no	7.0	7.0		
8/27/2022	0.927												
8/28/2022	0.927			4.5		<50	<0.16	no	no	6.9	6.9	7.6	
8/29/2022	0.852				0.400	<50	<0.16	yes	yes	6.8	6.8		30
8/30/2022	0.000												
8/31/2022	0.000												
Discharged	**26.033**												
Monthly Avg	**0.840**			**5.5**								**8.3**	