FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

April 20, 2022

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

Re: Monitoring Report #299
March 1 – March 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 March 1 through March 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

4798 Campus Drive
Kalamazoo, MI 49008
P: 269.385.0011
F: 269.382.6972
www.fveng.com

GelmanSciences

EXTRACTION DATA

TABLE #1	-	UNIT "D2" UPGRADIENT EXTRACTION DATA
TABLE #2	-	UNIT "D2" DOWNGRADIENT EXTRACTION DATA
TABLE #3	-	CORE AREA EXTRACTION DATA
TABLE #4	-	MARSHY AREA EXTRACTION DATA
TABLE #5	-	SOUTHWEST AREA EXTRACTION DATA
TABLE #6	-	UNIT "E" EXTRACTION DATA
TABLE #7	-	LITTLE LAKE AREA SYSTEM DATA
TABLE #8	-	INDIVIDUAL PURGE WELL CONCENTRATIONS
TABLE #9	-	RED POND DATA
TABLE #10	-	RED POND CONCENTRATIONS

OZONE OPERATION DATA

TABLE #11	-	OZONE OPERATION REPORT

DISCHARGE DATA

TABLE #12	-	GREEN POND / DISCHARGE DATA
TABLE #13	-	DAILY DISCHARGE MONITORING REPORT

Copyright 2022 Gelman Sciences, Inc. All rights reserved.

GelmanSciences

TABLE #1

UNIT D2 UPGRADIENT EXTRACTION DATA

Month of: Mar-22

Date	Horizontal Well Extraction			TW-9			TW-5			TW-21			Daily Flow	Daily Total
	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
Tue-3/1/22	-		-	-		-	-		-	144,089	100	24.00	100	144,089
Wed-3/2/22	-		-	-		-	-		-	144,064	100	24.00	100	144,064
Thu-3/3/22	-		-	-		-	-		-	144,012	100	24.00	100	144,012
Fri-3/4/22	-		-	-		-	-		-	144,043	100	24.00	100	144,043
Sat-3/5/22	-		-	-		-	-		-	144,136	100	24.00	100	144,136
Sun-3/6/22	-		-	-		-	-		-	142,768	100	23.75	99	142,768
Mon-3/7/22	-		-	-		-	-		-	144,045	100	24.00	100	144,045
Tue-3/8/22	-		-	-		-	-		-	144,069	100	24.00	100	144,069
Wed-3/9/22	-		-	-		-	-		-	144,077	100	24.00	100	144,077
Thu-3/10/22	-		-	-		-	-		-	143,889	100	24.00	100	143,889
Fri-3/11/22	-		-	-		-	-		-	144,015	100	24.00	100	144,015
Sat-3/12/22	-		-	-		-	-		-	143,944	100	24.00	100	143,944
Sun-3/13/22	-		-	-		-	-		-	137,975	100	22.98	96	137,975
Mon-3/14/22	-		-	-		-	-		-	144,116	100	24.00	100	144,116
Tue-3/15/22	-		-	-		-	-		-	144,094	100	24.00	100	144,094
Wed-3/16/22	-		-	-		-	-		-	144,140	100	24.00	100	144,140
Thu-3/17/22	-		-	24,533	74	5.53	-		-	144,186	100	24.00	117	168,719
Fri-3/18/22	-		-	-		-	-		-	144,168	100	24.00	100	144,168
Sat-3/19/22	-		-	-		-	-		-	144,140	100	24.00	100	144,140
Sun-3/20/22	-		-	-		-	-		-	144,146	100	24.00	100	144,146
Mon-3/21/22	-		-	-		-	-		-	144,168	100	24.00	100	144,168
Tue-3/22/22	-		-	-		-	-		-	144,105	100	24.00	100	144,105
Wed-3/23/22	-		-	-		-	-		-	144,126	100	24.00	100	144,126
Thu-3/24/22	-		-	-		-	-		-	144,135	100	24.00	100	144,135
Fri-3/25/22	-		-	-		-	-		-	144,106	100	24.00	100	144,106
Sat-3/26/22	-		-	-		-	-		-	144,065	100	24.00	100	144,065
Sun-3/27/22	-		-	-		-	-		-	144,005	100	24.00	100	144,005
Mon-3/28/22	-		-	-		-	35,666	59	10.03	144,011	100	24.00	125	179,677
Tue-3/29/22	-		-	-		-	86,770	60	24.00	144,043	100	24.00	160	230,813
Wed-3/30/22	-		-	-		-	23,985	59	6.75	46,135	100	7.70	49	70,120
Thu-3/31/22	-		-	-		-	38,119	59	10.70	57,112	100	9.52	66	95,231
TOTALS	-		-	24,533	74	5.53	184,540	60	51.48	4,274,127	100	711.95	100	4,483,200

TOTAL VOLUME EXTRACTED :	4,483,200 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	100.43 GPM

3/1/22-3/28/22 - TW-5 was shut down.
3/13/22 - Due to the start of daylight savings, the maximum run time on this date is 23 hours.
3/30/22-3/31/22 - TW-5 and TW-21 were shut down for system maintenance.

GelmanSciences

TABLE #2

UNIT D2 DOWNGRADIENT EXTRACTION DATA

Month of: Mar-22

Date	LB-1 Gallons	GPM	Run Hrs.	LB-4 Gallons	GPM	Run Hrs.	Daily Flow GPM	Daily Total Gallons
Tue-3/1/22	-		-	144,211	100	24.00	100	144,211
Wed-3/2/22	-		-	144,202	100	24.00	100	144,202
Thu-3/3/22	-		-	144,235	100	24.00	100	144,235
Fri-3/4/22	-		-	144,240	100	24.00	100	144,240
Sat-3/5/22	-		-	144,204	100	24.00	100	144,204
Sun-3/6/22	-		-	144,206	100	24.00	100	144,206
Mon-3/7/22	-		-	144,219	100	24.00	100	144,219
Tue-3/8/22	-		-	144,232	100	24.00	100	144,232
Wed-3/9/22	-		-	144,228	100	24.00	100	144,228
Thu-3/10/22	-		-	144,231	100	24.00	100	144,231
Fri-3/11/22	-		-	144,202	100	24.00	100	144,202
Sat-3/12/22	-		-	144,254	100	24.00	100	144,254
Sun-3/13/22	-		-	138,222	100	22.98	96	138,222
Mon-3/14/22	-		-	144,209	100	24.00	100	144,209
Tue-3/15/22	-		-	144,197	100	24.00	100	144,197
Wed-3/16/22	-		-	144,170	100	24.00	100	144,170
Thu-3/17/22	-		-	144,229	100	24.00	100	144,229
Fri-3/18/22	-		-	144,183	100	24.00	100	144,183
Sat-3/19/22	-		-	144,190	100	24.00	100	144,190
Sun-3/20/22	-		-	144,192	100	24.00	100	144,192
Mon-3/21/22	-		-	144,157	100	24.00	100	144,157
Tue-3/22/22	-		-	144,202	100	24.00	100	144,202
Wed-3/23/22	-		-	144,221	100	24.00	100	144,221
Thu-3/24/22	-		-	144,203	100	24.00	100	144,203
Fri-3/25/22	-		-	144,235	100	24.00	100	144,235
Sat-3/26/22	-		-	144,229	100	24.00	100	144,229
Sun-3/27/22	-		-	144,253	100	24.00	100	144,253
Mon-3/28/22	-		-	144,198	100	24.00	100	144,198
Tue-3/29/22	-		-	144,228	100	24.00	100	144,228
Wed-3/30/22	-		-	46,239	100	7.70	32	46,239
Thu-3/31/22	-		-	56,083	100	9.33	39	56,083
TOTALS	-		-	**4,278,504**	**100**	**712.01**	**96**	**4,278,504**

TOTAL VOLUME EXTRACTED :	4,278,504 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	95.84 GPM

3/13/22 - Due to the start of daylight savings, the maximum run time on this date is 23 hours.
3/30/22-3/31/22 - LB-4 was shut down for system maintenance.

GelmanSciences

TABLE #3

CORE AREA EXTRACTION DATA

Month of: Mar-22

Core Area Well Extraction																						Daily	Daily
	TW-1			TW-2 (Dolph)			TW-3			TW-10			TW-14			TW-20			TW-24			Flow	Total
Date	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	GPM	Gallons
Tue-3/1/22	-		-	38,221	27	24.00	-		-	40,068	28	24.00	42,621	30	24.00	47,962	33	24.00	26,344	18	24.00	136	195,216
Wed-3/2/22	-		-	38,174	27	24.00	-		-	42,796	30	24.00	42,487	30	24.00	50,340	35	24.00	21,377	15	24.00	136	195,174
Thu-3/3/22	-		-	38,138	26	24.00	-		-	38,157	26	24.00	34,223	24	24.00	41,097	29	24.00	30,763	21	24.00	127	182,378
Fri-3/4/22	-		-	38,157	26	24.00	-		-	35,525	25	24.00	32,810	23	24.00	36,266	25	24.00	36,059	25	24.00	124	178,817
Sat-3/5/22	-		-	38,114	26	24.00	-		-	35,358	25	24.00	42,891	30	24.00	36,866	26	24.00	36,238	25	24.00	132	189,467
Sun-3/6/22	-		-	38,057	26	24.00	-		-	35,294	25	24.00	42,926	30	24.00	43,722	30	24.00	36,209	25	24.00	136	196,208
Mon-3/7/22	-		-	38,069	26	24.00	-		-	35,372	25	24.00	-	0	0.02	40,290	28	24.00	36,146	25	24.00	104	149,877
Tue-3/8/22	-		-	38,081	26	24.00	-		-	35,782	25	24.00	34,826	24	24.00	36,059	25	24.00	35,417	25	24.00	125	180,165
Wed-3/9/22	-		-	38,049	26	24.00	-		-	35,813	25	24.00	34,080	24	24.00	40,586	28	24.00	31,715	22	24.00	125	180,243
Thu-3/10/22	-		-	37,998	26	24.00	-		-	35,791	25	24.00	36,695	25	24.00	43,496	30	24.00	28,934	20	24.00	127	182,914
Fri-3/11/22	-		-	37,954	26	24.00	-		-	35,718	25	24.00	36,665	25	24.00	43,402	30	24.00	29,033	20	24.00	127	182,772
Sat-3/12/22	-		-	38,037	26	24.00	-		-	35,675	25	24.00	36,252	25	24.00	43,426	30	24.00	28,952	20	24.00	127	182,342
Sun-3/13/22	-		-	36,415	26	22.98	-		-	34,210	25	22.98	34,219	25	23.00	41,601	30	22.98	27,737	20	22.98	121	174,182
Mon-3/14/22	-		-	37,995	26	24.00	-		-	35,731	25	24.00	35,869	25	24.00	43,434	30	24.00	28,866	20	24.00	126	181,895
Tue-3/15/22	-		-	37,979	26	24.00	-		-	35,757	25	24.00	35,847	25	24.00	43,433	30	24.00	28,895	20	24.00	126	181,911
Wed-3/16/22	-		-	37,925	26	24.00	-		-	35,680	25	24.00	35,810	25	24.00	43,421	30	24.00	28,965	20	24.00	126	181,801
Thu-3/17/22	-		-	37,841	26	24.00	-		-	40,815	28	24.00	35,881	25	24.00	43,507	30	24.00	29,010	20	24.00	130	187,054
Fri-3/18/22	-		-	37,806	26	24.00	-		-	43,638	30	24.00	35,942	25	24.00	43,515	30	24.00	28,978	20	24.00	132	189,879
Sat-3/19/22	-		-	37,819	26	24.00	-		-	43,450	30	24.00	36,019	25	24.00	43,489	30	24.00	29,019	20	24.00	132	189,796
Sun-3/20/22	-		-	37,806	26	24.00	-		-	43,403	30	24.00	36,064	25	24.00	43,459	30	24.00	28,778	20	24.00	132	189,510
Mon-3/21/22	-		-	37,719	26	24.00	-		-	43,469	30	24.00	36,132	25	24.00	43,421	30	24.00	28,806	20	24.00	132	189,547
Tue-3/22/22	-		-	37,721	26	24.00	-		-	43,478	30	24.00	36,072	25	24.00	43,402	30	24.00	28,862	20	24.00	132	189,535
Wed-3/23/22	-		-	37,741	26	24.00	-		-	43,508	30	24.00	36,063	25	24.00	43,377	30	24.00	29,104	20	24.00	132	189,793
Thu-3/24/22	-		-	37,726	26	24.00	-		-	43,545	30	24.00	36,080	25	24.00	43,348	30	24.00	29,035	20	24.00	132	189,734
Fri-3/25/22	-		-	34,945	25	23.75	-		-	12,766	35	6.08	36,139	25	24.00	15,176	42	6.08	29,097	20	24.00	89	128,123
Sat-3/26/22	-		-	33,555	23	24.00	-		-	-		-	36,165	25	24.00	-		-	28,791	20	24.00	68	98,511
Sun-3/27/22	-		-	33,517	23	24.00	-		-	-		-	36,201	25	24.00	-		-	28,669	20	24.00	68	98,387
Mon-3/28/22	-		-	33,444	23	24.00	-		-	-		-	35,976	25	24.00	-		-	28,679	20	24.00	68	98,099
Tue-3/29/22	-		-	33,445	23	24.00	-		-	-		-	35,469	25	24.00	-		-	28,759	20	24.00	68	97,673
Wed-3/30/22	-		-	10,763	23	7.72	-		-	-		-	11,307	25	7.68	-		-	28,935	20	24.00	35	51,005
Thu-3/31/22	-		-	12,407	22	9.50	-		-	-		-	14,302	25	9.50	-		-	18,842	20	15.62	32	45,551
TOTALS	-		-	1,101,618	26	711.95	-		-	940,799	27	581.07	1,052,033	25	688.20	1,038,095	30	581.07	915,014	21	734.60	113	5,047,559

TOTAL VOLUME EXTRACTED :	5,047,559 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	113.07 GPM

3/7/22 - TW-14 was shut down during work at TW-25.
3/13/22 - Due to the start of daylight savings, the maximum run time on this date is 23 hours.
3/25/22-3/31/22 - TW-10 and TW-20 were shut down due to power failure and associated repairs.
3/30/22-3/31/22 - TW-2 (Dolph) and TW-14 were shut down for system maintenance.
3/31/22 - TW-24 was shut down to control Red Pond concentrations.

GelmanSciences TABLE #4

MARSHY AREA EXTRACTION DATA

Month of: Mar-22

Marshy Well Extraction				Daily	Daily
Date	PW-1 Gallons	GPM	Run Hrs.	Flow GPM	Total Gallons
Tue-3/1/22	3,364	2	24.00	2	3,364
Wed-3/2/22	3,377	2	24.00	2	3,377
Thu-3/3/22	3,404	2	24.00	2	3,404
Fri-3/4/22	3,387	2	24.00	2	3,387
Sat-3/5/22	3,365	2	24.00	2	3,365
Sun-3/6/22	3,354	2	24.00	2	3,354
Mon-3/7/22	3,389	2	24.00	2	3,389
Tue-3/8/22	3,383	2	24.00	2	3,383
Wed-3/9/22	3,344	2	24.00	2	3,344
Thu-3/10/22	3,299	2	24.00	2	3,299
Fri-3/11/22	3,265	2	24.00	2	3,265
Sat-3/12/22	3,202	2	24.00	2	3,202
Sun-3/13/22	3,009	2	22.98	2	3,009
Mon-3/14/22	3,094	2	24.00	2	3,094
Tue-3/15/22	3,034	2	24.00	2	3,034
Wed-3/16/22	2,803	2	24.00	2	2,803
Thu-3/17/22	2,767	2	24.00	2	2,767
Fri-3/18/22	2,762	2	24.00	2	2,762
Sat-3/19/22	2,771	2	24.00	2	2,771
Sun-3/20/22	2,796	2	24.00	2	2,796
Mon-3/21/22	2,787	2	24.00	2	2,787
Tue-3/22/22	2,819	2	24.00	2	2,819
Wed-3/23/22	2,830	2	24.00	2	2,830
Thu-3/24/22	2,827	2	24.00	2	2,827
Fri-3/25/22	2,721	2	24.00	2	2,721
Sat-3/26/22	2,513	2	24.00	2	2,513
Sun-3/27/22	2,461	2	24.00	2	2,461
Mon-3/28/22	2,468	2	24.00	2	2,468
Tue-3/29/22	1,107	2	10.22	1	1,107
Wed-3/30/22	-		-		-
Thu-3/31/22	123	8	0.27	0	123
TOTALS	85,825	2	681.47	2	85,825

TOTAL VOLUME EXTRACTED :	85,825 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	1.92 GPM

3/13/22 - Due to the start of daylight savings, the maximum run time on this date is 23 hours.
3/29/22-3/31/22 - PW-1 was shut down for maintenance.

GelmanSciences

TABLE #5

SOUTHWEST AREA EXTRACTION DATA

Month of: Mar-22

SouthWest Well Extraction							Daily	Daily
	TW22			TW28			Flow	Total
Date	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	GPM	Gallons
Tue-3/1/22	3,416	2	24.00	35,861	25	24.00	27	39,277
Wed-3/2/22	3,396	2	24.00	35,836	25	24.00	27	39,232
Thu-3/3/22	3,388	2	24.00	35,781	25	24.00	27	39,169
Fri-3/4/22	3,398	2	24.00	35,783	25	24.00	27	39,181
Sat-3/5/22	3,427	2	24.00	35,772	25	24.00	27	39,199
Sun-3/6/22	3,410	2	24.00	35,744	25	24.00	27	39,154
Mon-3/7/22	3,405	2	24.00	35,762	25	24.00	27	39,167
Tue-3/8/22	3,397	2	24.00	35,738	25	24.00	27	39,135
Wed-3/9/22	3,404	2	24.00	35,756	25	24.00	27	39,160
Thu-3/10/22	3,401	2	24.00	35,734	25	24.00	27	39,135
Fri-3/11/22	3,410	2	24.00	35,741	25	24.00	27	39,151
Sat-3/12/22	3,400	2	24.00	35,751	25	24.00	27	39,151
Sun-3/13/22	3,226	2	22.98	34,783	25	22.98	28	38,009
Mon-3/14/22	3,375	2	24.00	36,301	25	24.00	28	39,676
Tue-3/15/22	3,366	2	24.00	36,307	25	24.00	28	39,673
Wed-3/16/22	2,421	2	17.22	36,148	25	24.00	27	38,569
Thu-3/17/22	2,086	2	16.00	36,009	25	24.00	27	38,095
Fri-3/18/22	3,191	2	24.00	35,916	25	24.00	27	39,107
Sat-3/19/22	3,182	2	24.00	35,867	25	24.00	27	39,049
Sun-3/20/22	3,169	2	24.00	35,814	25	24.00	27	38,983
Mon-3/21/22	3,167	2	24.00	35,827	25	24.00	27	38,994
Tue-3/22/22	3,170	2	24.00	35,821	25	24.00	27	38,991
Wed-3/23/22	2,455	2	18.57	27,746	25	18.57	27	30,201
Thu-3/24/22	1,707	2	15.62	23,444	25	15.62	27	25,151
Fri-3/25/22	2,600	2	24.00	35,950	25	24.00	27	38,550
Sat-3/26/22	2,589	2	24.00	35,908	25	24.00	27	38,497
Sun-3/27/22	2,586	2	24.00	35,919	25	24.00	27	38,505
Mon-3/28/22	2,445	2	23.93	35,912	25	24.00	27	38,357
Tue-3/29/22	2,907	2	24.00	36,095	25	24.00	27	39,002
Wed-3/30/22	1,039	2	7.67	11,603	25	7.67	27	12,642
Thu-3/31/22	1,080	2	9.48	14,299	25	9.48	27	15,379
TOTALS	90,613	2	683.47	1,044,928	25	698.32	27	1,135,541

TOTAL VOLUME EXTRACTED :	1,135,541 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	25.44 GPM

3/13/22 - Due to the start of daylight savings, the maximum run time on this date is 23 hours.
3/16/22-3/17/22 - TW-22 was shut down due to flows dropping below detectable levels during/after sampling.
3/23/22-3/24/22 - TW-22 and TW-28 were shut down due to communication loss from Comcast work in the area.
3/30/22-3/31/22 - TW-22 and TW-28 were shut down for system maintenance.

GelmanSciences

TABLE #6

UNIT "E" EXTRACTION DATA

Month of: Mar-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
Tue-3/1/22	-		-	76,862	53	24.00	153,782	107	24.00	71,955	50	24.00	72,288	50	24.00	260	374,887
Wed-3/2/22	-		-	79,433	55	24.00	153,794	107	24.00	71,933	50	24.00	72,259	50	24.00	262	377,419
Thu-3/3/22	-		-	79,350	55	24.00	149,171	104	24.00	71,965	50	24.00	72,295	50	24.00	259	372,781
Fri-3/4/22	-		-	79,370	55	24.00	146,539	102	24.00	71,989	50	24.00	72,289	50	24.00	257	370,187
Sat-3/5/22	-		-	79,430	55	24.00	147,731	103	24.00	71,950	50	24.00	72,311	50	24.00	258	371,422
Sun-3/6/22	-		-	79,452	55	24.00	159,518	112	23.77	71,784	50	24.00	72,265	50	24.00	266	383,019
Mon-3/7/22	-		-	-	0	0.02	156,240	109	24.00	71,970	50	24.00	72,246	50	24.00	209	300,456
Tue-3/8/22	-		-	91,207	63	24.00	153,784	107	24.00	71,977	50	24.00	72,363	50	24.00	270	389,331
Wed-3/9/22	-		-	93,822	65	24.00	149,298	104	24.00	71,953	50	24.00	72,250	50	24.00	269	387,323
Thu-3/10/22	-		-	93,738	65	24.00	146,495	102	24.00	71,886	50	24.00	72,189	50	24.00	267	384,308
Fri-3/11/22	-		-	93,702	65	24.00	146,511	102	24.00	71,878	50	24.00	72,236	50	24.00	267	384,327
Sat-3/12/22	-		-	93,643	65	24.00	146,533	102	24.00	71,895	50	24.00	72,234	50	24.00	267	384,305
Sun-3/13/22	-		-	89,749	65	23.00	140,453	102	22.98	68,861	50	22.98	69,197	50	22.98	256	368,260
Mon-3/14/22	-		-	93,724	65	24.00	146,579	102	24.00	71,818	50	24.00	72,342	50	24.00	267	384,463
Tue-3/15/22	-		-	93,743	65	24.00	146,589	102	24.00	72,070	50	24.00	72,359	50	24.00	267	384,761
Wed-3/16/22	-		-	93,809	65	24.00	146,598	102	24.00	71,100	50	23.73	29,883	50	9.90	237	341,390
Thu-3/17/22	-		-	98,477	68	24.00	146,644	102	24.00	71,936	50	24.00	48,133	50	16.00	254	365,190
Fri-3/18/22	-		-	93,808	65	24.00	146,596	102	24.00	71,985	50	24.00	72,178	50	24.00	267	384,567
Sat-3/19/22	-		-	93,678	65	24.00	146,558	102	24.00	72,033	50	24.00	72,207	50	24.00	267	384,476
Sun-3/20/22	-		-	93,715	65	24.00	146,561	102	24.00	71,979	50	24.00	72,184	50	24.00	267	384,437
Mon-3/21/22	-		-	93,742	65	24.00	146,604	102	24.00	71,889	50	24.00	72,245	50	24.00	267	384,480
Tue-3/22/22	-		-	93,672	65	24.00	146,563	102	24.00	72,083	50	24.00	72,236	50	24.00	267	384,554
Wed-3/23/22	-		-	93,678	65	24.00	146,568	102	24.00	72,022	50	24.00	72,267	50	24.00	267	384,535
Thu-3/24/22	-		-	93,699	65	24.00	146,575	102	24.00	71,909	50	24.00	72,234	50	24.00	267	384,417
Fri-3/25/22	-		-	93,692	65	24.00	146,572	102	24.00	71,880	50	24.00	72,223	50	24.00	267	384,367
Sat-3/26/22	-		-	93,649	65	24.00	146,543	102	24.00	71,880	50	24.00	72,267	50	24.00	267	384,339
Sun-3/27/22	-		-	93,791	65	24.00	146,514	102	24.00	71,772	50	24.00	72,221	50	24.00	267	384,298
Mon-3/28/22	-		-	93,710	65	24.00	146,530	102	24.00	71,870	50	24.00	72,250	50	24.00	267	384,360
Tue-3/29/22	-		-	93,696	65	24.00	146,535	102	24.00	71,870	50	24.00	72,253	50	24.00	267	384,354
Wed-3/30/22	-		-	29,981	65	7.68	46,974	102	7.70	23,047	50	7.68	23,178	50	7.68	86	123,180
Thu-3/31/22	-		-	37,158	65	9.50	58,023	102	9.50	27,930	50	9.30	27,908	50	9.26	105	151,019
TOTALS	-		-	2,601,178	61	688.20	4,399,975	103	711.95	2,133,069	50	711.69	2,076,990	50	689.82	251	11,211,212

TOTAL VOLUME EXTRACTED :	11,211,212 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	251.15 GPM

3/7/22 - TW-17 was shut down during work at TW-25.
3/13/22 - Due to the start of daylight savings, the maximum run time on this date is 23 hours.
3/16/22-3/17/22 - TW-23 was shut down due to flows dropping below detectable levels during/after sampling
3/30/22-3/31/22 - TW-17, TW-18, TW-29, and TW-23 were shut down for system maintenance.

GelmanSciences

TABLE #7

Little Lake Area System

MW-53i	
Date	1,4-Dioxane ug/L
12/01/21	40
01/12/22	54
02/10/22	43
03/14/22	39

GelmanSciences

TABLE #8

INDIVIDUAL PURGE WELL CONCENTRATIONS

SAMPLE ID	Date Sampled	1,4-DIOXANE (ppb)
DOLPH-03-16-22-11:25-1	03/16/22	150
TW-10-03-16-22-11:00-1	03/16/22	910
TW-14-03-16-22-10:35-1	03/16/22	130
TW-20-03-16-22-11:15-1	03/16/22	750
TW-24-03-16-22-11:30-1	03/16/22	2500
LB-4-03-16-22-09:50-1	03/16/22	490
TW-21-03-16-22-12:00-1	03/16/22	280
TW-17-03-16-22-10:40-1	03/16/22	54
TW-18-03-16-22-12:10-1	03/16/22	260
TW-23-03-16-22-09:55-1	03/16/22	410
TW-29-03-16-22-10:10-1	03/16/22	440
PW-1-03-16-22-11:20-1	03/16/22	1000
TW-22-03-16-22-11:05-1	03/16/22	500
TW-28-03-16-22-11:10-1	03/16/22	680

GelmanSciences

TABLE #9

RED POND DATA

Month of: Mar-22

Date	Time	Notes	Red Pond Pond Visual Chk	Level Feet	Aeration Hours	Influent Hours	Influent GPM
Tue-3/1/22	04:00:00.000		Y	4.7	-	24.00	626
Wed-3/2/22	04:00:00.000		Y	4.7	-	24.00	627
Thu-3/3/22	04:00:00.000		Y	4.5	-	24.00	615
Fri-3/4/22	04:00:00.000		Y	4.3	-	24.00	611
Sat-3/5/22	04:00:00.000	(1)		4.1	-	24.00	619
Sun-3/6/22	04:00:00.000	(1)		4.2	-	24.00	631
Mon-3/7/22	04:00:00.000		Y	4.3	-	24.00	542
Tue-3/8/22	04:00:00.000		Y	4.3	-	24.00	625
Wed-3/9/22	04:00:00.000		Y	4.4	-	24.00	624
Thu-3/10/22	04:00:00.000		Y	4.6	-	24.00	623
Fri-3/11/22	04:00:00.000		Y	4.6	-	24.00	623
Sat-3/12/22	04:00:00.000	(1)		4.6	-	24.00	623
Sun-3/13/22	04:00:00.000	(1)		4.5	-	23.00	623
Mon-3/14/22	04:00:00.000		Y	4.5	-	24.00	623
Tue-3/15/22	04:00:00.000		Y	4.4	-	24.00	623
Wed-3/16/22	04:00:00.000		Y	3.8	-	24.00	592
Thu-3/17/22	04:00:00.000		Y	3.9	-	24.00	629
Fri-3/18/22	04:00:00.000		Y	4.0	-	24.00	628
Sat-3/19/22	04:00:00.000	(1)		4.2	-	24.00	628
Sun-3/20/22	04:00:00.000	(1)		4.2	-	24.00	628
Mon-3/21/22	04:00:00.000		Y	4.3	-	24.00	628
Tue-3/22/22	04:00:00.000		Y	4.3	-	24.00	628
Wed-3/23/22	04:00:00.000		Y	4.3	-	24.00	622
Thu-3/24/22	04:00:00.000		Y	3.8	-	24.00	618
Fri-3/25/22	04:00:00.000		Y	5.6	-	24.00	585
Sat-3/26/22	04:00:00.000	(1)		5.4	-	24.00	564
Sun-3/27/22	04:00:00.000	(1)		4.7	-	24.00	564
Mon-3/28/22	04:00:00.000		Y	4.4	-	24.00	588
Tue-3/29/22	04:00:00.000		Y	4.6	-	24.00	623
Wed-3/30/22	04:00:00.000		Y	4.7	-	24.00	211
Thu-3/31/22	04:00:00.000		Y	4.8	-	15.62	388
		TOTALS	-		-	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.

Gelman Sciences

TABLE #10

RED POND CONCENTRATIONS

SAMPLE ID	Date Sampled	1,4-DIOXANE (ppb)
Red Pond-03-01-22-07:30-1	3/1/2022	460
Red Pond-03-02-22-07:25-1	3/2/2022	440
Red Pond-03-03-22-07:35-1	3/3/2022	440
Red Pond-03-04-22-07:35-	3/4/2022	520
Red Pond-03-07-22-07:30-1	3/7/2022	460
Red Pond-03-08-22-07:45-1	3/8/2022	510
Red Pond-03-09-22-07:55-1	3/9/2022	440
Red Pond-03-10-22-07:30-1	3/10/2022	430
Red Pond-03-11-22-07:20-1	3/11/2022	440
Red Pond-03-14-22-07:45-1	3/14/2022	430
Red Pond-03-15-22-07:10-1	3/15/2022	460
Red Pond-03-16-22-07:35-1	3/16/2022	420
Red Pond-03-17-22-07:35-1	3/17/2022	470
Red Pond-03-18-22-07:00-1	3/18/2022	470
Red Pond-03-21-22-07:15-1	3/21/2022	440
Red Pond-03-22-22-07:35-1	3/22/2022	440
Red Pond-03-23-22-07:40-1	3/23/2022	460
Red Pond-03-24-22-07:00-1	3/24/2022	420
Red Pond-03-28-22-07:05-1	3/28/2022	420
Red Pond-03-29-22-07:00-1	3/29/2022	430
Red Pond-03-30-22-06:30-1	3/30/2022	370
Red Pond-03-31-22-15:25-1	3/31/2022	520

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

GelmanSciences

TABLE #11

OZONE OPERATION REPORT

Month of: Mar-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
Tue-3/1/22	04:00:00.000		240	24.00	0	0.00	380	24.00	0	0.00
Wed-3/2/22	04:00:00.000		240	24.00	0	0.00	380	24.00	0	0.00
Thu-3/3/22	04:00:00.000		240	24.00	0	0.00	380	24.00	0	0.00
Fri-3/4/22	04:00:00.000		240	24.00	0	0.00	381	24.00	0	0.00
Sat-3/5/22	04:00:00.000	(1)	241	24.00	0	0.00	380	24.00	0	0.00
Sun-3/6/22	04:00:00.000	(1)	241	24.00	0	0.00	380	24.00	0	0.00
Mon-3/7/22	04:00:00.000		240	24.00	0	0.00	380	24.00	0	0.00
Tue-3/8/22	04:00:00.000		241	24.00	0	0.00	379	24.00	0	0.00
Wed-3/9/22	04:00:00.000		241	24.00	0	0.00	380	24.00	0	0.00
Thu-3/10/22	04:00:00.000		240	24.00	0	0.00	379	24.00	0	0.00
Fri-3/11/22	04:00:00.000		240	24.00	0	0.00	380	24.00	0	0.00
Sat-3/12/22	04:00:00.000	(1)	241	24.00	0	0.00	379	24.00	0	0.00
Sun-3/13/22	04:00:00.000	(1)	241	22.98	0	0.00	380	22.98	0	0.00
Mon-3/14/22	04:00:00.000		240	24.00	0	0.00	380	24.00	0	0.00
Tue-3/15/22	04:00:00.000		240	24.00	0	0.00	380	24.00	0	0.00
Wed-3/16/22	04:00:00.000		241	24.00	0	0.00	380	24.00	0	0.00
Thu-3/17/22	04:00:00.000		240	24.00	0	0.00	380	24.00	0	0.00
Fri-3/18/22	04:00:00.000		240	24.00	0	0.00	379	24.00	0	0.00
Sat-3/19/22	04:00:00.000	(1)	241	24.00	0	0.00	380	24.00	0	0.00
Sun-3/20/22	04:00:00.000	(1)	240	24.00	0	0.00	380	24.00	0	0.00
Mon-3/21/22	04:00:00.000		241	24.00	0	0.00	380	24.00	0	0.00
Tue-3/22/22	04:00:00.000		240	24.00	0	0.00	381	24.00	0	0.00
Wed-3/23/22	04:00:00.000		241	24.00	0	0.00	379	24.00	0	0.00
Thu-3/24/22	04:00:00.000		240	24.00	0	0.00	380	23.72	0	0.00
Fri-3/25/22	04:00:00.000		240	17.93	0	0.00	380	19.48	0	0.00
Sat-3/26/22	04:00:00.000	(1)	240	24.00	0	0.00	380	24.00	0	0.00
Sun-3/27/22	04:00:00.000	(1)	240	23.13	0	0.00	379	22.60	0	0.00
Mon-3/28/22	04:00:00.000		241	24.00	0	0.00	380	24.00	0	0.00
Tue-3/29/22	04:00:00.000		241	24.00	0	0.00	381	22.98	0	0.00
Wed-3/30/22	04:00:00.000		240	7.50	0	0.00	380	6.47	0	0.00
Thu-3/31/22	04:00:00.000		241	9.25	0	0.00	380	10.57	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.

3/13/22 - Due to the start of daylight savings, the maximum run time on this date is 23 hours.
3/25/22 - Treatment was shut down due to power failure and associated repairs.
3/27/22 - Treatment System 2A was shut down briefly due to a VFD fault.
3/29/22 - Treatment System 2A was shut down briefly due to a VFD fault.
3/30/22-3/31/22 - Treatment was shut down for system maintenance.

GelmanSciences

TABLE #12

GREEN POND / DISCHARGE DATA

Month of: Mar-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
Tue-3/1/22	04:00:00.000		Y	-	-						643	925,606	24.00	-	-	-	-	-	-
Wed-3/2/22	04:00:00.000		Y	-	-						643	925,576	24.00	-	-	-	-	-	-
Thu-3/3/22	04:00:00.000		Y	-	-						642	925,111	24.00	-	-	-	-	-	-
Fri-3/4/22	04:00:00.000		Y	-	-						642	925,171	24.00	-	-	-	-	-	-
Sat-3/5/22	04:00:00.000	(1)		-	-						643	925,502	24.00	-	-	-	-	-	-
Sun-3/6/22	04:00:00.000	(1)		-	-						643	925,871	24.00	-	-	-	-	-	-
Mon-3/7/22	04:00:00.000		Y	-	-						643	925,552	24.00	-	-	-	-	-	-
Tue-3/8/22	04:00:00.000		Y	-	-						643	925,337	24.00	-	-	-	-	-	-
Wed-3/9/22	04:00:00.000		Y	-	-						642	913,086	23.72	-	-	-	-	-	-
Thu-3/10/22	04:00:00.000		Y	-	-						639	896,916	23.38	-	-	-	-	-	-
Fri-3/11/22	04:00:00.000		Y	-	-						643	925,490	24.00	-	-	-	-	-	-
Sat-3/12/22	04:00:00.000	(1)		-	-						642	925,018	24.00	-	-	-	-	-	-
Sun-3/13/22	04:00:00.000	(1)		-	-						643	886,443	22.98	-	-	-	-	-	-
Mon-3/14/22	04:00:00.000		Y	-	-						643	925,441	24.00	-	-	-	-	-	-
Tue-3/15/22	04:00:00.000		Y	-	-						643	925,413	24.00	-	-	-	-	-	-
Wed-3/16/22	04:00:00.000		Y	-	-						643	925,575	24.00	-	-	-	-	-	-
Thu-3/17/22	04:00:00.000		Y	-	-						643	925,786	24.00	-	-	-	-	-	-
Fri-3/18/22	04:00:00.000		Y	-	-						643	925,588	24.00	-	-	-	-	-	-
Sat-3/19/22	04:00:00.000	(1)		-	-						643	925,581	24.00	-	-	-	-	-	-
Sun-3/20/22	04:00:00.000	(1)		-	-						643	925,258	24.00	-	-	-	-	-	-
Mon-3/21/22	04:00:00.000		Y	-	-						643	925,443	24.00	-	-	-	-	-	-
Tue-3/22/22	04:00:00.000		Y	-	-						642	925,188	24.00	-	-	-	-	-	-
Wed-3/23/22	04:00:00.000		Y	-	-						643	925,409	24.00	-	-	-	-	-	-
Thu-3/24/22	04:00:00.000		Y	-	-						643	925,363	24.00	-	-	-	-	-	-
Fri-3/25/22	04:00:00.000		Y	-	-						616	708,780	19.17	-	-	-	-	-	-
Sat-3/26/22	04:00:00.000	(1)		-	-						643	925,429	24.00	-	-	-	-	-	-
Sun-3/27/22	04:00:00.000	(1)		-	-						631	873,072	23.07	-	-	-	-	-	-
Mon-3/28/22	04:00:00.000		Y	-	-						643	925,278	24.00	-	-	-	-	-	-
Tue-3/29/22	04:00:00.000		Y	-	-						632	909,906	24.00	-	-	-	-	-	-
Wed-3/30/22	04:00:00.000		Y	-	-						615	279,368	7.57	-	-	-	-	-	-
Thu-3/31/22	04:00:00.000		Y	-	-						634	358,899	9.43	-	-	-	-	-	-
		TOTALS			-	-		-	-			27,111,456	705		-	-		-	-

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
3/1/2022	0.926	*G	*G	5	0.460	<0.50	<0.16	no	no	7.0	7.0	6.8	
3/2/2022	0.926			6	0.440	<0.50	<0.16	no	yes	7.1	7.1	11	45
3/3/2022	0.925			6	0.440	<0.50	<0.16	no	no	7.0	7.0	10	
3/4/2022	0.925				0.520	<0.50	<0.16	no	no	7.0	7.0		
3/5/2022	0.926												
3/6/2022	0.926			6								7.6	
3/7/2022	0.926			6	0.460	<0.50	<0.16	yes	yes	6.9	6.9	10	38
3/8/2022	0.925			6	0.510	<0.50	<0.16	no	no	6.9	6.9	8.8	
3/9/2022	0.913			7	0.440	<0.50	<0.16	no	yes	6.9	6.9	8.6	45
3/10/2022	0.897			6	0.430	<0.50	<0.16	no	no	6.9	6.9	11	
3/11/2022	0.925				0.440	<0.50	<0.16	no	no	6.9	6.9		
3/12/2022	0.925												
3/13/2022	0.886			6								8.6	
3/14/2022	0.925			6	0.430	<0.50	<0.16	yes	yes	7.0	7.0	10	40
3/15/2022	0.925			6	0.460	<0.50	<0.16	no	no	7.0	7.0	9.2	
3/16/2022	0.926			6	0.420	<0.50	<0.16	no	yes	6.9	6.9	9.4	45
3/17/2022	0.926			6	0.470	<0.50	<0.16	no	no	6.9	6.9	8.6	
3/18/2022	0.926				0.470	<0.50	<0.16	no	no	7.0	7.0		
3/19/2022	0.926												
3/20/2022	0.925			6								7.6	
3/21/2022	0.925			6	0.440	<0.50	<0.16	yes	yes	7.0	7.0	9.6	42
3/22/2022	0.925			6	0.440	<0.50	<0.16	no	no	6.9	6.9	8.5	
3/23/2022	0.925			6	0.460	<0.50	<0.16	no	yes	6.9	6.9	8.9	48
3/24/2022	0.925			7	0.420	<0.50	<0.16	no	no	6.9	6.9	11	
3/25/2022	0.709					<0.50	<0.16	no	no	6.9	6.9		
3/26/2022	0.925												
3/27/2022	0.873			6								8.6	
3/28/2022	0.925			6	0.420	<0.50	<0.16	yes	yes	6.9	6.9	11	58
3/29/2022	0.910			6	0.430	<0.50	<0.16	no	no	6.9	6.9	9.6	
3/30/2022	0.279				0.370	<0.50	<0.16	no	no	6.9	6.9		46
3/31/2022	0.359			8	0.520	<0.50	<0.16	no	no	7.0	7.0	5.2	
Discharged	**27.111**												
Monthly Avg	**0.875**			**6.1**								**9.1**	

3/13/22 - Due to the start of daylight savings, the maximum run time on this date is 23 hours.