FLEIS&VANDENBRINK
DESIGN. BUILD. OPERATE.

November 19, 2021

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

Re: Gelman Sciences Monitoring Report #294
October 1 – October 31, 2021

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 October 1 through October 31, 2021.

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: Oct-21

	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-10/1/21	-		-	-		-	-		-	144,301	100	24.00	100	144,301
Sat-10/2/21	-		-	-		-	-		-	144,315	100	24.00	100	144,315
Sun-10/3/21	-		-	50,450	50	16.90	-		-	144,341	100	24.00	135	194,791
Mon-10/4/21	-		-	21,395	50	7.08	17,509	20	14.68	144,326	100	24.00	127	183,230
Tue-10/5/21	-		-	-		-	29,063	20	24.00	144,299	100	24.00	120	173,362
Wed-10/6/21	-		-	-		-	28,953	20	24.00	144,297	100	24.00	120	173,250
Thu-10/7/21	-		-	-		-	28,952	20	24.00	143,810	100	23.93	120	172,762
Fri-10/8/21	-		-	-		-	29,018	20	24.00	144,308	100	24.00	120	173,326
Sat-10/9/21	-		-	-		-	28,977	20	24.00	144,363	100	24.00	120	173,340
Sun-10/10/21	-		-	-		-	29,066	20	24.00	144,340	100	24.00	120	173,406
Mon-10/11/21	-		-	-		-	34,168	24	24.00	144,383	100	24.00	124	178,551
Tue-10/12/21	-		-	-		-	10,329	25	6.95	144,186	100	24.00	107	154,515
Wed-10/13/21	-		-	-		-	18,334	25	12.33	144,212	100	24.00	113	162,546
Thu-10/14/21	-		-	-		-	36,325	25	24.00	144,342	100	24.00	125	180,667
Fri-10/15/21	-		-	-		-	36,297	25	24.00	144,292	100	24.00	125	180,589
Sat-10/16/21	-		-	-		-	36,249	25	24.00	144,241	100	24.00	125	180,490
Sun-10/17/21	-		-	-		-	36,189	25	24.00	144,221	100	24.00	125	180,410
Mon-10/18/21	-		-	-		-	36,241	25	24.00	144,239	100	24.00	125	180,480
Tue-10/19/21	-		-	-		-	36,230	25	24.00	144,264	100	24.00	125	180,494
Wed-10/20/21	-		-	-		-	41,475	29	24.00	144,279	100	24.00	129	185,754
Thu-10/21/21	-		-	-		-	43,405	30	24.00	144,255	100	24.00	130	187,660
Fri-10/22/21	-		-	-		-	38,713	27	24.00	144,188	100	24.00	127	182,901
Sat-10/23/21	-		-	-		-	36,103	25	24.00	144,188	100	24.00	125	180,291
Sun-10/24/21	-		-	-		-	41,818	29	24.00	144,122	100	24.00	129	185,940
Mon-10/25/21	-		-	-		-	48,237	33	24.00	143,196	100	23.85	133	191,433
Tue-10/26/21	-		-	-		-	54,209	38	24.00	142,731	100	23.77	137	196,940
Wed-10/27/21	-		-	30,846	51	10.13	67,527	47	24.00	149,823	104	24.00	172	248,196
Thu-10/28/21	-		-	-		-	57,867	40	24.00	144,212	100	24.00	140	202,079
Fri-10/29/21	-		-	-		-	57,854	40	24.00	144,196	100	24.00	140	202,050
Sat-10/30/21	-		-	-		-	57,826	40	24.00	143,765	100	24.00	140	201,591
Sun-10/31/21	-		-	-		-	57,838	40	24.00	144,162	100	24.00	140	202,000
TOTALS	-		-	102,691	50	34.12	1,074,772	28	633.97	4,474,197	100	743.55	127	5,651,660

TOTAL VOLUME EXTRACTED :	5,651,660 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	126.61 GPM

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TABLE #2

UNIT D2 DOWNGRADIENT EXTRACTION DATA

Month of: Oct-21

Date	LB-1 Gallons	GPM	Run Hrs.	LB-4 Gallons	GPM	Run Hrs.	Daily Flow GPM	Daily Total Gallons
Fri-10/1/21	-		-	144,237	100	24.00	100	144,237
Sat-10/2/21	-		-	144,250	100	24.00	100	144,250
Sun-10/3/21	-		-	144,216	100	24.00	100	144,216
Mon-10/4/21	-		-	144,245	100	24.00	100	144,245
Tue-10/5/21	-		-	144,227	100	24.00	100	144,227
Wed-10/6/21	-		-	144,244	100	24.00	100	144,244
Thu-10/7/21	-		-	144,225	100	24.00	100	144,225
Fri-10/8/21	-		-	144,250	100	24.00	100	144,250
Sat-10/9/21	-		-	144,251	100	24.00	100	144,251
Sun-10/10/21	-		-	144,202	100	24.00	100	144,202
Mon-10/11/21	-		-	144,225	100	24.00	100	144,225
Tue-10/12/21	-		-	144,203	100	24.00	100	144,203
Wed-10/13/21	-		-	144,237	100	24.00	100	144,237
Thu-10/14/21	-		-	144,242	100	24.00	100	144,242
Fri-10/15/21	-		-	144,206	100	24.00	100	144,206
Sat-10/16/21	-		-	144,221	100	24.00	100	144,221
Sun-10/17/21	-		-	144,196	100	24.00	100	144,196
Mon-10/18/21	-		-	144,212	100	24.00	100	144,212
Tue-10/19/21	-		-	144,219	100	24.00	100	144,219
Wed-10/20/21	-		-	144,223	100	24.00	100	144,223
Thu-10/21/21	-		-	144,222	100	24.00	100	144,222
Fri-10/22/21	-		-	144,265	100	24.00	100	144,265
Sat-10/23/21	-		-	144,238	100	24.00	100	144,238
Sun-10/24/21	-		-	144,196	100	24.00	100	144,196
Mon-10/25/21	-		-	143,353	100	23.86	100	143,353
Tue-10/26/21	49,624	65	12.75	45,507	95	7.95	66	95,131
Wed-10/27/21	35,274	65	9.06	-		-	24	35,274
Thu-10/28/21	93,741	65	24.00	-		-	65	93,741
Fri-10/29/21	93,739	65	24.00	-		-	65	93,739
Sat-10/30/21	93,737	65	24.00	-		-	65	93,737
Sun-10/31/21	93,725	65	24.00	-		-	65	93,725
TOTALS	**459,840**	**65**	**117.81**	**3,650,312**	**100**	**607.81**	**92**	**4,110,152**

TOTAL VOLUME EXTRACTED :	4,110,152 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	92.07 GPM

10/26/21-10/31/21 - LB-4 was shut down for rehabilitation.

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TABLE #3

CORE AREA EXTRACTION DATA

Month of: Oct-21

Core Area Well Extraction

Date	TW-1 Gallons	TW-1 GPM	TW-1 Run Hrs.	TW-2 (Dolph) Gallons	TW-2 (Dolph) GPM	TW-2 (Dolph) 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.	Daily Flow GPM	Daily Total Gallons
Fri-10/1/21	-		-	-		-	-		-	-		-	19,058	41	7.83	36,020	25	24.00	-		-	38	55,078
Sat-10/2/21	-		-	-		-	-		-	-		-	-		-	35,978	25	24.00	-		-	25	35,978
Sun-10/3/21	-		-	-		-	-		-	45,239	44	17.18	41,503	40	17.20	35,923	25	24.00	-		-	85	122,665
Mon-10/4/21	-		-	-		-	-		-	18,864	44	7.12	57,947	40	24.00	36,246	25	24.00	13,008	15	14.45	88	126,065
Tue-10/5/21	-		-	-		-	-		-	-		-	57,498	40	24.00	35,623	25	24.00	21,421	15	24.00	80	114,542
Wed-10/6/21	-		-	-		-	-		-	-		-	57,631	40	24.00	34,734	24	24.00	21,434	15	24.00	79	113,799
Thu-10/7/21	-		-	-		-	-		-	-		-	57,816	40	24.00	34,539	24	24.00	21,512	15	24.00	79	113,867
Fri-10/8/21	-		-	-		-	-		-	-		-	57,950	40	24.00	34,489	24	24.00	21,547	15	24.00	79	113,986
Sat-10/9/21	-		-	-		-	-		-	-		-	58,012	40	24.00	34,449	24	24.00	21,530	15	24.00	79	113,991
Sun-10/10/21	-		-	-		-	-		-	-		-	58,100	40	24.00	34,431	24	24.00	21,539	15	24.00	79	114,070
Mon-10/11/21	-		-	-		-	-		-	-		-	58,173	40	24.00	35,473	25	24.00	21,511	15	24.00	80	115,157
Tue-10/12/21	-		-	29,666	31	15.85	-		-	-		-	19,069	40	7.88	14,710	25	9.82	21,513	15	24.00	59	84,958
Wed-10/13/21	-		-	38,027	26	24.00	-		-	-		-	26,657	40	11.12	-		-	21,524	15	24.00	60	86,188
Thu-10/14/21	-		-	34,385	24	24.00	-		-	-		-	57,742	40	24.00	-		-	21,531	15	24.00	79	113,658
Fri-10/15/21	-		-	34,539	24	24.00	-		-	-		-	57,797	40	24.00	16,906	25	11.18	21,501	15	24.00	91	130,743
Sat-10/16/21	-		-	34,667	24	24.00	-		-	-		-	57,482	40	24.00	36,211	25	24.00	21,376	15	24.00	104	149,736
Sun-10/17/21	-		-	34,755	24	24.00	-		-	-		-	57,559	40	24.00	36,120	25	24.00	21,294	15	24.00	104	149,728
Mon-10/18/21	-		-	34,748	24	24.00	-		-	-		-	57,582	40	24.00	36,020	25	24.00	21,269	15	24.00	104	149,619
Tue-10/19/21	-		-	34,763	24	24.00	-		-	-		-	57,714	40	24.00	36,044	25	24.00	21,274	15	24.00	104	149,795
Wed-10/20/21	-		-	34,777	24	24.00	-		-	-		-	57,839	40	24.00	35,897	25	24.00	21,305	15	24.00	104	149,818
Thu-10/21/21	-		-	34,897	24	24.00	-		-	-		-	25,770	40	10.68	11,055	25	7.37	9,502	16	10.20	56	81,224
Fri-10/22/21	-		-	35,045	24	24.00	-		-	-		-	-		-	-		-	-		-	24	35,045
Sat-10/23/21	-		-	35,080	24	24.00	-		-	-		-	-		-	-		-	-		-	24	35,080
Sun-10/24/21	-		-	35,131	24	24.00	-		-	-		-	-		-	-		-	-		-	24	35,131
Mon-10/25/21	-		-	36,133	25	23.65	-		-	-		-	-		-	20,644	25	13.60	-		-	39	56,777
Tue-10/26/21	-		-	41,039	29	23.78	-		-	-		-	-		-	39,120	27	24.00	-		-	56	80,159
Wed-10/27/21	-		-	42,074	29	24.00	-		-	9,535	44	3.65	45,387	50	15.20	47,392	33	24.00	-		-	100	144,388
Thu-10/28/21	-		-	42,059	29	24.00	-		-	-		-	72,256	50	24.00	43,469	30	24.00	-		-	110	157,784
Fri-10/29/21	-		-	42,080	29	24.00	-		-	-		-	14,521	50	4.80	43,455	30	24.00	-		-	69	100,056
Sat-10/30/21	-		-	42,086	29	24.00	-		-	-		-	-		-	43,436	30	24.00	-		-	59	85,522
Sun-10/31/21	-		-	42,107	29	24.00	-		-	-		-	-		-	43,448	30	24.00	-		-	59	85,555
TOTALS	-		-	738,058	26	471.28	-		-	73,638	44	27.95	1,131,043	41	458.72	891,832	26	569.97	365,591	15	408.65	72	3,200,162

TOTAL VOLUME EXTRACTED :	3,200,162	GALLONS
DAYS IN MONTH :	31	DAYS
MONTHLY AVERAGE FLOW RATE :	71.69	GPM

10/1/21-10/12/21 - TW-2 (Dolph) was shut down for rehabilitation.
10/1/21-10/4/21 - TW-24 was shut down to control Red Pond level.
10/12/21-10/15/21 - TW-20 was shut down to control Red Pond level.
10/21/21-10/25/21 - TW-20 was shut down to control Red Pond level.
10/21/21-10/31/21 - TW-24 was shut down to control Red Pond level.

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MARSHY AREA EXTRACTION DATA

Month of: Oct-21

Marshy Well Extraction				Daily	Daily
	PW-1			Flow	Total
Date	Gallons	GPM	Run Hrs.	GPM	Gallons
Fri-10/1/21	3,345	2	24.00	2	3,345
Sat-10/2/21	3,331	2	24.00	2	3,331
Sun-10/3/21	3,294	2	24.00	2	3,294
Mon-10/4/21	3,302	2	24.00	2	3,302
Tue-10/5/21	3,319	2	24.00	2	3,319
Wed-10/6/21	3,329	2	24.00	2	3,329
Thu-10/7/21	3,317	2	24.00	2	3,317
Fri-10/8/21	3,308	2	24.00	2	3,308
Sat-10/9/21	3,301	2	24.00	2	3,301
Sun-10/10/21	3,264	2	24.00	2	3,264
Mon-10/11/21	3,267	2	24.00	2	3,267
Tue-10/12/21	3,271	2	24.00	2	3,271
Wed-10/13/21	3,330	2	24.00	2	3,330
Thu-10/14/21	3,393	2	24.00	2	3,393
Fri-10/15/21	3,293	2	24.00	2	3,293
Sat-10/16/21	3,247	2	24.00	2	3,247
Sun-10/17/21	3,177	2	24.00	2	3,177
Mon-10/18/21	1,222	2	9.02	1	1,222
Tue-10/19/21	-		-		-
Wed-10/20/21	-		-		-
Thu-10/21/21	-		-		-
Fri-10/22/21	-		-		-
Sat-10/23/21	-		-		-
Sun-10/24/21	-		-		-
Mon-10/25/21	1,275	2	13.57	1	1,275
Tue-10/26/21	2,361	2	24.00	2	2,361
Wed-10/27/21	2,418	2	24.00	2	2,418
Thu-10/28/21	2,427	2	24.00	2	2,427
Fri-10/29/21	2,472	2	24.00	2	2,472
Sat-10/30/21	2,477	2	24.00	2	2,477
Sun-10/31/21	2,461	2	24.00	2	2,461
TOTALS	**73,201**	**2**	**574.58**	**2**	**73,201**

TOTAL VOLUME EXTRACTED :	73,201 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	1.64 GPM

10/18/21-10/25/21 - PW-1 was shut down for rehabilitation.

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TABLE #5

SOUTHWEST AREA EXTRACTION DATA

Month of: Oct-21

SouthWest Well Extraction							Daily	Daily
	TW22			TW28			Flow	Total
Date	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	GPM	Gallons
Fri-10/1/21	1,674	2	15.60	35,973	25	24.00	26	37,647
Sat-10/2/21	2,472	2	24.00	35,915	25	24.00	27	38,387
Sun-10/3/21	2,470	2	24.00	35,880	25	24.00	27	38,350
Mon-10/4/21	2,461	2	24.00	35,871	25	24.00	27	38,332
Tue-10/5/21	2,463	2	24.00	35,836	25	24.00	27	38,299
Wed-10/6/21	2,459	2	24.00	35,780	25	24.00	27	38,239
Thu-10/7/21	2,457	2	24.00	35,831	25	24.00	27	38,288
Fri-10/8/21	2,457	2	24.00	35,824	25	24.00	27	38,281
Sat-10/9/21	2,454	2	24.00	35,781	25	24.00	27	38,235
Sun-10/10/21	2,451	2	24.00	35,774	25	24.00	27	38,225
Mon-10/11/21	2,453	2	24.00	35,780	25	24.00	27	38,233
Tue-10/12/21	2,467	2	24.00	35,973	25	24.00	27	38,440
Wed-10/13/21	2,700	2	22.73	35,841	25	24.00	27	38,541
Thu-10/14/21	3,194	2	24.00	35,626	25	24.00	27	38,820
Fri-10/15/21	3,167	2	24.00	35,931	25	24.00	27	39,098
Sat-10/16/21	3,177	2	24.00	35,689	25	24.00	27	38,866
Sun-10/17/21	3,199	2	24.00	35,634	25	24.00	27	38,833
Mon-10/18/21	3,188	2	24.00	36,252	25	24.00	27	39,440
Tue-10/19/21	3,302	2	24.00	36,221	25	24.00	27	39,523
Wed-10/20/21	3,408	2	24.00	36,078	25	24.00	27	39,486
Thu-10/21/21	3,241	2	24.00	36,133	25	24.00	27	39,374
Fri-10/22/21	3,123	2	24.00	36,137	25	24.00	27	39,260
Sat-10/23/21	3,158	2	24.00	36,036	25	24.00	27	39,194
Sun-10/24/21	3,165	2	24.00	36,018	25	24.00	27	39,183
Mon-10/25/21	2,716	2	23.85	35,713	25	23.85	27	38,429
Tue-10/26/21	2,407	2	24.00	35,790	25	24.00	27	38,197
Wed-10/27/21	2,407	2	24.00	35,718	25	24.00	26	38,125
Thu-10/28/21	2,986	2	24.00	35,727	25	24.00	27	38,713
Fri-10/29/21	3,341	2	24.00	36,310	25	24.00	28	39,651
Sat-10/30/21	3,349	2	24.00	36,261	25	24.00	28	39,610
Sun-10/31/21	3,362	2	24.00	36,251	25	24.00	28	39,613
TOTALS	87,328	2	734.18	1,113,584	25	743.85	27	1,200,912

TOTAL VOLUME EXTRACTED :	1,200,912 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	26.90 GPM

10/1/21 - TW-22 was shut down for rehabilitation.
10/13/21 - TW-22 flow was briefly reduced below detectable rates during sampling.

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TABLE #6

UNIT "E" EXTRACTION DATA

Month of: Oct-21

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-10/1/21	-			-		-	147,803	103	24.00	71,892	50	24.00	33,299	50	11.08	176	252,994
Sat-10/2/21	-			-		-	147,786	103	24.00	71,941	50	24.00	-		-	153	219,727
Sun-10/3/21	-			-		-	147,780	103	24.00	71,897	50	24.00	50,631	50	16.85	188	270,308
Mon-10/4/21	-			34,891	40	14.45	147,788	103	24.00	71,903	50	24.00	72,029	50	24.00	227	326,611
Tue-10/5/21	-			57,806	40	24.00	147,779	103	24.00	71,955	50	24.00	72,204	50	24.00	243	349,744
Wed-10/6/21	-			57,813	40	24.00	147,819	103	24.00	71,844	50	24.00	72,154	50	24.00	243	349,630
Thu-10/7/21	-			57,831	40	24.00	147,368	103	23.92	71,934	50	24.00	72,118	50	24.00	243	349,251
Fri-10/8/21	-			57,801	40	24.00	147,837	103	24.00	71,695	50	23.91	71,888	50	23.91	243	349,221
Sat-10/9/21	-			57,800	40	24.00	147,841	103	24.00	71,902	50	24.00	72,167	50	24.00	243	349,710
Sun-10/10/21	-			57,918	40	24.00	147,856	103	24.00	71,906	50	24.00	72,108	50	24.00	243	349,788
Mon-10/11/21	-			57,835	40	24.00	147,867	103	24.00	71,876	50	24.00	72,133	50	24.00	243	349,711
Tue-10/12/21	-			19,005	40	7.88	147,949	103	24.00	71,532	50	23.86	71,844	50	23.86	216	310,330
Wed-10/13/21	-			26,796	40	11.12	147,935	103	24.00	70,586	50	23.55	71,078	50	23.61	220	316,395
Thu-10/14/21	-			57,836	40	24.00	147,928	103	24.00	71,901	50	24.00	72,085	50	24.00	243	349,750
Fri-10/15/21	-			30,971	40	12.85	147,908	103	24.00	71,917	50	24.00	72,091	50	24.00	224	322,887
Sat-10/16/21	-			-		-	147,878	103	24.00	71,891	50	24.00	72,156	50	24.00	203	291,925
Sun-10/17/21	-			-		-	147,849	103	24.00	71,897	50	24.00	72,256	50	24.00	203	292,002
Mon-10/18/21	-			-		-	147,838	103	24.00	71,923	50	24.00	72,252	50	24.00	203	292,013
Tue-10/19/21	-			-		-	147,829	103	24.00	71,937	50	24.00	72,112	50	24.00	203	291,878
Wed-10/20/21	-			-		-	147,830	103	24.00	71,919	50	24.00	72,186	50	24.00	203	291,935
Thu-10/21/21	-			44,073	55	13.30	147,754	103	24.00	71,963	50	24.00	72,114	50	24.00	233	335,904
Fri-10/22/21	-			79,374	55	24.00	147,645	103	24.00	71,752	50	23.95	72,010	50	23.95	257	370,781
Sat-10/23/21	-			79,388	55	24.00	147,649	103	24.00	71,880	50	24.00	72,132	50	24.00	258	371,049
Sun-10/24/21	-			79,347	55	24.00	147,572	102	24.00	71,891	50	24.00	72,170	50	24.00	258	370,980
Mon-10/25/21	-			78,878	55	23.83	146,563	102	23.88	71,458	50	23.85	71,655	50	23.85	256	368,554
Tue-10/26/21	-			79,398	55	24.00	147,119	102	23.93	53,742	44	20.56	61,884	50	20.55	238	342,143
Wed-10/27/21	-			79,370	55	24.00	178,272	124	24.00	26,987	50	9.01	27,278	50	9.05	217	311,907
Thu-10/28/21	-			79,353	55	24.00	147,545	102	24.00	71,849	50	24.00	72,265	50	24.00	258	371,012
Fri-10/29/21	-			79,427	55	24.00	147,519	102	24.00	71,545	50	23.86	71,896	50	23.86	257	370,387
Sat-10/30/21	-			79,407	55	24.00	147,072	102	23.93	71,875	50	24.00	72,271	50	24.00	257	370,625
Sun-10/31/21	-			79,401	55	24.00	147,509	102	24.00	71,874	50	24.00	72,144	50	24.00	258	370,928
TOTALS	-		-	1,411,719	47	491.43	4,608,687	103	743.67	2,163,064	50	724.55	2,046,610	50	680.57	229	10,230,080

TOTAL VOLUME EXTRACTED :	10,230,080 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	229.17 GPM

10/1/21-10/3/21 - TW-23 was shut down due to flow fluctuations during TW-29 initial startup.
10/26/21-10/27/21 - TW-29 and TW-23 were shut down during LB-4 cleaning.

GelmanSciences

TABLE #7

Little Lake Area System

MW-53i	
Date	1,4-Dioxane ug/L
07/01/21	55
08/02/21	37
09/01/21	57
10/04/21	38

A2 Cleaning Supply Well	
Date	1,4-Dioxane ug/L
07/01/21	49
08/02/21	38
09/01/21	44
10/04/21	51

GelmanSciences

TABLE #8

INDIVIDUAL PURGE WELL CONCENTRATIONS

SAMPLE ID	Date Sampled	1,4-DIOXANE (ppb)
DOLPH-10-12-21-14:05-1	10/12/21	120
DOLPH-10-13-21-11:10-1	10/13/21	120
TW-14-10-05-21-09:15-1	10/05/21	100
TW-14-10-14-21-11:00-1	10/14/21	110
TW-14-10-21-21-10:15-1	10/21/21	110
TW-14-10-28-21-10:30-1	10/28/21	110
TW-20-10-18-21-12:40-1	10/18/21	830
TW-20-10-26-21-10:45-1	10/26/21	720
TW-24-10-05-21-09:25-1	10/05/21	1900
TW-24-10-15-21-10:28-1	10/15/21	1800
TW-24-10-21-21-10:35-1	10/21/21	1900
LB-1-10-26-21-10:30-1	10/26/21	290
LB-4-10-13-21-10:25-1	10/13/21	430
TW-21-10-13-21-10:55-1	10/13/21	240
TW-5-10-05-21-09:05-1	10/05/21	610
TW-5-10-14-21-10:50-1	10/14/21	590
TW-5-10-21-21-13:30-1	10/21/21	630
TW-11-10-05-21-09:10-1	10/05/21	160
TW-11-10-14-21-10:55-1	10/14/21	160
TW-11-10-21-21-13:35-1	10/21/21	160
TW-17-10-05-21-09:20-1	10/05/21	100
TW-17-10-14-21-11:05-1	10/14/21	77
TW-17-10-22-21-10:30-1	10/22/21	77
TW-18-10-13-21-11:00-1	10/13/21	260
TW-23-10-13-21-10:30-1	10/13/21	380
TW-29-10-01-21-10:30-1	10/01/21	450
TW-29-10-13-21-10:45-1	10/13/21	290
PW-1-10-13-21-11:05-1	10/13/21	760
PW-1-10-26-21-10:40-1	10/26/21	640
TW-22-10-01-21-11:15-1	10/01/21	450
TW-22-10-13-21-11:15-1	10/13/21	420
TW-22-10-21-21-10:25-1	10/21/21	400
TW-28-10-13-21-11:20-1	10/13/21	640
TW-28-10-21-21-10:30-1	10/21/21	490

GelmanSciences **TABLE #9**

RED POND DATA

Month of: Oct-21

Date	Time	Notes	Red Pond Pond Visual Chk	Level Feet	Aeration Hours	Influent Hours	Influent GPM
Fri-10/1/21	04:00:00.000		Y	3.7	-	24.00	443
Sat-10/2/21	04:00:00.000	(1)		2.6	-	24.00	407
Sun-10/3/21	04:00:00.000	(1)		3.9	-	24.00	537
Mon-10/4/21	04:00:00.000		Y	4.3	-	24.00	571
Tue-10/5/21	04:00:00.000		Y	4.3	-	24.00	572
Wed-10/6/21	04:00:00.000		Y	4.2	-	24.00	571
Thu-10/7/21	04:00:00.000		Y	4.2	-	24.00	571
Fri-10/8/21	04:00:00.000		Y	4.1	-	24.00	571
Sat-10/9/21	04:00:00.000	(1)		4.0	-	24.00	571
Sun-10/10/21	04:00:00.000	(1)		4.0	-	24.00	571
Mon-10/11/21	04:00:00.000		Y	4.8	-	24.00	576
Tue-10/12/21	04:00:00.000		Y	4.7	-	24.00	511
Wed-10/13/21	04:00:00.000		Y	4.4	-	24.00	522
Thu-10/14/21	04:00:00.000		Y	4.5	-	24.00	577
Fri-10/15/21	04:00:00.000		Y	5.0	-	24.00	570
Sat-10/16/21	04:00:00.000	(1)		4.9	-	24.00	561
Sun-10/17/21	04:00:00.000	(1)		4.7	-	24.00	561
Mon-10/18/21	04:00:00.000		Y	4.5	-	24.00	560
Tue-10/19/21	04:00:00.000		Y	4.2	-	24.00	560
Wed-10/20/21	04:00:00.000		Y	4.1	-	24.00	563
Thu-10/21/21	04:00:00.000		Y	5.0	-	24.00	547
Fri-10/22/21	04:00:00.000		Y	4.9	-	24.00	536
Sat-10/23/21	04:00:00.000	(1)		4.4	-	24.00	535
Sun-10/24/21	04:00:00.000	(1)		4.1	-	24.00	538
Mon-10/25/21	04:00:00.000		Y	4.3	-	24.00	555
Tue-10/26/21	04:00:00.000		Y	3.5	-	24.00	524
Wed-10/27/21	04:00:00.000		Y	3.7	-	24.00	542
Thu-10/28/21	04:15:00.000		Y	4.2	-	24.00	601
Fri-10/29/21	04:00:00.000		Y	4.2	-	24.00	561
Sat-10/30/21	04:00:00.000	(1)		4.1	-	24.00	551
Sun-10/31/21	04:00:00.000	(1)		4.1	-	24.00	552
		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-10-04-21-06:25-1	10/4/2021	390
Red Pond-10-11-21-07:20-1	10/11/2021	400
Red Pond-10-12-21-07:15-1	10/12/2021	390
Red Pond-10-13-21-07:25-1	10/13/2021	390
Red Pond-10-14-21-07:25-1	10/14/2021	360
Red Pond-10-14-21-07:25-2	10/14/2021	360
Red Pond-10-15-21-08:00-1	10/15/2021	330
Red Pond-10-18-21-07:10-1	10/18/2021	430
Red Pond-10-19-21-07:05-1	10/19/2021	410
Red Pond-10-20-21-07:00-1	10/20/2021	400
Red Pond-10-21-21-07:20-1	10/21/2021	390
Red Pond-10-22-21-07:05-1	10/22/2021	350
Red Pond-10-25-21-07:15-1	10/25/2021	320
Red Pond-10-26-21-07:10-1	10/26/2021	260
Red Pond-10-27-21-05:50-1	10/27/2021	340
Red Pond-10-28-21-07:15-1	10/28/2021	320
Red Pond-10-29-21-07:15-1	10/29/2021	200

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

GelmanSciences

TABLE #11

OZONE OPERATION REPORT

Month of: Oct-21

Date	Time	Notes	SYSTEM-1A Flow GPM	SYSTEM-1A Run Hours	SYSTEM-1B Flow GPM	SYSTEM-1B Run Hours	SYSTEM-2A Flow GPM	SYSTEM-2A Run Hours	SYSTEM-2B Flow GPM	SYSTEM-2B Run Hours
Fri-10/1/21	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
Sat-10/2/21	04:00:00	(1)	241	24.00	0	0.00	240	24.00	0	0.00
Sun-10/3/21	04:00:00	(1)	241	24.00	0	0.00	238	24.00	0	0.00
Mon-10/4/21	04:00:00		240	24.00	0	0.00	380	22.93	0	0.00
Tue-10/5/21	04:00:00		240	24.00	0	0.00	380	24.00	0	0.00
Wed-10/6/21	04:00:00		240	24.00	0	0.00	380	24.00	0	0.00
Thu-10/7/21	04:00:00		241	24.00	0	0.00	380	24.00	0	0.00
Fri-10/8/21	04:00:00		240	24.00	0	0.00	380	24.00	0	0.00
Sat-10/9/21	04:00:00	(1)	241	24.00	0	0.00	380	24.00	0	0.00
Sun-10/10/21	04:00:00	(1)	241	24.00	0	0.00	380	24.00	0	0.00
Mon-10/11/21	04:00:00		240	24.00	0	0.00	379	24.00	0	0.00
Tue-10/12/21	04:00:00		241	24.00	0	0.00	380	24.00	0	0.00
Wed-10/13/21	04:00:00		241	24.00	0	0.00	380	24.00	0	0.00
Thu-10/14/21	04:00:00		241	24.00	0	0.00	380	24.00	0	0.00
Fri-10/15/21	04:00:00		240	24.00	0	0.00	380	21.68	0	0.00
Sat-10/16/21	04:00:00	(1)	240	24.00	0	0.00	380	24.00	0	0.00
Sun-10/17/21	04:00:00	(1)	240	24.00	0	0.00	380	24.00	0	0.00
Mon-10/18/21	04:00:00		239	24.00	0	0.00	380	24.00	0	0.00
Tue-10/19/21	04:00:00		240	24.00	0	0.00	380	24.00	0	0.00
Wed-10/20/21	04:00:00		240	24.00	0	0.00	379	24.00	0	0.00
Thu-10/21/21	04:00:00		240	24.00	0	0.00	380	23.82	0	0.00
Fri-10/22/21	04:00:00		240	24.00	0	0.00	380	24.00	0	0.00
Sat-10/23/21	04:00:00	(1)	241	24.00	0	0.00	380	24.00	0	0.00
Sun-10/24/21	04:00:00	(1)	241	24.00	0	0.00	380	24.00	0	0.00
Mon-10/25/21	04:00:00		240	23.30	0	0.00	380	23.73	0	0.00
Tue-10/26/21	04:00:00		241	24.00	0	0.00	380	24.00	0	0.00
Wed-10/27/21	04:00:00		240	24.00	0	0.00	380	24.00	0	0.00
Thu-10/28/21	04:15:00		240	24.00	0	0.00	379	24.00	0	0.00
Fri-10/29/21	04:00:00		240	24.00	0	0.00	379	24.00	0	0.00
Sat-10/30/21	04:00:00	(1)	240	24.00	0	0.00	380	24.00	0	0.00
Sun-10/31/21	04:00:00	(1)	241	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.

10/4/21 - Treatment System 2A was shut down briefly for injector installation.
10/15/21 - Treatment System 2A was shut down briefly for system maintenance.

GelmanSciences

TABLE #12

GREEN POND / DISCHARGE DATA

Month of: **Oct-21**

			Green Pond															
			Pond	Level	Aeration	Influent	Influent	Pond Discharge		Bypass Discharge			Recirc Thru UV to Pond			Recirc Thru UV to Disch		
Date	Time	Notes	Visual Chk	Feet	Hours	Hours	GPM	GPM	Gallons	GPM	Gallons	Hours	GPM	Gallons	Hours	GPM	Gallons	Hours
Fri-10/1/21	04:00:00		Y	-	-					499	718,340	24.00	-	-	-	-	-	-
Sat-10/2/21	04:00:00	(1)		-	-					499	718,379	24.00	-	-	-	-	-	-
Sun-10/3/21	04:00:00	(1)		-	-					499	718,591	24.00	-	-	-	-	-	-
Mon-10/4/21	04:00:00		Y	-	-					573	825,128	24.00	-	-	-	-	-	-
Tue-10/5/21	04:00:00		Y	-	-					642	923,909	24.00	-	-	-	-	-	-
Wed-10/6/21	04:00:00		Y	-	-					641	923,483	24.00	-	-	-	-	-	-
Thu-10/7/21	04:00:00		Y	-	-					642	923,828	24.00	-	-	-	-	-	-
Fri-10/8/21	04:00:00		Y	-	-					642	923,980	24.00	-	-	-	-	-	-
Sat-10/9/21	04:00:00	(1)		-	-					642	923,901	24.00	-	-	-	-	-	-
Sun-10/10/21	04:00:00	(1)		-	-					642	924,103	24.00	-	-	-	-	-	-
Mon-10/11/21	04:00:00		Y	-	-					642	924,209	24.00	-	-	-	-	-	-
Tue-10/12/21	04:00:00		Y	-	-					642	924,249	24.00	-	-	-	-	-	-
Wed-10/13/21	04:00:00		Y	-	-					642	924,129	24.00	-	-	-	-	-	-
Thu-10/14/21	04:00:00		Y	-	-					642	924,041	24.00	-	-	-	-	-	-
Fri-10/15/21	04:00:00		Y	-	-					601	865,011	24.00	-	-	-	-	-	-
Sat-10/16/21	04:00:00	(1)		-	-					642	923,808	24.00	-	-	-	-	-	-
Sun-10/17/21	04:00:00	(1)		-	-					641	923,711	24.00	-	-	-	-	-	-
Mon-10/18/21	04:00:00		Y	-	-					641	923,747	24.00	-	-	-	-	-	-
Tue-10/19/21	04:00:00		Y	-	-					642	923,828	24.00	-	-	-	-	-	-
Wed-10/20/21	04:00:00		Y	-	-					642	923,847	24.00	-	-	-	-	-	-
Thu-10/21/21	04:00:00		Y	-	-					637	916,714	24.00	-	-	-	-	-	-
Fri-10/22/21	04:00:00		Y	-	-					642	923,918	24.00	-	-	-	-	-	-
Sat-10/23/21	04:00:00	(1)		-	-					642	924,035	24.00	-	-	-	-	-	-
Sun-10/24/21	04:00:00	(1)		-	-					642	923,975	24.00	-	-	-	-	-	-
Mon-10/25/21	04:00:00		Y	-	-					633	902,577	23.77	-	-	-	-	-	-
Tue-10/26/21	04:00:00		Y	-	-					642	924,062	24.00	-	-	-	-	-	-
Wed-10/27/21	04:00:00		Y	-	-					642	924,060	24.00	-	-	-	-	-	-
Thu-10/28/21	04:15:00		Y	-	-					642	924,242	24.00	-	-	-	-	-	-
Fri-10/29/21	04:00:00		Y	-	-					642	924,234	24.00	-	-	-	-	-	-
Sat-10/30/21	04:00:00	(1)		-	-					642	924,031	24.00	-	-	-	-	-	-
Sun-10/31/21	04:00:00	(1)		-	-					642	923,876	24.00	-	-	-	-	-	-
	TOTALS				-	-			-		27,839,946	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 #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**
10/1/2020	0.718	*G	*G			<50	<0.16	no	no	7.0	7.0		
10/2/2020	0.718												
10/3/2020	0.719			6								7.0	
10/4/2020	0.825			5	390	<50	<0.16	yes	yes	7.0	7.0	10	40
10/5/2020	0.924			5		<50	<0.16	no	no	7.0	7.0	8.4	
10/6/2020	0.923			6		<50	<0.16	no	yes	7.0	7.0	8.2	42
10/7/2020	0.924			6		<50	<0.16	no	no	6.9	6.9	8.4	
10/8/2020	0.924					<50	<0.16	no	no	7.0	7.0		
10/9/2020	0.924												
10/10/2020	0.924			6								10	
10/11/2020	0.924			6	400	<50	<0.16	yes	yes	7.0	7.0	12	36
10/12/2020	0.924			5	390	<50	<0.16	no	no	6.9	6.9	11	
10/13/2020	0.924			4	390	<50	<0.16	no	yes	7.0	7.0	12	44
10/14/2020	0.924			5	360	<50	<0.16	no	no	7.0	7.0	12	
10/15/2020	0.865				330	<50	<0.16	no	no	7.0	7.0		
10/16/2020	0.924												
10/17/2020	0.924			5								19	
10/18/2020	0.924			7	430	<50	<0.16	yes	yes	7.0	7.0	14	32
10/19/2020	0.924			8	410	<50	<0.16	no	no	7.1	7.1	9.4	
10/20/2020	0.924			8	400	<50	<0.16	no	yes	6.9	6.9	9.4	46
10/21/2020	0.917			7	390	<50	<0.16	no	no	7.0	7.0	8.9	
10/22/2020	0.924			7	350	<50	<0.16	no	no	7.0	7.0	10	
10/23/2020	0.924			6								10	
10/24/2020	0.924			6								9.4	
10/25/2020	0.903			6	320	<50	<0.16	yes	yes	7.4	7.4	9.3	42
10/26/2020	0.924			6	260	<50	<0.16	no	no	7.0	7.0	10	
10/27/2020	0.924			6	340	<50	<0.16	no	yes	6.9	6.9	7.7	40
10/28/2020	0.924			7	320	<50	<0.16	no	no	6.9	6.9	8.2	
10/29/2020	0.924			7	200	<50	<0.16	no	no	7.0	7.0	9.4	
10/30/2020	0.924			7								8.6	
10/31/2020	0.924			6								8.2	
Discharged	**27.840**												
Monthly Avg				**6.1**								**10.0**	