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Pall Life Sciences  
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January 9, 2018

**RECEIVED**

JAN 11 2018

DEQ . RRD  
JACKSON DISTRICT OFFICE

Jeff Surfus  
Surface Water Quality Division  
Michigan Department of Environmental Quality  
301 East Louis Glick Highway  
Jackson, Michigan 49201

**Re: Monitoring Report # 248  
December 1 – December 31, 2017**

Dear Mr. Surfus:

Pursuant to the National Pollutant Discharge Elimination System (NPDES) Permit No. MI0048453, please find the enclosed Monitoring Report for the period of December 1 through December 31, 2017.

Should you have any questions or concerns regarding this report, please contact me at 386-562-0176.

Sincerely,

A handwritten signature in black ink, appearing to read "L. Gelb", followed by a horizontal line.

Lawrence J. Gelb  
Sr. Director Global EHS

cc: Dan Hamel, MDEQ  
Supervisor, Scio Twp.  
Matthew Naud, City of Ann Arbor



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**UNIT D2 UPGRADIENT EXTRACTION DATA**

**Month of: Dec-17**

Date	TW-9			TW-21			Daily Flow	Daily Total
	Gallons	GPM	Run Hrs.	TW-21		Run Hrs.	GPM	Gallons
				Gallons	GPM			
Fri-12/1/17	-	-	-	86,355	60	24.00	60	86,355
Sat-12/2/17	-	-	-	86,349	60	24.00	60	86,349
Sun-12/3/17	-	-	-	86,355	60	24.00	60	86,355
Mon-12/4/17	-	-	-	21,687	60	6.03	15	21,687
Tue-12/5/17	-	-	-	-	-	-	0	-
Wed-12/6/17	-	-	-	-	-	-	0	-
Thu-12/7/17	-	-	-	-	-	-	0	-
Fri-12/8/17	-	-	-	56,523	60	15.70	39	56,523
Sat-12/9/17	-	-	-	86,349	60	24.00	60	86,349
Sun-12/10/17	-	-	-	86,334	60	24.00	60	86,334
Mon-12/11/17	-	-	-	86,336	60	24.00	60	86,336
Tue-12/12/17	369	53	0.12	86,316	60	24.00	60	86,685
Wed-12/13/17	-	-	-	86,373	60	24.00	60	86,373
Thu-12/14/17	-	-	-	86,352	60	24.00	60	86,352
Fri-12/15/17	-	-	-	86,395	60	24.00	60	86,395
Sat-12/16/17	-	-	-	86,444	60	24.00	60	86,444
Sun-12/17/17	-	-	-	86,376	60	24.00	60	86,376
Mon-12/18/17	-	-	-	86,428	60	24.00	60	86,428
Tue-12/19/17	-	-	-	86,408	60	24.00	60	86,408
Wed-12/20/17	-	-	-	86,414	60	24.00	60	86,414
Thu-12/21/17	-	-	-	86,440	60	24.00	60	86,440
Fri-12/22/17	-	-	-	86,446	60	24.00	60	86,446
Sat-12/23/17	-	-	-	86,442	60	24.00	60	86,442
Sun-12/24/17	-	-	-	86,376	60	24.00	60	86,376
Mon-12/25/17	-	-	-	86,338	60	24.00	60	86,338
Tue-12/26/17	-	-	-	86,331	60	24.00	60	86,331
Wed-12/27/17	-	-	-	86,307	60	24.00	60	86,307
Thu-12/28/17	-	-	-	86,323	60	24.00	60	86,323
Fri-12/29/17	-	-	-	86,339	60	24.00	60	86,339
Sat-12/30/17	-	-	-	86,331	60	24.00	60	86,331
Sun-12/31/17	-	-	-	83,407	58	24.00	58	83,407
<b>TOTALS</b>	<b>369</b>	<b>53</b>	<b>0.12</b>	<b>2,320,874</b>	<b>60</b>	<b>645.73</b>	<b>52</b>	<b>2,321,243</b>

<b>TOTAL VOLUME EXTRACTED :</b>	<b>2,321,243 GALLONS</b>
<b>DAYS IN MONTH :</b>	<b>31 DAYS</b>
<b>MONTHLY AVERAGE FLOW RATE :</b>	<b>52.00 GPM</b>

12/4/17-12/8/17 - Extraction and Treatment were shut down for maintenance.  
 12/12/17 - TW-9 was turned on briefly to adjust the Pond level.

**UNIT D2 DOWNGRADIANT EXTRACTION DATA**

Month of: **Dec-17**

Date	LB-4			Daily	Daily
	Gallons	GPM	Run Hrs.	Flow GPM	Total Gallons
Fri-12/1/17	144,194	100	24.00	100	144,194
Sat-12/2/17	144,179	100	24.00	100	144,179
Sun-12/3/17	144,180	100	24.00	100	144,180
Mon-12/4/17	51,206	100	8.53	36	51,206
Tue-12/5/17	-	-	-	0	-
Wed-12/6/17	-	-	-	0	-
Thu-12/7/17	-	-	-	0	-
Fri-12/8/17	77,769	100	12.93	54	77,769
Sat-12/9/17	144,180	100	24.00	100	144,180
Sun-12/10/17	144,194	100	24.00	100	144,194
Mon-12/11/17	144,206	100	24.00	100	144,206
Tue-12/12/17	142,645	100	23.73	99	142,645
Wed-12/13/17	140,467	100	23.38	98	140,467
Thu-12/14/17	144,199	100	24.00	100	144,199
Fri-12/15/17	144,208	100	24.00	100	144,208
Sat-12/16/17	144,213	100	24.00	100	144,213
Sun-12/17/17	144,220	100	24.00	100	144,220
Mon-12/18/17	144,227	100	24.00	100	144,227
Tue-12/19/17	144,190	100	24.00	100	144,190
Wed-12/20/17	144,205	100	24.00	100	144,205
Thu-12/21/17	144,212	100	24.00	100	144,212
Fri-12/22/17	144,220	100	24.00	100	144,220
Sat-12/23/17	144,234	100	24.00	100	144,234
Sun-12/24/17	144,243	100	24.00	100	144,243
Mon-12/25/17	144,211	100	24.00	100	144,211
Tue-12/26/17	144,190	100	24.00	100	144,190
Wed-12/27/17	144,246	100	24.00	100	144,246
Thu-12/28/17	144,226	100	24.00	100	144,226
Fri-12/29/17	144,252	100	24.00	100	144,252
Sat-12/30/17	144,265	100	24.00	100	144,265
Sun-12/31/17	144,239	100	24.00	100	144,239
<b>TOTALS</b>	<b>3,873,220</b>	<b>100</b>	<b>644.57</b>	<b>87</b>	<b>3,873,220</b>

<b>TOTAL VOLUME EXTRACTED :</b>	<b>3,873,220 GALLONS</b>
<b>DAYS IN MONTH :</b>	<b>31 DAYS</b>
<b>MONTHLY AVERAGE FLOW RATE :</b>	<b>86.77 GPM</b>

12/4/17-12/8/17 - Extraction and Treatment were shut down for maintenance.

**CORE AREA EXTRACTION DATA**

Month of: Dec-17

Core Area Well Extraction										Daily	Daily
Date	TW-2 (Dolph)			TW-14			TW-20			Flow	Total
	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	GPM	Gallons
Fri-12/1/17	25,449	18	24.00	-	-	-	43,238	30	24.00	48	68,687
Sat-12/2/17	25,592	18	24.00	-	-	-	43,268	30	24.00	48	68,860
Sun-12/3/17	25,710	18	24.00	-	-	-	43,184	30	24.00	48	68,894
Mon-12/4/17	8,429	18	7.68	-	-	-	12,969	30	7.15	15	21,398
Tue-12/5/17	-	-	-	-	-	-	-	-	-	-	-
Wed-12/6/17	-	-	-	-	-	-	-	-	-	-	-
Thu-12/7/17	-	-	-	-	-	-	-	-	-	-	-
Fri-12/8/17	9,843	12	13.17	-	-	-	26,723	30	14.77	25	36,566
Sat-12/9/17	16,600	12	24.00	-	-	-	43,386	30	24.00	42	59,986
Sun-12/10/17	16,944	12	24.00	-	-	-	43,014	30	24.00	42	59,958
Mon-12/11/17	17,364	12	24.00	-	-	-	42,995	30	24.00	42	60,359
Tue-12/12/17	17,633	12	24.00	349	70	0.08	43,113	30	24.00	42	61,095
Wed-12/13/17	17,694	12	24.00	-	-	-	43,386	30	24.00	42	61,080
Thu-12/14/17	18,348	13	24.00	-	-	-	43,342	30	24.00	43	61,690
Fri-12/15/17	18,970	13	24.00	-	-	-	43,111	30	24.00	43	62,081
Sat-12/16/17	19,247	13	24.00	-	-	-	43,062	30	24.00	43	62,309
Sun-12/17/17	18,846	13	24.00	-	-	-	43,288	30	24.00	43	62,134
Mon-12/18/17	19,257	13	24.00	-	-	-	43,068	30	23.98	43	62,325
Tue-12/19/17	19,510	14	24.00	-	-	-	42,922	30	24.00	43	62,432
Wed-12/20/17	19,700	14	24.00	-	-	-	43,499	30	24.00	44	63,199
Thu-12/21/17	19,484	14	24.00	-	-	-	43,193	30	24.00	44	62,677
Fri-12/22/17	19,773	14	24.00	-	-	-	43,007	30	24.00	44	62,780
Sat-12/23/17	20,019	14	24.00	-	-	-	42,887	30	24.00	44	62,906
Sun-12/24/17	19,720	14	24.00	-	-	-	42,924	30	24.00	44	62,644
Mon-12/25/17	19,802	14	24.00	-	-	-	43,184	30	24.00	44	62,986
Tue-12/26/17	19,961	14	24.00	-	-	-	43,240	30	24.00	44	63,201
Wed-12/27/17	20,172	14	24.00	-	-	-	43,194	30	24.00	44	63,366
Thu-12/28/17	20,381	14	24.00	-	-	-	43,213	30	24.00	44	63,594
Fri-12/29/17	20,717	14	24.00	-	-	-	43,239	30	24.00	44	63,956
Sat-12/30/17	20,972	15	24.00	-	-	-	43,277	30	24.00	45	64,249
Sun-12/31/17	21,103	15	24.00	-	-	-	43,325	30	24.00	45	64,428
<b>TOTALS</b>	<b>537,240</b>	<b>14</b>	<b>644.85</b>	<b>349</b>	<b>70</b>	<b>0.08</b>	<b>1,162,251</b>	<b>30</b>	<b>645.90</b>	<b>42</b>	<b>1,699,840</b>

<b>TOTAL VOLUME EXTRACTED :</b>	<b>1,699,840 GALLONS</b>
<b>DAYS IN MONTH :</b>	<b>31 DAYS</b>
<b>MONTHLY AVERAGE FLOW RATE :</b>	<b>38.08 GPM</b>

12/4/17-12/8/17 - Extraction and Treatment were shut down for maintenance.  
 12/12/17 - TW-14 was turned on briefly to adjust the Pond level.

**MARSHY AREA EXTRACTION DATA**

**Month of: Dec-17**

Marshy Well Extraction				Daily	Daily
Date	PW-1 Gallons	GPM	Run Hrs.	Flow GPM	Total Gallons
Fri-12/1/17	3,626	3	24.00	3	3,626
Sat-12/2/17	3,628	3	24.00	3	3,628
Sun-12/3/17	3,628	3	24.00	3	3,628
Mon-12/4/17	1,181	3	7.12	1	1,181
Tue-12/5/17	-	-	-	-	-
Wed-12/6/17	-	-	-	-	-
Thu-12/7/17	-	-	-	-	-
Fri-12/8/17	2,358	3	14.58	2	2,358
Sat-12/9/17	3,869	3	24.00	3	3,869
Sun-12/10/17	3,896	3	24.00	3	3,896
Mon-12/11/17	3,915	3	24.00	3	3,915
Tue-12/12/17	3,909	3	24.00	3	3,909
Wed-12/13/17	3,934	3	24.00	3	3,934
Thu-12/14/17	3,953	3	24.00	3	3,953
Fri-12/15/17	3,964	3	24.00	3	3,964
Sat-12/16/17	3,959	3	24.00	3	3,959
Sun-12/17/17	3,969	3	24.00	3	3,969
Mon-12/18/17	3,954	3	24.00	3	3,954
Tue-12/19/17	3,970	3	24.00	3	3,970
Wed-12/20/17	4,003	3	24.00	3	4,003
Thu-12/21/17	4,006	3	24.00	3	4,006
Fri-12/22/17	3,984	3	24.00	3	3,984
Sat-12/23/17	3,991	3	24.00	3	3,991
Sun-12/24/17	4,097	3	24.00	3	4,097
Mon-12/25/17	4,129	3	24.00	3	4,129
Tue-12/26/17	4,129	3	24.00	3	4,129
Wed-12/27/17	4,201	3	24.00	3	4,201
Thu-12/28/17	4,226	3	24.00	3	4,226
Fri-12/29/17	4,195	3	24.00	3	4,195
Sat-12/30/17	4,207	3	24.00	3	4,207
Sun-12/31/17	4,215	3	24.00	3	4,215
<b>TOTALS</b>	<b>107,096</b>	<b>3</b>	<b>645.70</b>	<b>3</b>	<b>107,096</b>

<b>TOTAL VOLUME EXTRACTED :</b>	<b>107,096 GALLONS</b>
<b>DAYS IN MONTH :</b>	<b>31 DAYS</b>
<b>MONTHLY AVERAGE FLOW RATE :</b>	<b>2.40 GPM</b>

12/4/17-12/8/17 - Extraction and Treatment were shut down for maintenance.

**SOUTHWEST AREA EXTRACTION DATA**

**Month of: Dec-17**

SouthWest Well Extraction				Daily	Daily
Date	ACTIVE WELLS			Flow	Total
	Gallons	GPM	Run Hrs.	GPM	Gallons
Fri-12/1/17	30,320	21	24.00	21	30,320
Sat-12/2/17	30,341	21	24.00	21	30,341
Sun-12/3/17	30,350	21	24.00	21	30,350
Mon-12/4/17	7,750	18	7.12	5	7,750
Tue-12/5/17	-	-	-	-	-
Wed-12/6/17	-	-	-	-	-
Thu-12/7/17	-	-	-	-	-
Fri-12/8/17	19,965	23	14.57	14	19,965
Sat-12/9/17	30,918	21	24.00	21	30,918
Sun-12/10/17	30,981	22	24.00	22	30,981
Mon-12/11/17	31,146	22	24.00	22	31,146
Tue-12/12/17	31,134	22	24.00	22	31,134
Wed-12/13/17	31,084	22	24.00	22	31,084
Thu-12/14/17	31,023	22	24.00	22	31,023
Fri-12/15/17	31,043	22	24.00	22	31,043
Sat-12/16/17	31,028	22	24.00	22	31,028
Sun-12/17/17	31,031	22	24.00	22	31,031
Mon-12/18/17	31,009	22	24.00	22	31,009
Tue-12/19/17	31,001	22	24.00	22	31,001
Wed-12/20/17	30,998	22	24.00	22	30,998
Thu-12/21/17	30,992	22	24.00	22	30,992
Fri-12/22/17	31,008	22	24.00	22	31,008
Sat-12/23/17	31,027	22	24.00	22	31,027
Sun-12/24/17	31,052	22	24.00	22	31,052
Mon-12/25/17	31,026	22	24.00	22	31,026
Tue-12/26/17	30,966	22	24.00	22	30,966
Wed-12/27/17	30,948	21	24.00	21	30,948
Thu-12/28/17	30,951	21	24.00	21	30,951
Fri-12/29/17	30,945	21	24.00	21	30,945
Sat-12/30/17	30,875	21	24.00	21	30,875
Sun-12/31/17	30,783	21	24.00	21	30,783
<b>TOTALS</b>	<b>831,695</b>	<b>21</b>	<b>645.68</b>	<b>21</b>	<b>831,695</b>

<b>TOTAL VOLUME EXTRACTED :</b>	<b>831,695 GALLONS</b>
<b>DAYS IN MONTH :</b>	<b>31 DAYS</b>
<b>MONTHLY AVERAGE FLOW RATE :</b>	<b>18.63 GPM</b>

Note: ACTIVE WELLS = TW-8, TW-22

12/4/17-12/8/17 - Extraction and Treatment were shut down for maintenance.

**TABLE #6**

**UNIT "E" EXTRACTION DATA**

Month of: Dec-17

Date	TW-17			TW-18			TW-19			TW-23			Daily	Daily
	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Flow GPM	Total Gallons
Fri-12/1/17	-	-	-	234,100	163	24.00	43,910	30	24.00	99,263	69	24.00	262	377,273
Sat-12/2/17	-	-	-	234,081	163	24.00	43,921	31	24.00	99,349	69	24.00	262	377,351
Sun-12/3/17	-	-	-	234,091	163	24.00	43,908	30	24.00	99,444	69	24.00	262	377,443
Mon-12/4/17	-	-	-	70,237	162	7.22	11,531	31	6.30	26,127	69	6.30	75	107,895
Tue-12/5/17	-	-	-	-	-	-	-	-	-	-	-	-	0	-
Wed-12/6/17	-	-	-	-	-	-	-	-	-	-	-	-	0	-
Thu-12/7/17	-	-	-	-	-	-	-	-	-	-	-	-	0	-
Fri-12/8/17	-	-	-	141,735	162	14.55	28,235	31	15.10	62,571	69	15.10	161	232,541
Sat-12/9/17	-	-	-	234,003	163	24.00	45,119	31	24.00	99,418	69	24.00	263	378,540
Sun-12/10/17	-	-	-	234,071	163	24.00	45,262	31	24.00	99,330	69	24.00	263	378,663
Mon-12/11/17	-	-	-	234,104	163	24.00	45,373	32	24.00	99,473	69	24.00	263	378,950
Tue-12/12/17	33,860	75	7.53	234,135	163	24.00	29,009	31	15.80	65,551	69	15.80	252	362,555
Wed-12/13/17	353	71	0.08	234,148	163	24.00	41,458	31	22.50	93,054	69	22.50	256	369,013
Thu-12/14/17	-	-	-	234,165	163	24.00	44,376	31	24.00	99,363	69	24.00	262	377,904
Fri-12/15/17	-	-	-	231,215	161	24.00	44,443	31	24.00	99,486	69	24.00	261	375,144
Sat-12/16/17	-	-	-	226,844	158	24.00	44,480	31	24.00	99,332	69	24.00	257	370,656
Sun-12/17/17	-	-	-	226,854	158	24.00	44,503	31	24.00	99,504	69	24.00	258	370,861
Mon-12/18/17	-	-	-	226,852	158	23.98	44,672	31	24.00	99,416	69	24.00	258	370,940
Tue-12/19/17	-	-	-	226,916	158	24.00	44,766	31	24.00	99,322	69	24.00	258	371,004
Wed-12/20/17	-	-	-	229,638	159	24.00	44,766	31	24.00	99,347	69	24.00	260	373,751
Thu-12/21/17	-	-	-	234,231	163	24.00	44,805	31	24.00	99,311	69	24.00	263	378,347
Fri-12/22/17	-	-	-	234,232	163	24.00	44,809	31	24.00	99,463	69	24.00	263	378,504
Sat-12/23/17	-	-	-	234,242	163	24.00	44,817	31	24.00	99,383	69	24.00	263	378,442
Sun-12/24/17	-	-	-	234,284	163	24.00	44,847	31	24.00	99,335	69	24.00	263	378,466
Mon-12/25/17	-	-	-	234,300	163	24.00	44,843	31	24.00	99,407	69	24.00	263	378,550
Tue-12/26/17	-	-	-	234,323	163	24.00	44,847	31	24.00	99,520	69	24.00	263	378,690
Wed-12/27/17	-	-	-	234,366	163	24.00	44,896	31	24.00	99,489	69	24.00	263	378,751
Thu-12/28/17	-	-	-	234,373	163	24.00	44,948	31	24.00	99,509	69	24.00	263	378,830
Fri-12/29/17	-	-	-	229,183	159	24.00	44,984	31	24.00	99,554	69	24.00	260	373,721
Sat-12/30/17	-	-	-	227,039	158	24.00	44,988	31	24.00	99,498	69	24.00	258	371,525
Sun-12/31/17	-	-	-	224,463	156	24.00	45,005	31	24.00	99,423	69	24.00	256	368,891
<b>TOTALS</b>	<b>34,213</b>	<b>73</b>	<b>7.62</b>	<b>6,242,225</b>	<b>161</b>	<b>645.75</b>	<b>1,183,521</b>	<b>31</b>	<b>635.70</b>	<b>2,633,242</b>	<b>69</b>	<b>635.70</b>	<b>226</b>	<b>10,093,201</b>

<b>TOTAL VOLUME EXTRACTED :</b>	<b>10,093,201 GALLONS</b>
<b>DAYS IN MONTH :</b>	<b>31 DAYS</b>
<b>MONTHLY AVERAGE FLOW RATE :</b>	<b>226.10 GPM</b>

12/4/17-12/8/17 - Extraction and Treatment were shut down for maintenance.  
 12/12/17-12/13/17 - TW-17 was turned on briefly to adjust the Pond level.  
 12/12/17-12/13/17 - TW-19 and TW-23 were shut down due to a DTE Energy power loss in the area.



**TABLE #7**

**Little Lake Area System**

MW-53i	
Date	1,4-Dioxane ug/L
09/07/17	140*
10/03/17	43
11/13/17	37
12/20/17	40

Supply Well	
Date	1,4-Dioxane ug/L
09/11/17	90
10/03/17	84
11/13/17	75
12/21/17	84

Date	Gallons Purged
12/21/2017	28,000

\*confirmed

**TABLE #8**

**INDIVIDUAL PURGE WELL CONCENTRATIONS**

<b>SAMPLE ID</b>	<b>Date Sampled</b>	<b>1,4-DIOXANE (ppb)</b>
DOLPH-12-11-17-10:54-1	12/11/17	110
TW-20-12-11-17-11:13-1	12/11/17	840
LB-4-12-11-17-09:17-1	12/11/17	500
TW-21-12-11-17-09:30-1	12/11/17	200
TW-18-12-11-17-11:01-1	12/11/17	280
TW-19-12-18-17-10:52-1	12/18/17	710
TW-23-12-18-17-10:54-1	12/18/17	440
PW-1-12-11-17-11:04-1	12/11/17	880
TW-22-12-11-17-11:47-1	12/11/17	430
TW-8-12-11-17-11:45-1	12/11/17	710

**RED POND DATA**

**Month of: Dec-17**

Date	Time	Notes	Red Pond				
			Pond	Level	Aeration	Influent	Influent
			Visual Chk	Feet	Hours	Hours	GPM
Fri-12/1/17	3:06		Y	4.7	-	24.00	493
Sat-12/2/17	3:00	(1)		4.7	-	24.00	494
Sun-12/3/17	3:00	(1)		4.8	-	24.00	494
Mon-12/4/17	3:00		Y	4.8	-	8.53	412
Tue-12/5/17	3:00		Y	4.9	-	-	-
Wed-12/6/17	3:00		Y	4.9	-	-	-
Thu-12/7/17	3:00		Y	4.9	-	-	-
Fri-12/8/17	3:00		Y	4.9	-	15.70	452
Sat-12/9/17	3:00	(1)		5.4	-	24.00	489
Sun-12/10/17	3:00	(1)		5.3	-	24.00	489
Mon-12/11/17	3:00		Y	5.3	-	24.00	490
Tue-12/12/17	3:00		Y	5.3	-	24.00	478
Wed-12/13/17	3:00		Y	5.0	-	24.00	481
Thu-12/14/17	3:00		Y	5.0	-	24.00	490
Fri-12/15/17	3:00		Y	5.1	-	24.00	488
Sat-12/16/17	3:00	(1)		5.0	-	24.00	485
Sun-12/17/17	3:00	(1)		4.9	-	24.00	485
Mon-12/18/17	3:00		Y	4.8	-	24.00	485
Tue-12/19/17	12:10		Y	4.8	-	24.00	485
Wed-12/20/17	3:00		Y	4.8	-	24.00	488
Thu-12/21/17	3:00		Y	4.7	-	24.00	491
Fri-12/22/17	3:00		Y	5.0	-	24.00	491
Sat-12/23/17	3:00	(1)		5.0	-	24.00	491
Sun-12/24/17	3:00	(1)		5.0	-	24.00	491
Mon-12/25/17	3:00	(1)		5.0	-	24.00	491
Tue-12/26/17	3:00		Y	5.0	-	24.00	491
Wed-12/27/17	3:00		Y	5.0	-	24.00	492
Thu-12/28/17	3:00		Y	5.0	-	24.00	492
Fri-12/29/17	3:00		Y	5.1	-	24.00	488
Sat-12/30/17	3:00	(1)		5.0	-	24.00	487
Sun-12/31/17	3:00	(1)		5.0	-	24.00	483
<b>TOTALS</b>			-	-	-	<b>648</b>	

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.

**TABLE #10**

**RED POND CONCENTRATIONS**

Concentrations of 1,4-Dioxane found in the Red Pond

<b>SAMPLE ID</b>	<b>Date Sampled</b>	<b>1,4-DIOXANE (ppb)</b>
Red Pond-12-04-17-06:15-1	12/4/2017	380
Red Pond-12-11-17-06:45-1	12/11/2017	390
Red Pond-12-18-17-11:24-1	12/18/2017	390
Red Pond-12-26-17-07:35-1	12/26/2017	400

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

OZONE OPERATION REPORT

Month of: Dec-17

Date	Time	Notes	SYSTEM-1A		SYSTEM-1B		SYSTEM-2A		SYSTEM-2B	
			Flow GPM	Run Hours	Flow GPM	Run Hours	Flow GPM	Run Hours	Flow GPM	Run Hours
Fri-12/1/17	3:07 AM		240	24.00	0	0.00	241	24.00	0	0.00
Sat-12/2/17	3:00 AM	(1)	240	23.87	0	0.00	240	23.85	0	0.00
Sun-12/3/17	3:00 AM	(1)	239	24.00	0	0.00	241	24.00	0	0.00
Mon-12/4/17	3:00 AM		240	6.25	0	0.00	240	6.25	0	0.00
Tue-12/5/17	3:00 AM		0	0.00	0	0.00	0	0.00	0	0.00
Wed-12/6/17	3:00 AM		0	0.00	0	0.00	0	0.00	0	0.00
Thu-12/7/17	3:00 AM		0	0.00	0	0.00	0	0.00	0	0.00
Fri-12/8/17	3:00 AM		0	13.55	0	0.00	0	14.00	0	0.00
Sat-12/9/17	3:00 AM	(1)	240	24.00	0	0.00	240	24.00	0	0.00
Sun-12/10/17	3:00 AM	(1)	240	24.00	0	0.00	241	24.00	0	0.00
Mon-12/11/17	3:00 AM		240	24.00	0	0.00	240	24.00	0	0.00
Tue-12/12/17	3:00 AM		240	24.00	0	0.00	240	24.00	0	0.00
Wed-12/13/17	3:00 AM		240	24.00	0	0.00	240	24.00	0	0.00
Thu-12/14/17	3:00 AM		240	24.00	0	0.00	240	24.00	0	0.00
Fri-12/15/17	3:00 AM		240	24.00	0	0.00	239	24.00	0	0.00
Sat-12/16/17	3:00 AM	(1)	240	24.00	0	0.00	240	24.00	0	0.00
Sun-12/17/17	3:00 AM	(1)	240	24.00	0	0.00	240	24.00	0	0.00
Mon-12/18/17	3:00 AM		240	23.87	0	0.00	240	23.90	0	0.00
Tue-12/19/17	3:00 AM		240	24.00	0	0.00	241	24.00	0	0.00
Wed-12/20/17	3:00 AM		240	24.00	0	0.00	240	24.00	0	0.00
Thu-12/21/17	3:00 AM		239	24.00	0	0.00	240	24.00	0	0.00
Fri-12/22/17	3:00 AM		240	24.00	0	0.00	240	24.00	0	0.00
Sat-12/23/17	3:00 AM	(1)	240	24.00	0	0.00	241	24.00	0	0.00
Sun-12/24/17	3:00 AM	(1)	239	24.00	0	0.00	240	24.00	0	0.00
Mon-12/25/17	3:00 AM		239	24.00	0	0.00	240	24.00	0	0.00
Tue-12/26/17	3:00 AM		240	24.00	0	0.00	240	24.00	0	0.00
Wed-12/27/17	3:00 AM		240	24.00	0	0.00	241	24.00	0	0.00
Thu-12/28/17	3:00 AM		240	24.00	0	0.00	240	24.00	0	0.00
Fri-12/29/17	3:00 AM		239	24.00	0	0.00	241	24.00	0	0.00
Sat-12/30/17	3:00 AM	(1)	240	24.00	0	0.00	240	24.00	0	0.00
Sun-12/31/17	3:00 AM	(1)	240	21.73	0	0.00	240	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.

12/4/17-12/8/17 - Extraction and Treatment were shut down for maintenance.  
 12/31/17 - System 1A was shut down briefly for maintenance.

**TABLE #12**

**GREEN POND / DISCHARGE DATA**

Month of: **Dec-17**

			Green Pond																	
Date	Time	Notes	Pond			Influent			Pond Discharge			Bypass Discharge			Recirc Thru UV to Pond			Recirc Thru UV to Disch		
			Visual Chk	Level Feet	Aeration Hours	Influent Hours	Influent GPM	GPM	Gallons	GPM	Gallons	Hours	GPM	Gallons	Hours	GPM	Gallons	Hours		
Fri-12/1/17	3:06 AM		Y	-	-					496	713,923	24.00	-	-	-	-	-	-		
Sat-12/2/17	3:00 AM	(1)		-	-					496	707,901	23.80	-	-	-	-	-	-		
Sun-12/3/17	3:00 AM	(1)		-	-					496	713,704	24.00	-	-	-	-	-	-		
Mon-12/4/17	3:00 AM		Y	-	-					495	184,077	6.20	-	-	-	-	-	-		
Tue-12/5/17	3:00 AM		Y	-	-					-	-	-	-	-	-	-	-	-		
Wed-12/6/17	3:00 AM		Y	-	-					-	-	-	-	-	-	-	-	-		
Thu-12/7/17	3:00 AM		Y	-	-					-	-	-	-	-	-	-	-	-		
Fri-12/8/17	3:00 AM		Y	-	-					478	398,502	13.88	-	-	-	-	-	-		
Sat-12/9/17	3:00 AM	(1)		-	-					495	712,921	24.00	-	-	-	-	-	-		
Sun-12/10/17	3:00 AM	(1)		-	-					495	713,037	24.00	-	-	-	-	-	-		
Mon-12/11/17	3:00 AM		Y	-	-					496	713,944	24.00	-	-	-	-	-	-		
Tue-12/12/17	3:00 AM		Y	-	-					496	713,737	24.00	-	-	-	-	-	-		
Wed-12/13/17	3:00 AM		Y	-	-					496	713,642	24.00	-	-	-	-	-	-		
Thu-12/14/17	3:00 AM		Y	-	-					491	707,377	24.00	-	-	-	-	-	-		
Fri-12/15/17	3:00 AM		Y	-	-					496	713,996	24.00	-	-	-	-	-	-		
Sat-12/16/17	3:00 AM	(1)		-	-					496	714,034	24.00	-	-	-	-	-	-		
Sun-12/17/17	3:00 AM	(1)		-	-					496	714,054	24.00	-	-	-	-	-	-		
Mon-12/18/17	3:00 AM		Y	-	-					492	708,722	24.00	-	-	-	-	-	-		
Tue-12/19/17	12:10 PM		Y	-	-					496	714,373	24.00	-	-	-	-	-	-		
Wed-12/20/17	3:00 AM		Y	-	-					496	714,137	24.00	-	-	-	-	-	-		
Thu-12/21/17	3:00 AM		Y	-	-					496	714,175	24.00	-	-	-	-	-	-		
Fri-12/22/17	3:00 AM		Y	-	-					496	714,183	24.00	-	-	-	-	-	-		
Sat-12/23/17	3:00 AM	(1)		-	-					496	714,232	24.00	-	-	-	-	-	-		
Sun-12/24/17	3:00 AM	(1)		-	-					496	714,022	24.00	-	-	-	-	-	-		
Mon-12/25/17	3:00 AM	(1)		-	-					496	713,800	24.00	-	-	-	-	-	-		
Tue-12/26/17	3:00 AM		Y	-	-					496	713,627	24.00	-	-	-	-	-	-		
Wed-12/27/17	3:00 AM		Y	-	-					495	713,476	24.00	-	-	-	-	-	-		
Thu-12/28/17	3:00 AM		Y	-	-					496	713,525	24.00	-	-	-	-	-	-		
Fri-12/29/17	3:00 AM		Y	-	-					496	713,860	24.00	-	-	-	-	-	-		
Sat-12/30/17	3:00 AM	(1)		-	-					496	713,787	24.00	-	-	-	-	-	-		
Sun-12/31/17	3:00 AM	(1)		-	-					470	676,808	24.00	-	-	-	-	-	-		
<b>TOTALS</b>											<b>19,087,576</b>	<b>644</b>								

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.

**TABLE #13**  
**Daily Discharge Monitoring Report**

	(Daily)	Quarterly	(Effluent - Outfall)	(Influent - Red Pond)	(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 (measured as TRO)	Outfall Observation	Equipment Inspection	pH (Min. Daily)	pH (Max. Daily)	Bromate	Sodium Bisulfite Dose Rate
PARAMETER CODE	50050	1007	1007	82388	82388	00139	84130	46478	00400	00400	99814	99798
MONITORING PT.	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
UNIT	MGD	ug/l	lbs/day	ug/l	mg/l	ug/l	yes/no	yes/no	S.U.	S.U.	ug/l	mg/l
12/1/2017	0.714	*G	*G			<100	no	no	6.7	6.7		56
12/2/2017	0.708											
12/3/2017	0.714			6.0							7.0	
12/4/2017	0.184				0.380	<100	yes	yes	6.7	6.7		60
12/5/2017	0.000											
12/6/2017	0.000											
12/7/2017	0.000											
12/8/2017	0.399			6.0		<100		yes	6.8	6.8		60
12/9/2017	0.713											
12/10/2017	0.713			5.6							5.4	
12/11/2017	0.714			6.0	0.380	<100	yes	yes	6.6	6.6	6.1	45
12/12/2017	0.714			6.1		<100	no	no	6.6	6.6	8.4	
12/13/2017	0.714			6.1		<100	no	no	6.7	6.7	7.3	
12/14/2017	0.707			6.5		<100	no	yes	6.6	6.6	8.0	50
12/15/2017	0.714					<100	no	no	6.6	6.6		
12/16/2017	0.714											
12/17/2017	0.714			6.4							8.1	
12/18/2017	0.709			6.1	0.390	<100	yes	yes	6.6	6.6	8.6	50
12/19/2017	0.714			5.8		<100	no	no	6.6	6.6	7.9	
12/20/2017	0.714			6.2		<100	no	no	6.6	6.6	7.4	
12/21/2017	0.714			6.3		<100	no	yes	6.6	6.6	6.8	40
12/22/2017	0.714					<100	no	no	6.7	6.7		
12/23/2017	0.714											
12/24/2017	0.714			6.4							7.5	
12/25/2017	0.714			5.7							6.9	
12/26/2017	0.714			5.8	0.400	<100	yes	yes	6.7	6.7	7.5	40
12/27/2017	0.713			6.0		<100	no	no	6.6	6.6	8.4	
12/28/2017	0.714			5.8		<100	no	no	6.7	6.7	7.2	
12/29/2017	0.714					<100	no	yes	6.9	6.9		58
12/30/2017	0.714											
12/31/2017	0.677			5.8							7.5	
<b>Discharged</b>	<b>19.088</b>											
<b>Monthly Avg</b>				<b>6.0</b>							<b>7.4</b>	