

June 11, 2019

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

**Re: Monitoring Report # 265  
May 1 – May 31, 2019**

Dear Ms. Dijak:

Pursuant to the National Pollutant Discharge Elimination System (NPDES) Permit No. MI0048453, please find the enclosed Monitoring Report for the period of May 1 through May 31, 2019.

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

Sincerely,



Lawrence J. Gelb  
Sr. Director Global EHS

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



## **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**

TABLE #1

UNIT D2 UPGRADIENT EXTRACTION DATA

Month of: **May-19**

Date	Horizontal Well Extraction			TW-9			TW-5			TW-21			Daily Flow	Daily Total
	HW-S			TW-9			TW-5			TW-21			GPM	Gallons
	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.		
Wed-5/1/19	-	-	-	-	-	-	-	-	-	69,924	60	19.40	49	69,924
Thu-5/2/19	-	-	-	-	-	-	-	-	-	58,826	60	16.32	41	58,826
Fri-5/3/19	-	-	-	-	-	-	-	-	-	86,495	60	24.00	60	86,495
Sat-5/4/19	-	-	-	-	-	-	-	-	-	86,435	60	24.00	60	86,435
Sun-5/5/19	-	-	-	-	-	-	-	-	-	86,492	60	24.00	60	86,492
Mon-5/6/19	-	-	-	-	-	-	-	-	-	86,519	60	24.00	60	86,519
Tue-5/7/19	-	-	-	-	-	-	-	-	-	86,379	60	24.00	60	86,379
Wed-5/8/19	-	-	-	-	-	-	-	-	-	81,083	56	24.00	56	81,083
Thu-5/9/19	-	-	-	-	-	-	-	-	-	84,066	58	24.00	58	84,066
Fri-5/10/19	-	-	-	-	-	-	-	-	-	86,435	60	24.00	60	86,435
Sat-5/11/19	-	-	-	-	-	-	-	-	-	86,426	60	24.00	60	86,426
Sun-5/12/19	-	-	-	-	-	-	-	-	-	86,376	60	24.00	60	86,376
Mon-5/13/19	-	-	-	-	-	-	-	-	-	86,397	60	24.00	60	86,397
Tue-5/14/19	-	-	-	-	-	-	-	-	-	86,521	60	24.00	60	86,521
Wed-5/15/19	-	-	-	-	-	-	-	-	-	86,512	60	24.00	60	86,512
Thu-5/16/19	-	-	-	-	-	-	-	-	-	86,476	60	24.00	60	86,476
Fri-5/17/19	-	-	-	-	-	-	-	-	-	86,466	60	24.00	60	86,466
Sat-5/18/19	-	-	-	-	-	-	-	-	-	86,459	60	24.00	60	86,459
Sun-5/19/19	-	-	-	-	-	-	-	-	-	86,437	60	24.00	60	86,437
Mon-5/20/19	-	-	-	-	-	-	-	-	-	86,380	60	24.00	60	86,380
Tue-5/21/19	-	-	-	-	-	-	-	-	-	86,419	60	24.00	60	86,419
Wed-5/22/19	-	-	-	-	-	-	-	-	-	86,475	60	24.00	60	86,475
Thu-5/23/19	-	-	-	-	-	-	-	-	-	86,527	60	24.00	60	86,527
Fri-5/24/19	-	-	-	-	-	-	-	-	-	86,459	60	24.00	60	86,459
Sat-5/25/19	-	-	-	-	-	-	-	-	-	86,537	60	24.00	60	86,537
Sun-5/26/19	-	-	-	-	-	-	-	-	-	86,497	60	24.00	60	86,497
Mon-5/27/19	-	-	-	-	-	-	-	-	-	86,535	60	24.00	60	86,535
Tue-5/28/19	-	-	-	-	-	-	-	-	-	86,524	60	24.00	60	86,524
Wed-5/29/19	-	-	-	-	-	-	-	-	-	86,484	60	24.00	60	86,484
Thu-5/30/19	-	-	-	-	-	-	-	-	-	86,516	60	24.00	60	86,516
Fri-5/31/19	-	-	-	-	-	-	-	-	-	83,672	60	23.20	58	83,672
<b>TOTALS</b>	-	-	-	-	-	-	-	-	-	<b>2,625,749</b>	<b>60</b>	<b>730.92</b>	<b>59</b>	<b>2,625,749</b>

TOTAL VOLUME EXTRACTED :	2,625,749 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	58.82 GPM

05/01/19 - 05/02/19 - TW-21 was shut down due to a DTE Energy power surge.

**UNIT D2 DOWNGRADIENT EXTRACTION DATA**

Month of: **May-19**

Date	LB-1			LB-4			Daily	Daily
	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Flow GPM	Total Gallons
Wed-5/1/19	-	-	-	144,199	100	24.00	100	144,199
Thu-5/2/19	-	-	-	144,251	100	24.00	100	144,251
Fri-5/3/19	-	-	-	144,228	100	24.00	100	144,228
Sat-5/4/19	-	-	-	144,176	100	24.00	100	144,176
Sun-5/5/19	-	-	-	144,227	100	24.00	100	144,227
Mon-5/6/19	-	-	-	144,297	100	24.00	100	144,297
Tue-5/7/19	-	-	-	144,150	100	24.00	100	144,150
Wed-5/8/19	-	-	-	144,168	100	24.00	100	144,168
Thu-5/9/19	-	-	-	144,167	100	24.00	100	144,167
Fri-5/10/19	-	-	-	144,225	100	24.00	100	144,225
Sat-5/11/19	2,200	49	0.75	124,102	100	20.68	88	126,302
Sun-5/12/19	72,157	50	24.00	-	-	-	50	72,157
Mon-5/13/19	33,002	50	10.96	77,390	98	13.11	77	110,392
Tue-5/14/19	-	-	-	144,197	100	24.00	100	144,197
Wed-5/15/19	-	-	-	144,213	100	24.00	100	144,213
Thu-5/16/19	-	-	-	144,203	100	24.00	100	144,203
Fri-5/17/19	-	-	-	144,185	100	24.00	100	144,185
Sat-5/18/19	-	-	-	144,232	100	24.00	100	144,232
Sun-5/19/19	-	-	-	144,197	100	24.00	100	144,197
Mon-5/20/19	-	-	-	144,198	100	24.00	100	144,198
Tue-5/21/19	-	-	-	144,204	100	24.00	100	144,204
Wed-5/22/19	-	-	-	144,200	100	24.00	100	144,200
Thu-5/23/19	-	-	-	144,224	100	24.00	100	144,224
Fri-5/24/19	-	-	-	144,240	100	24.00	100	144,240
Sat-5/25/19	-	-	-	117,250	100	19.53	81	117,250
Sun-5/26/19	-	-	-	144,215	100	24.00	100	144,215
Mon-5/27/19	-	-	-	144,227	100	24.00	100	144,227
Tue-5/28/19	-	-	-	144,188	100	24.00	100	144,188
Wed-5/29/19	-	-	-	123,841	100	20.61	86	123,841
Thu-5/30/19	-	-	-	144,199	100	24.00	100	144,199
Fri-5/31/19	-	-	-	144,184	100	24.00	100	144,184
<b>TOTALS</b>	<b>107,359</b>	<b>50</b>	<b>35.71</b>	<b>4,191,977</b>	<b>100</b>	<b>697.93</b>	<b>96</b>	<b>4,299,336</b>

<b>TOTAL VOLUME EXTRACTED :</b>	<b>4,299,336 GALLONS</b>
<b>DAYS IN MONTH :</b>	<b>31 DAYS</b>
<b>MONTHLY AVERAGE FLOW RATE :</b>	<b>96.31 GPM</b>

05/11/19 - 05/13/19 - LB-4 was shut down for maintenance.  
 05/25/19 - LB-4 was shut down for maintenance.  
 05/29/19 - LB-4 was shut down due to a DTE Energy power outage.

**TABLE #3**

**CORE AREA EXTRACTION DATA**

Month of: **May-19**

Core Area Well Extraction																		Daily Flow	Daily Total	
Date	TW-1			TW-2 (Dolph)			TW-3			TW-10			TW-14			TW-20			GPM	Gallons
	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.		
Wed-5/1/19	-	-	-	19,524	14	24.00	-	-	-	-	-	-	-	-	34,882	30	19.35	38	54,406	
Thu-5/2/19	-	-	-	19,501	14	24.00	-	-	-	-	-	-	-	-	29,207	30	16.37	34	48,708	
Fri-5/3/19	-	-	-	19,477	14	24.00	-	-	-	-	-	-	-	-	42,935	30	24.00	43	62,412	
Sat-5/4/19	-	-	-	19,504	14	24.00	-	-	-	-	-	-	-	-	42,999	30	24.00	43	62,503	
Sun-5/5/19	-	-	-	19,515	14	24.00	-	-	-	-	-	-	-	-	42,890	30	24.00	43	62,405	
Mon-5/6/19	-	-	-	19,491	14	24.00	-	-	-	-	-	-	-	-	43,090	30	24.00	43	62,581	
Tue-5/7/19	-	-	-	19,488	14	24.00	-	-	-	-	-	-	-	-	43,305	30	24.00	44	62,793	
Wed-5/8/19	-	-	-	19,586	14	24.00	-	-	-	-	-	-	-	-	43,189	30	24.00	44	62,775	
Thu-5/9/19	-	-	-	19,517	14	24.00	-	-	-	-	-	-	-	-	43,075	30	24.00	43	62,592	
Fri-5/10/19	-	-	-	19,505	14	24.00	-	-	-	-	-	-	-	-	42,945	30	24.00	43	62,450	
Sat-5/11/19	-	-	-	19,516	14	24.00	-	-	-	3,390	39	1.43	-	-	43,615	30	24.00	46	66,521	
Sun-5/12/19	-	-	-	19,543	14	24.00	-	-	-	58,190	40	24.00	-	-	43,571	30	24.00	84	121,304	
Mon-5/13/19	-	-	-	19,561	14	24.00	-	-	-	25,730	41	10.55	-	-	43,554	30	24.00	62	88,845	
Tue-5/14/19	-	-	-	19,607	14	24.00	-	-	-	-	-	-	-	-	43,533	30	24.00	44	63,140	
Wed-5/15/19	-	-	-	19,616	14	24.00	-	-	-	-	-	-	-	-	43,464	30	24.00	44	63,080	
Thu-5/16/19	-	-	-	19,594	14	24.00	-	-	-	-	-	-	-	-	43,049	30	24.00	44	62,643	
Fri-5/17/19	-	-	-	19,595	14	24.00	-	-	-	-	-	-	-	-	43,078	30	24.00	44	62,673	
Sat-5/18/19	-	-	-	19,558	14	24.00	-	-	-	-	-	-	-	-	43,243	30	24.00	44	62,801	
Sun-5/19/19	-	-	-	19,546	14	24.00	-	-	-	-	-	-	-	-	43,195	30	24.00	44	62,741	
Mon-5/20/19	-	-	-	19,534	14	24.00	-	-	-	-	-	-	-	-	43,166	30	24.00	44	62,700	
Tue-5/21/19	-	-	-	19,598	14	24.00	-	-	-	-	-	-	-	-	43,730	30	24.00	44	63,328	
Wed-5/22/19	-	-	-	19,637	14	24.00	-	-	-	-	-	-	-	-	43,639	30	24.00	44	63,276	
Thu-5/23/19	-	-	-	19,644	14	24.00	-	-	-	-	-	-	-	-	43,540	30	24.00	44	63,184	
Fri-5/24/19	2,490	51	0.82	21,320	15	23.73	6,470	67	1.62	-	-	-	-	-	43,275	30	24.00	51	73,555	
Sat-5/25/19	-	-	-	16,112	11	24.00	-	-	-	-	-	-	-	-	43,070	30	24.00	41	59,182	
Sun-5/26/19	-	-	-	16,255	11	24.00	-	-	-	-	-	-	-	-	43,019	30	24.00	41	59,274	
Mon-5/27/19	-	-	-	16,694	12	24.00	-	-	-	-	-	-	-	-	42,910	30	24.00	41	59,604	
Tue-5/28/19	-	-	-	16,689	12	24.00	-	-	-	-	-	-	-	-	43,611	30	24.00	42	60,300	
Wed-5/29/19	-	-	-	16,672	12	24.00	-	-	-	-	-	-	-	-	24,401	30	13.52	29	41,073	
Thu-5/30/19	-	-	-	16,662	12	24.00	-	-	-	-	-	-	-	-	43,411	30	24.00	42	60,073	
Fri-5/31/19	-	-	-	16,053	12	23.03	-	-	-	-	-	-	-	-	41,814	30	23.20	40	57,867	
<b>TOTALS</b>	<b>2,490</b>	<b>0.82</b>		<b>586,114</b>	<b>13</b>	<b>742.77</b>	<b>6,470</b>	<b>1.62</b>		<b>87,310</b>	<b>40</b>	<b>35.98</b>			<b>1,298,405</b>	<b>30</b>	<b>720.43</b>	<b>44</b>	<b>1,980,789</b>	

TOTAL VOLUME EXTRACTED :	1,980,789 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	44.37 GPM

05/01/19 - 05/02/19 - TW-20 was shut down due to a DTE Energy power surge.  
 05/29/19 - TW-20 was shut down to adjust the Pond level.

**MARSHY AREA EXTRACTION DATA**

**Month of: May-19**

<b>Marshy Well Extraction</b>				<b>Daily</b>	<b>Daily</b>
<b>Date</b>	<b>PW-1 Gallons</b>	<b>GPM</b>	<b>Run Hrs.</b>	<b>Flow GPM</b>	<b>Total Gallons</b>
Wed-5/1/19	1,836	1	24.00	1	1,836
Thu-5/2/19	1,838	1	24.00	1	1,838
Fri-5/3/19	1,828	1	24.00	1	1,828
Sat-5/4/19	1,819	1	24.00	1	1,819
Sun-5/5/19	1,803	1	24.00	1	1,803
Mon-5/6/19	1,719	2	19.02	1	1,719
Tue-5/7/19	1,986	3	11.32	1	1,986
Wed-5/8/19	1,822	2	12.52	1	1,822
Thu-5/9/19	1,622	2	13.18	1	1,622
Fri-5/10/19	1,620	2	13.70	1	1,620
Sat-5/11/19	1,628	2	13.90	1	1,628
Sun-5/12/19	1,629	2	13.88	1	1,629
Mon-5/13/19	1,641	2	13.75	1	1,641
Tue-5/14/19	1,617	2	13.60	1	1,617
Wed-5/15/19	1,314	2	11.35	1	1,314
Thu-5/16/19	-	-	-	-	-
Fri-5/17/19	557	3	2.98	0	557
Sat-5/18/19	1,362	1	24.00	1	1,362
Sun-5/19/19	1,377	1	24.00	1	1,377
Mon-5/20/19	1,395	1	24.00	1	1,395
Tue-5/21/19	1,399	1	24.00	1	1,399
Wed-5/22/19	1,400	1	24.00	1	1,400
Thu-5/23/19	1,400	1	24.00	1	1,400
Fri-5/24/19	1,405	1	24.00	1	1,405
Sat-5/25/19	1,398	1	24.00	1	1,398
Sun-5/26/19	1,400	1	24.00	1	1,400
Mon-5/27/19	1,400	1	24.00	1	1,400
Tue-5/28/19	1,400	1	24.00	1	1,400
Wed-5/29/19	1,403	1	24.00	1	1,403
Thu-5/30/19	1,400	1	24.00	1	1,400
Fri-5/31/19	1,224	1	24.00	1	1,224
<b>TOTALS</b>	<b>45,642</b>	<b>1</b>	<b>595.20</b>	<b>1</b>	<b>45,642</b>

<b>TOTAL VOLUME EXTRACTED :</b>	<b>45,642 GALLONS</b>
<b>DAYS IN MONTH :</b>	<b>31 DAYS</b>
<b>MONTHLY AVERAGE FLOW RATE :</b>	<b>1.02 GPM</b>

PW-1 was shut down intermittently due to flow fluctuations.  
 05/16/19 - PW-1 was shut down for maintenance.

**SOUTHWEST AREA EXTRACTION DATA**

**Month of: May-19**

SouthWest Well Extraction				Daily	Daily
Date	ACTIVE WELLS			Flow	Total
	Gallons	GPM	Run Hrs.	GPM	Gallons
Wed-5/1/19	36,617	25	24.00	25	36,617
Thu-5/2/19	24,325	17	24.00	17	24,325
Fri-5/3/19	37,972	26	24.00	26	37,972
Sat-5/4/19	37,857	26	24.00	26	37,857
Sun-5/5/19	37,803	26	24.00	26	37,803
Mon-5/6/19	37,726	26	24.00	26	37,726
Tue-5/7/19	37,643	26	24.00	26	37,643
Wed-5/8/19	28,348	20	24.00	20	28,348
Thu-5/9/19	27,143	19	24.00	19	27,143
Fri-5/10/19	32,947	23	24.00	23	32,947
Sat-5/11/19	37,571	26	24.00	26	37,571
Sun-5/12/19	37,519	26	24.00	26	37,519
Mon-5/13/19	37,458	26	24.00	26	37,458
Tue-5/14/19	32,437	23	24.00	23	32,437
Wed-5/15/19	37,368	26	24.00	26	37,368
Thu-5/16/19	37,322	26	24.00	26	37,322
Fri-5/17/19	36,309	25	24.00	25	36,309
Sat-5/18/19	37,610	26	24.00	26	37,610
Sun-5/19/19	37,571	26	24.00	26	37,571
Mon-5/20/19	37,494	26	24.00	26	37,494
Tue-5/21/19	37,441	26	24.00	26	37,441
Wed-5/22/19	37,426	26	24.00	26	37,426
Thu-5/23/19	37,374	26	24.00	26	37,374
Fri-5/24/19	37,318	26	24.00	26	37,318
Sat-5/25/19	37,324	26	24.00	26	37,324
Sun-5/26/19	37,269	26	24.00	26	37,269
Mon-5/27/19	37,246	26	24.00	26	37,246
Tue-5/28/19	37,248	26	24.00	26	37,248
Wed-5/29/19	22,091	15	24.00	15	22,091
Thu-5/30/19	37,356	26	24.00	26	37,356
Fri-5/31/19	36,104	25	24.00	25	36,104
<b>TOTALS</b>	<b>1,101,237</b>	<b>25</b>	<b>744.00</b>	<b>25</b>	<b>1,101,237</b>

<b>TOTAL VOLUME EXTRACTED :</b>	<b>1,101,237 GALLONS</b>
<b>DAYS IN MONTH :</b>	<b>31 DAYS</b>
<b>MONTHLY AVERAGE FLOW RATE :</b>	<b>24.67 GPM</b>

Note: ACTIVE WELLS = TW-28, TW-22

TABLE #6

UNIT "E" EXTRACTION DATA

Month of: May-19

Date	TW-11			TW-12			TW-17			TW-18			TW-19			TW-23			Daily Flow GPM	Daily Total Gallons
	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.	Gallons	GPM	Run Hrs.		
Wed-5/1/19	-	-	-	-	-	-	-	-	176,949	152	19.40	44,141	31	24.00	99,261	69	24.00	222	320,351	
Thu-5/2/19	-	-	-	-	-	-	-	-	149,513	152	16.38	44,039	31	24.00	99,339	69	24.00	203	292,891	
Fri-5/3/19	-	-	-	-	-	-	-	-	219,195	152	24.00	43,992	31	24.00	99,319	69	24.00	252	362,506	
Sat-5/4/19	-	-	-	-	-	-	-	-	218,809	152	24.00	43,949	31	24.00	99,303	69	24.00	251	362,061	
Sun-5/5/19	-	-	-	-	-	-	-	-	219,196	152	24.00	43,896	30	24.00	99,267	69	24.00	252	362,359	
Mon-5/6/19	-	-	-	-	-	-	-	-	219,237	152	24.00	43,841	30	24.00	99,203	69	24.00	252	362,281	
Tue-5/7/19	-	-	-	-	-	-	-	-	219,292	152	24.00	43,830	30	24.00	99,199	69	24.00	252	362,321	
Wed-5/8/19	-	-	-	-	-	-	-	-	213,775	148	24.00	42,224	30	23.60	96,366	68	23.55	245	352,365	
Thu-5/9/19	-	-	-	-	-	-	-	-	216,807	151	24.00	44,124	31	24.00	98,859	69	24.00	250	359,790	
Fri-5/10/19	-	-	-	-	-	-	-	-	219,184	152	24.00	44,756	31	24.00	99,258	69	24.00	252	363,198	
Sat-5/11/19	-	-	-	-	-	-	-	-	219,205	152	24.00	43,988	31	23.62	97,739	69	23.63	251	360,932	
Sun-5/12/19	-	-	-	-	-	-	-	-	219,199	152	24.00	44,604	31	24.00	99,329	69	24.00	252	363,132	
Mon-5/13/19	-	-	-	-	-	-	-	-	219,219	152	24.00	44,393	31	23.80	98,490	69	23.83	251	362,102	
Tue-5/14/19	-	-	-	-	-	-	-	-	219,082	152	24.00	45,203	31	24.00	99,202	69	24.00	252	363,487	
Wed-5/15/19	-	-	-	-	-	-	-	-	219,146	152	24.00	45,158	31	24.00	99,202	69	24.00	252	363,506	
Thu-5/16/19	-	-	-	-	-	-	-	-	219,185	152	24.00	45,135	31	24.00	99,205	69	24.00	252	363,525	
Fri-5/17/19	-	-	-	-	-	-	-	-	219,194	152	24.00	45,105	31	24.00	99,228	69	24.00	252	363,527	
Sat-5/18/19	-	-	-	-	-	-	-	-	219,261	152	24.00	45,073	31	24.00	99,276	69	24.00	253	363,610	
Sun-5/19/19	-	-	-	-	-	-	-	-	219,186	152	24.00	45,068	31	24.00	99,327	69	24.00	252	363,581	
Mon-5/20/19	-	-	-	-	-	-	-	-	218,981	152	24.00	45,065	31	24.00	99,207	69	24.00	252	363,253	
Tue-5/21/19	-	-	-	-	-	-	-	-	219,085	152	24.00	45,087	31	24.00	99,325	69	24.00	252	363,497	
Wed-5/22/19	-	-	-	-	-	-	-	-	219,172	152	24.00	45,085	31	24.00	99,349	69	24.00	253	363,606	
Thu-5/23/19	-	-	-	-	-	-	-	-	219,117	152	24.00	45,022	31	24.00	99,279	69	24.00	252	363,418	
Fri-5/24/19	-	-	-	-	-	-	-	-	218,933	152	23.98	45,010	31	24.00	99,194	69	24.00	252	363,137	
Sat-5/25/19	-	-	-	-	-	-	-	-	219,095	152	24.00	36,128	31	19.37	80,065	69	19.37	233	335,288	
Sun-5/26/19	-	-	-	-	-	-	-	-	219,044	152	24.00	44,202	31	24.00	99,216	69	24.00	252	362,462	
Mon-5/27/19	-	-	-	-	-	-	-	-	219,095	152	24.00	44,192	31	24.00	99,264	69	24.00	252	362,551	
Tue-5/28/19	-	-	-	-	-	-	-	-	219,109	152	24.00	44,185	31	24.00	99,240	69	24.00	252	362,534	
Wed-5/29/19	-	-	-	-	-	-	-	-	219,042	152	24.00	38,072	31	20.70	85,585	69	20.72	238	342,699	
Thu-5/30/19	-	-	-	-	-	-	-	-	219,235	152	24.00	44,091	31	24.00	99,211	69	24.00	252	362,537	
Fri-5/31/19	-	-	-	-	-	-	-	-	211,988	152	23.25	44,042	31	24.00	99,312	69	24.00	247	355,342	
<b>TOTALS</b>	-	-	-	-	-	-	-	-	<b>6,666,530</b>	<b>152</b>	<b>731.02</b>	<b>1,362,700</b>	<b>31</b>	<b>735.09</b>	<b>3,038,619</b>	<b>69</b>	<b>735.10</b>	<b>248</b>	<b>11,067,849</b>	

TOTAL VOLUME EXTRACTED :	11,067,849 GALLONS
DAYS IN MONTH :	31 DAYS
MONTHLY AVERAGE FLOW RATE :	247.94 GPM

05/01/19 - 05/02/19 - TW-18 was shut down during the night due to a DTE Energy power surge.  
 05/25/19 - TW-19 & TW-23 were shut down for maintenance.  
 05/29/19 - TW-19 & TW-23 were shut down due to a DTE Energy power outage.



**TABLE #7**

**Little Lake Area System**

MW-53i	
Date	1,4-Dioxane ug/L
02/05/19	37
03/11/19	30
04/03/19	50
05/01/19	56

A2 Cleaning Supply Well	
Date	1,4-Dioxane ug/L
03/08/19	61
03/15/19	93
04/03/19	91
05/01/19	87



**TABLE #8**

**INDIVIDUAL PURGE WELL CONCENTRATIONS**

<b>SAMPLE ID</b>	<b>Date Sampled</b>	<b>1,4-DIOXANE (ppb)</b>
DOLPH-05-08-19-09:13-1	05/08/19	130
DOLPH-05-24-19-08:14-1	05/24/19	130
TW-1-05-24-19-09:49-1	05/24/19	50
TW-10-05-13-19-08:38-1	05/13/19	400
TW-20-05-08-19-09:24-1	05/08/19	940
TW-3-05-24-19-09:14-1	05/24/19	43
LB-1-05-13-19-09:03-1	05/13/19	380
LB-4-05-08-19-08:36-1	05/08/19	480
TW-21-05-08-19-09:10-1	05/08/19	230
TW-18-05-08-19-09:21-1	05/08/19	220
TW-19-05-08-19-08:41-1	05/08/19	540
TW-23-05-08-19-09:01-1	05/08/19	450
PW-1-05-08-19-09:18-1	05/08/19	270
TW-22-05-08-19-08:02-1	05/08/19	490
TW-28-05-08-19-08:00-1	05/08/19	690

**RED POND DATA**

**Month of: May-19**

Date	Time	Notes	Red Pond				
			Pond	Level	Aeration	Influent	Influent
			Visual Chk	Feet	Hours	Hours	GPM
Wed-5/1/19	04:00:00		Y	6.5	-	24.00	436
Thu-5/2/19	04:00:00		Y	6.8	-	24.00	396
Fri-5/3/19	04:00:00		Y	6.3	-	24.00	483
Sat-5/4/19	04:00:00	(1)		6.3	-	24.00	483
Sun-5/5/19	04:00:00	(1)		6.1	-	24.00	483
Mon-5/6/19	04:00:00		Y	6.0	-	24.00	483
Tue-5/7/19	04:00:00		Y	6.0	-	23.90	485
Wed-5/8/19	04:00:00		Y	5.9	-	24.00	466
Thu-5/9/19	04:00:00		Y	5.6	-	24.00	472
Fri-5/10/19	04:00:00		Y	5.4	-	24.00	480
Sat-5/11/19	04:00:00	(1)		5.3	-	24.00	472
Sun-5/12/19	04:00:00	(1)		4.9	-	24.00	474
Mon-5/13/19	04:00:00		Y	4.7	-	24.00	477
Tue-5/14/19	04:00:00		Y	4.5	-	24.00	480
Wed-5/15/19	04:00:00		Y	4.4	-	24.00	483
Thu-5/16/19	04:00:00		Y	4.5	-	24.00	482
Fri-5/17/19	04:00:00		Y	4.4	-	24.00	482
Sat-5/18/19	04:00:00	(1)		4.3	-	24.00	483
Sun-5/19/19	04:00:00	(1)		4.2	-	24.00	483
Mon-5/20/19	04:00:00		Y	4.2	-	24.00	483
Tue-5/21/19	04:00:00		Y	4.1	-	24.00	484
Wed-5/22/19	04:00:00		Y	4.8	-	24.00	484
Thu-5/23/19	04:00:00		Y	4.8	-	24.00	483
Fri-5/24/19	04:00:00		Y	4.7	-	24.00	490
Sat-5/25/19	04:00:00	(1)		4.7	-	24.00	442
Sun-5/26/19	04:00:00	(1)		4.0	-	24.00	480
Mon-5/27/19	04:00:00		Y	3.9	-	24.00	480
Tue-5/28/19	04:00:00		Y	3.8	-	24.00	481
Wed-5/29/19	04:00:00		Y	8.1	-	24.00	429
Thu-5/30/19	04:00:00		Y	7.7	-	24.00	481
Fri-5/31/19	04:00:00		Y	6.6	-	24.00	471
<b>TOTALS</b>			-	-	-	<b>744</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-05-06-19-08:31-1	5/6/2019	420
Red Pond-05-13-19-09:24-1	5/13/2019	380
Red Pond-05-20-19-08:35-1	5/20/2019	390
Red Pond-05-28-19-09:01-1	5/28/2019	420

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

OZONE OPERATION REPORT

Month of: May-19

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
2019-05-01	04:00:00		0	19.90	0	0.00	240	17.02	0	0.00
2019-05-02	04:00:00		240	23.60	0	0.00	0	16.63	0	0.00
2019-05-03	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-05-04	04:00:00	(1)	240	24.00	0	0.00	241	24.02	0	0.00
2019-05-05	04:00:00	(1)	239	24.00	0	0.00	240	24.00	0	0.00
2019-05-06	04:00:00		240	24.00	0	0.00	238	24.00	0	0.00
2019-05-07	04:00:00		239	24.02	0	0.00	239	24.00	0	0.00
2019-05-08	04:00:00		240	24.00	0	0.00	238	24.00	0	0.00
2019-05-09	04:00:00		239	24.00	0	0.00	239	24.00	0	0.00
2019-05-10	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-05-11	04:00:00	(1)	239	24.00	0	0.00	240	24.00	0	0.00
2019-05-12	04:00:00	(1)	240	24.00	0	0.00	240	24.00	0	0.00
2019-05-13	04:00:00		240	24.00	0	0.00	239	24.00	0	0.00
2019-05-14	04:00:00		240	24.00	0	0.00	239	24.00	0	0.00
2019-05-15	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-05-16	04:00:00		240	23.05	0	0.00	240	23.77	0	0.00
2019-05-17	04:00:00		240	24.00	0	0.00	239	24.00	0	0.00
2019-05-18	04:00:00	(1)	239	24.00	0	0.00	240	24.00	0	0.00
2019-05-19	04:00:00	(1)	239	24.00	0	0.00	240	24.00	0	0.00
2019-05-20	04:00:00		240	24.00	0	0.00	239	24.02	0	0.00
2019-05-21	04:00:00		240	21.03	0	0.00	240	21.42	0	0.00
2019-05-22	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-05-23	04:00:00		239	24.00	0	0.00	240	24.00	0	0.00
2019-05-24	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-05-25	04:00:00	(1)	240	24.00	0	0.00	240	23.88	0	0.00
2019-05-26	04:00:00	(1)	240	24.00	0	0.00	241	24.00	0	0.00
2019-05-27	04:00:00		240	24.00	0	0.00	240	24.00	0	0.00
2019-05-28	04:00:00		240	15.83	0	0.00	240	17.12	0	0.00
2019-05-29	04:00:00		240	17.53	0	0.00	240	18.35	0	0.00
2019-05-30	04:00:00		239	23.22	0	0.00	240	23.22	0	0.00
2019-05-31	04:00:00		240	24.00	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.

- 05/01/19 - System 1A was shut down briefly due to a DTE Energy power surge.
- 05/01/19 - 05/02/19 - System 2A was shut down due to a DTE Energy power surge and maintenance.
- 05/21/19 - Treatment was shut down briefly for maintenance.
- 05/28/19 - 05/29/19 - Treatment was shut down for changes in the Green Pumphouse.

**GREEN POND / DISCHARGE DATA**

Month of: **May-19**

			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	Pond Discharge GPM	Pond Discharge Gallons	Bypass Discharge GPM	Bypass Discharge Gallons	Bypass Discharge Hours	Recirc Thru UV to Pond GPM	Recirc Thru UV to Pond Gallons	Recirc Thru UV to Pond Hours	Recirc Thru UV to Disch GPM	Recirc Thru UV to Disch Gallons	Recirc Thru UV to Disch Hours		
Wed-5/1/19	04:00:00		Y	-	-	-	-	-	-	436	580,523	22.22	-	-	-	-	-	-		
Thu-5/2/19	04:00:00		Y	-	-	-	-	-	-	446	641,710	24.00	-	-	-	-	-	-		
Fri-5/3/19	04:00:00		Y	-	-	-	-	-	-	498	716,464	24.00	-	-	-	-	-	-		
Sat-5/4/19	04:00:00	(1)		-	-	-	-	-	-	498	716,690	24.00	-	-	-	-	-	-		
Sun-5/5/19	04:00:00	(1)		-	-	-	-	-	-	498	716,576	24.00	-	-	-	-	-	-		
Mon-5/6/19	04:00:00		Y	-	-	-	-	-	-	498	716,600	24.00	-	-	-	-	-	-		
Tue-5/7/19	04:00:00		Y	-	-	-	-	-	-	497	716,214	24.00	-	-	-	-	-	-		
Wed-5/8/19	04:00:00		Y	-	-	-	-	-	-	497	716,274	24.00	-	-	-	-	-	-		
Thu-5/9/19	04:00:00		Y	-	-	-	-	-	-	498	716,464	24.00	-	-	-	-	-	-		
Fri-5/10/19	04:00:00		Y	-	-	-	-	-	-	498	716,535	24.00	-	-	-	-	-	-		
Sat-5/11/19	04:00:00	(1)		-	-	-	-	-	-	497	716,213	24.00	-	-	-	-	-	-		
Sun-5/12/19	04:00:00	(1)		-	-	-	-	-	-	497	716,109	24.00	-	-	-	-	-	-		
Mon-5/13/19	04:00:00		Y	-	-	-	-	-	-	497	716,101	24.00	-	-	-	-	-	-		
Tue-5/14/19	04:00:00		Y	-	-	-	-	-	-	498	716,734	24.00	-	-	-	-	-	-		
Wed-5/15/19	04:00:00		Y	-	-	-	-	-	-	490	696,946	23.72	-	-	-	-	-	-		
Thu-5/16/19	04:00:00		Y	-	-	-	-	-	-	498	716,712	24.00	-	-	-	-	-	-		
Fri-5/17/19	04:00:00		Y	-	-	-	-	-	-	498	717,059	24.00	-	-	-	-	-	-		
Sat-5/18/19	04:00:00	(1)		-	-	-	-	-	-	498	717,017	24.00	-	-	-	-	-	-		
Sun-5/19/19	04:00:00	(1)		-	-	-	-	-	-	498	716,817	24.00	-	-	-	-	-	-		
Mon-5/20/19	04:00:00		Y	-	-	-	-	-	-	495	712,205	24.00	-	-	-	-	-	-		
Tue-5/21/19	04:00:00		Y	-	-	-	-	-	-	491	634,777	21.57	-	-	-	-	-	-		
Wed-5/22/19	04:00:00		Y	-	-	-	-	-	-	498	717,030	24.00	-	-	-	-	-	-		
Thu-5/23/19	04:00:00		Y	-	-	-	-	-	-	498	717,509	24.00	-	-	-	-	-	-		
Fri-5/24/19	04:00:00		Y	-	-	-	-	-	-	498	716,994	24.00	-	-	-	-	-	-		
Sat-5/25/19	04:00:00	(1)		-	-	-	-	-	-	496	714,898	24.00	-	-	-	-	-	-		
Sun-5/26/19	04:00:00	(1)		-	-	-	-	-	-	498	717,010	24.00	-	-	-	-	-	-		
Mon-5/27/19	04:00:00		Y	-	-	-	-	-	-	498	717,267	24.00	-	-	-	-	-	-		
Tue-5/28/19	04:00:00		Y	-	-	-	-	-	-	494	198,722	6.70	-	-	-	-	-	-		
Wed-5/29/19	04:00:00		Y	-	-	-	-	-	-	494	560,838	18.92	-	-	-	-	-	-		
Thu-5/30/19	04:00:00		Y	-	-	-	-	-	-	495	592,672	19.95	-	-	-	-	-	-		
Fri-5/31/19	04:00:00		Y	-	-	-	-	-	-	497	716,398	24.00	-	-	-	-	-	-		
<b>TOTALS</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)	(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
5/1/2019	0.581	*G	*G	6.5		<50	<0.16	No	Yes	6.8	6.8	6.5	44
5/2/2019	0.642			5.8		<50	<0.16	No	No	6.7	6.7	7.7	
5/3/2019	0.716					<50	<0.16	No	No	6.7	6.7		
5/4/2019	0.717												
5/5/2019	0.717			6.1								6.5	
5/6/2019	0.717			6	0.420	<50	<0.16	Yes	Yes	6.8	6.8	7.1	59
5/7/2019	0.716			5.2		<50	<0.16	No	No	6.9	6.9	6.2	
5/8/2019	0.716			6.2		<50	<0.16	No	Yes	6.9	6.9	5.9	40
5/9/2019	0.716			6.2		<50	<0.16	No	No	7.0	7.0	7.4	
5/10/2019	0.717					<50	<0.16	No	No	7.0	7.0		
5/11/2019	0.716												
5/12/2019	0.716			6.5								7.5	
5/13/2019	0.716			5.8	0.380	<50	<0.16	Yes	Yes	7.0	7.0	7	60
5/14/2019	0.717			5.6		<50	<0.16	No	No	7.0	7.0	7.4	
5/15/2019	0.697			5.5		<50	<0.16	No	Yes	7.0	7.0	6.4	50
5/16/2019	0.717			5.7		<50	<0.16	No	No	7.0	7.0	8	
5/17/2019	0.717					<50	<0.16	No	No	6.9	6.9		
5/18/2019	0.717												
5/19/2019	0.717			5.0								6.6	
5/20/2019	0.712			5.0	0.390	<50	<0.16	Yes	Yes	7.0	7.0	6.6	40
5/21/2019	0.635			6.2		<50	<0.16	No	No	7.1	7.1	6.9	
5/22/2019	0.717			6.0		<50	<0.16	No	Yes	7.1	7.1	7.4	30
5/23/2019	0.718			5.9		<50	<0.16	No	No	6.7	6.7	5.5	
5/24/2019	0.717					<50	<0.16	No	No	6.7	6.7		
5/25/2019	0.715												
5/26/2019	0.717			5.6								6.8	
5/27/2019	0.717			6.2								6.9	
5/28/2019	0.199			5.6	0.420	<50	<0.16	Yes	Yes	7.1	7.1	6.4	35
5/29/2019	0.561			5.7		<50	<0.16	No	Yes	6.9	6.9	6.1	
5/30/2019	0.593			5.6		<50	<0.16	No	No	6.9	6.9	5.1	50
5/31/2019	0.716					<50	<0.16	No	No	6.9	6.9		
<b>Discharged</b>	<b>21.100</b>												
<b>Monthly Avg</b>				<b>5.8</b>								<b>6.7</b>	

5/27/19 - Memorial Day