

NPDES PERMIT NO.: NC0047384

PERMIT VERSION: 4.0

PERMIT STATUS: Expired

FACILITY NAME: T.Z. Osborne WWTP

CLASS: WW-4.

COUNTY: Guilford

OWNER NAME: City of Greensboro

ORC: Bradley Todd Flynt

ORC CERT NUMBER: 27171

GRADE: WW-4.

ORC HAS CHANGED: No

eDMR PERIOD: 02-2021 (February 2021)

VERSION: 1.0

STATUS: Submitted

**SAMPLING LOCATION: EFFLUENT DISCHARGE NO.: 001 NO DISCHARGE\*: NO**

Date	Composite Sample Time	Total Composite Time		Operator Time On Site	ORC On Site?*	No Reporting Reason****	50050	00010	00400	50060	CO610	CO530	31616	00300	QM600			
		2400 clock	Hrs				2400 clock	Hrs	Y/B/N	Continuous	5 X week	5 X week	5 X week	5 X week	2 X week	2 X week	5 X week	Monthly
		Recorder	Grab				Grab	Grab	Composite	Composite	Grab	Grab	Calculated					
		FLOW	TEMP-C				pH	CHLORINE	NH3-N - Conc	TSS - Conc	FCOLI BR	DO	TOTAL N - Qty					
							mgd	deg c	su	ug/l	mg/l	mg/l	#/100ml	mg/l	lb/mon			
1		24	7	24	Y		43.36	15.4	7.3	< 14	1.75	27.6	7.1	9.24				
2		24	7	24	Y		41.42	15.4	7.4	< 14	6.93	50.7	2	9.67				
3		24	7	24	Y		39.82	15.2	7.6	< 14	3.24	5.1	4.1	9.84				
4		24	7	24	Y		35.83	15.4	7.6	< 14	2.71	24	> 2419.6	9.5				
5		24	7	24	Y		35.36	16	7.6	< 14	1.86	10.5	121.1	9.55				
6		24	7	24	B		34.39											
7		24	7	24	B		37.98											
8		24	7	24	Y		36.8	14.9	7.3	< 14	3.68	6.55	5.51	9.72				
9		24	7	24	Y		37.79	15.5	7.4	< 14	4.52	15.3	12.1	9.63				
10		24	7	24	Y		37.55	16	7.6	< 14	5.17	67.4	< 1	9.56				
11		24	7	24	Y		45.2	16.4	7.6	< 14	3.07	8.6	50.4	9.45				
12		24	7	24	Y		49.37	15.7	7.5	< 14	3.88	15.9	3	9.62				
13		24	7	24	B		60.81											
14		24	7	24	B		55.53											
15		24	7	24	Y		54.44	13.6	7.3	< 14	12.1	22	> 2419.6	9.84				
16		24	7	24	Y		71.51	13.9	7.3	< 14	11.7	139	204.6	9.33				
17		24	7	24	Y		51.19	13.4	7.2	< 14	15.4	41		9.6				
18		24	7	24	Y		54.92	H	H	H	H	H	H	H				
19		24	7	24	Y		55.56	14.7	7.5	< 14	16	13.1	8.4	9.87				
20		24	7	24	B		45.49											
21		24	7	24	B		42.39											
22		24	7	24	Y		40.39	15.3	7.6	< 14	14.3	27.7	3.1	9.65				
23		24	7	24	Y		42.59	15	7.6	< 14	13	14.7	1	9.72				
24		24	7	24	Y		39.64	14.8	7.6	< 14	10.6	91	2	9.45				
25		24	7	24	Y		41.76	15.1	7.5	< 14	18	43	> 2419.6	9.45				
26		24	7	24	Y		45.04	15.7	7.6	< 14	26.1	32	6.3	9.44				
27		24	7	24	B		49.73											
28		24	7	24	B		43.43								106812.35658			
Monthly Average Limit:							40				4	30	200					
Monthly Average:							45.331786	15.126316		0	9.158421	34.481579	18.549199	9.585789	106812.35658			
Daily Maximum:							71.51	16.4	7.6	0	26.1	139	2419.6	9.87	106812.35658			
Daily Minimum:							34.39	13.4	7.2	0	1.75	5.1	0	9.24	106812.35658			

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**SAMPLING LOCATION: EFFLUENT DISCHARGE NO.: 001 NO DISCHARGE\*: NO (Continue)**

Date	Composite Sample Time	Total Composite Time		Operator Time On Site	ORC On Site**	No Reporting Reason****	QY600	CO600	CO665	QM665	QY665	80082	00630	00625	01147	82388	01097			
		2400 clock	Hrs				2400 clock	Hrs	Y/B/N	Annually	Weekly	Weekly	Monthly	Annually	2 X week	Weekly	Weekly	Monthly		
		Calculated	Composite				Composite	Calculated	Calculated	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Composite	Grab	Composite	
		TOTAL N -	TOTAL N -				TOTAL P -	Total P - Qty	Total P - Qty	CBOD 20C	NO2&NO3	TOT KJEL	Se-TOTAL	[4DIOXAN	ANTIMONY					
		lbs/yr	mg/l	mg/l	lb/mon	lbs/yr	mg/l	mg/l	mg/l	ug/l	ug/l	ug/l								
1		24	7	24	Y							16.4								
2		24	7	24	Y							24.9								
3		24	7	24	Y		6.79					3.06	1.25	5.54	< 1					
4		24	7	24	Y			1.18				6.48								
5		24	7	24	Y							4.46				33.35				
6		24	7	24	B															
7		24	7	24	B															
8		24	7	24	Y							6.56								
9		24	7	24	Y							6.84								
10		24	7	24	Y		12.04					22.8	0.64	11.4						
11		24	7	24	Y			1.05				3.74								
12		24	7	24	Y							6.33				9.55				
13		24	7	24	B															
14		24	7	24	B															
15		24	7	24	Y							23.7								
16		24	7	24	Y							62.4								
17		24	7	24	Y		11					82	< 0.1	11		19.5				
18		24	7	24	Y		H	H				H	H	H	H		H			
19		24	7	24	Y			3.56				13.9				6.54				
20		24	7	24	B															
21		24	7	24	B															
22		24	7	24	Y			2.94				16.7								
23		24	7	24	Y							8.38								
24		24	7	24	Y		10.42					24.3	0.12	10.3						
25		24	7	24	Y							30.3								
26		24	7	24	Y							43.2				7.05				
27		24	7	24	B															
28		24	7	24	B				23109											
Monthly Average Limit:												8			5.2					
Monthly Average:								10.0625	2.1825	23109		21.392105	0.5025	9.56	0	15.198				
Daily Maximum:								12.04	3.56	23109		82	1.25	11.4	0	33.35				
Daily Minimum:								6.79	1.05	23109		3.06	0	5.54	0	6.54				

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Date	Composite Sample Time	Total Composite Time		Operator Time On Site	ORC On Site?*	No Reporting Reason****	01002	01012	01027	01034	01037	01042	00720	00900	01051	COMER	01067	
		Composite	Composite				Composite	Composite	Composite	Composite	Grab	Composite	Composite	Grab	Composite			
		As-TOTAL	BERYLIUM				CADMIUM	Cr-TOTAL	COBALT	COPPER	CN-TOT	TOT HARD	LEAD	MERCURY	NICKEL			
	2400 clock	Hrs	2400 clock	Hrs	Y/B/N		ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	mg/l	ug/l	ug/l	ug/l	ug/l	
1		24	7	24	Y													
2		24	7	24	Y													
3		24	7	24	Y		< 2		< 0.15	2		2			< 0.5			7.6
4		24	7	24	Y													
5		24	7	24	Y													
6		24	7	24	B													
7		24	7	24	B													
8		24	7	24	Y													
9		24	7	24	Y													
10		24	7	24	Y													
11		24	7	24	Y													
12		24	7	24	Y													
13		24	7	24	B													
14		24	7	24	B													
15		24	7	24	Y													
16		24	7	24	Y													
17		24	7	24	Y													
18		24	7	24	Y		H	H	H	H	H	H	H		H	H	H	
19		24	7	24	Y													
20		24	7	24	B													
21		24	7	24	B													
22		24	7	24	Y													
23		24	7	24	Y													
24		24	7	24	Y													
25		24	7	24	Y													
26		24	7	24	Y												0.017	
27		24	7	24	B													
28		24	7	24	B													
Monthly Average Limit:																		
Monthly Average:							0		0	2		2				0	0.017	7.6
Daily Maximum:							0		0	2		2				0	0.017	7.6
Daily Minimum:							0		0	2		2				0	0.017	7.6

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Date	Composite Sample Time	Total Composite Time		Operator Time On Site	ORC On Site?*	No Reporting Reason****	TGP3B	01077	01059	01102	01152	01087	01092			
		Hrs	2400 clock				Hrs	Y/B/N	pass/fail	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l
		2400 clock	Hrs				Y/B/N	pass/fail	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	ug/l	
1		24	7	24	Y											
2		24	7	24	Y											
3		24	7	24	Y		< 0.5						30			
4		24	7	24	Y											
5		24	7	24	Y											
6		24	7	24	B											
7		24	7	24	B											
8		24	7	24	Y											
9		24	7	24	Y											
10		24	7	24	Y											
11		24	7	24	Y											
12		24	7	24	Y											
13		24	7	24	B											
14		24	7	24	B											
15		24	7	24	Y											
16		24	7	24	Y											
17		24	7	24	Y											
18		24	7	24	Y			H	H	H	H	H	H			
19		24	7	24	Y											
20		24	7	24	B											
21		24	7	24	B											
22		24	7	24	Y											
23		24	7	24	Y											
24		24	7	24	Y											
25		24	7	24	Y											
26		24	7	24	Y											
27		24	7	24	B											
28		24	7	24	B											
Monthly Average Limit:																
Monthly Average:								0					30			
Daily Maximum:								0					30			
Daily Minimum:								0					30			

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ORC: Bradley Todd Flynt

ORC CERT NUMBER: 27171

GRADE: WW-4.

ORC HAS CHANGED: No

eDMR PERIOD: 02-2021 (February 2021)

VERSION: 1.0

STATUS: Submitted

**SAMPLING LOCATION: INFLUENT DISCHARGE NO.: 001**

Date	Composite Sample Time	Total Composite Time	No Reporting Reason****	CO530	80082	CO610	CO665	80091	81011
				2 X week	2 X week				
				Composite	Composite	Composite	Composite	Composite	Composite
				TSS - Conc	CBOD 20C	NH3-N - Conc	TOTAL P - Conc	CBOD5-%R	TSS-%R
	2400	Hrs		mg/l	mg/l	mg/l	mg/l	percent	percent
1		24		221	335	15.55			
2		24		458	269	16.1			
3		24		531	348	17.38			
4		24		470	383	18.11	11.74		
5		24		928	585	21.58			
6		24							
7		24							
8		24		594	260	17.63			
9		24		687	350	15.2			
10		24		302	477	24.4			
11		24		372	484	24.57	8.29		
12		24		197	345	19.56			
13		24							
14		24							
15		24		126	253	12.71			
16		24		176	207	12.35			
17		24		264	238	14.74			
18		24		H	H	H	H		
19		24		132	262	15.68	6.56		
20		24							
21		24							
22		24		294	357	19.28	8.72		
23		24		199	251	16.56			
24		24		242	369	23.46			
25		24		266	391	23.29			
26		24		223	277	22.2			
27		24							
28		24						93.690464	90.194878
<b>Monthly Average Limit:</b>									
<b>Monthly Average:</b>				351.684211	339	18.439474	8.8275	93.690464	90.194878
<b>Daily Maximum:</b>				928	585	24.57	11.74	93.690464	90.194878
<b>Daily Minimum:</b>				126	207	12.35	6.56	93.690464	90.194878

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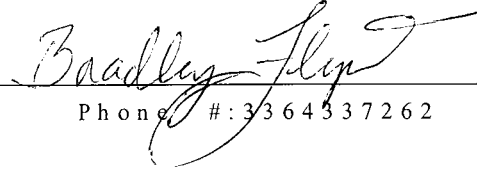
STATUS: Submitted

COMPLIANCE STATUS: Non-Compliant

CONTACT PHONE #: 433-7262

SUBMISSION DATE: 03/27/2021

Electronically Certified by Bradley Todd Flynt on 2021-03-25 14:30:10.13



ORC / Certifier Signature: Bradley Todd Flynt

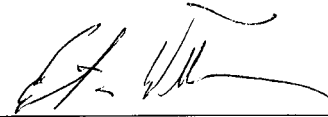
Phone #: 3364337262

Date

I certify that this report is accurate and complete to the best of my knowledge.

The permittee shall report to the Director or the appropriate Regional Office any noncompliance that potentially threatens public health or the environment. Any information shall be provided orally within 24 hours from the time the permittee became aware of the circumstances. A written submission shall also be provided within 5 days of the time the permittee becomes aware of the circumstances. The written submission shall be made as required by part II.E.6 of the NPDES permit.

Electronically Signed by Elijah Lamont Williams on 2021-03-27 22:28:35.526



Permittee/Submitter Signature: \*\*\*Elijah Lamont Williams

Phone #: 336-373-4632

Date

Permittee Address: 2350 Huffine Mill Rd Mc Leansville NC 27301

Permit Expiration Date: 06/30/2019

I certify, under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who managed the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

CERTIFIED LABORATORIES

LAB NAME: TZO Laboratory, Meritech Labs Inc, Pace Analytical Services

CERTIFIED LAB #: #65, #165, #12

PERSON(S) COLLECTING SAMPLES: Automatic Sampler

PARAMETER CODES

Parameter Code assistance may be obtained by visiting <https://deq.nc.gov/about/divisions/water-resources/edmr/user-documentation>.

FOOTNOTES

Use only units of measurement designated in the reporting facility's NPDES permit for reporting data.

\* No Flow/Discharge From Site: YES indicates that No Flow/Discharge occurred and, as a result, no data is reported for any parameter on the DMR for the entire monitoring period.

\*\* ORC on Site?: ORC must visit facility and document visitation of facility as required per 15A NCAC 8G .0204.

\*\*\* Signature of Permittee: If signed by other than the permittee, then delegation of the signatory authority must be on file with the state per 15A NCAC 2B .0506(b)(2)(D).

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**Report Comments:**

Data Qualifications - CBOD: Glucose/glutamic acid out of range on 2/1-3, 2/8-12, 2/22-24, 2/26 likely due to problem with laboratory DI water system. Ammonia and Total Phosphorus: samples on 2/19 were not preserved within 15 minutes due to City snow delay; Ammonia: not preserved within 15 minutes due to lab error; Total Phosphorus: matrix spike out on 2/4, 2/22 due to high effluent concentration, but within 15% range; TSS: on 2/19 no initial dry constant weight calibration; City closed due to snow/weather on 2/18.

The TZ Osborne POTW recorded the following 9 violations: 1 MA flow; 2 WA CBOD, 1 MA CBOD; 2 WA ammonia, 1 MA ammonia; 1 WA suspended solids, 1 MA suspended solids.

A combined sequence of events resulted in the violations. High flows due to rainfall, construction, elevated solids inventory and a structural failure of the fluidized bed incinerator which caused a loss of solids to the effluent and also impacted the nitrification process.

We have been dealing with some incinerator maintenance issues that have caused several shut downs and increasing MLSS since December 2020. We had approximately 240 hours of downtime before we finally had a major failure in the heat exchanger resulting in the complete shutdown of incineration from February 4th to 15th. During that time we had heavy rain events and ice storms which caused high flows, which on top of our elevated MLSS, caused high blanket levels in our finals and contributed to the violations. We also had a failure of our new invent mixers in our BNR system which caused us to shut those down and go back to extended aeration mode. These invent mixers have now been fixed. During the incinerator down time, we hired HILCO to haul sludge to the landfill at the cost of \$225k trying to keep our heads above water. With ongoing construction, we experienced weekly shutdowns of our RAS systems which also limited our solids removal. With the high levels of MLSS and high flow events we had to shut down all aeration to control the finals and stop some of the solids from bypassing our filter system.

We are currently processing sludge at full capacity and we have also returned to our new BNR process.

The POTW rain gage measured almost 4 inches of rain in a 5-day period in which the TZO flow averaged 58 MGD with a maximum of 71.5 MGD. Our current average flow is back to normal at less than 40 MGD (37.49 MGD).

Although the TZ Osborne facility returned to compliance for CBOD and TSS during March, the POTW is still struggling with ammonia due to high solids inventory.