

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION
DIVISION OF WATER POLLUTION CONTROL



REPORT OF OPERATION OF WASTEWATER TREATMENT
PLANT Mountain City S.W.
COUNTY Johnson
MONTH OF MAY 2024

DATE	RAINFALL (0.1")	INFLUENT FLOW (MGD)	INFLUENT MAX FLOW (MGD)	EFFLUENT FLOW (MGD)	HOURS BYPASSED	TEMPERATURE INFLUENT (°C)	TEMPERATURE EFFLUENT (°C)	5 DAY CBOD / BOD					AMMONIA NITROGEN					SUSPENDED SOLIDS					SETTLABLE SOLIDS		DISSOLVED OXYGEN		pH		FINAL EFFLUENT				
								INFLUENT (mg/L)	EFFLUENT (mg/L)	EFFLUENT (POUNDS)	PERCENT REMOVAL	INFLUENT (mg/L)	EFFLUENT (mg/L)	EFFLUENT (POUNDS)	PERCENT REMOVAL	INFLUENT (mg/L)	EFFLUENT (mg/L)	EFFLUENT (POUNDS)	PERCENT REMOVAL	INFLUENT (mg/L)	EFFLUENT (mg/L)	INFLUENT (mg/L)	EFFLUENT (mg/L)	INFLUENT (STANDARD UNITS)	EFFLUENT (STANDARD UNITS)	TSS	CHLORINE RESIDUAL (mg/L)	GALLONS BLEACH	GALLONS DISINFECTANT	F-Coli.			
1		.836	2.11	.426		15	16	99	4	14	96		.1	1		209	6	21	97	4	6.5	2.6	8.1	7.1	6.9	.80	BDL	16	48	4			
2		.840	2.12	.413		15	16	108	6	21	94		.1	1		162	5	17	97			2.4	8.2	7.2	6.9		BDL	16	47				
3		.820	2.1	.448		16	16															1.8	8.0	7.1	7.0		BDL	16	46				
4	1.2	1.383	2.45	.896																									20	50			
5		1.217	2.19	.747																									22	43			
6	.4	1.364	2.2	.851		16	16.5													10	6.5	3.9	7.4	7.0	6.9	1.26	BDL	21	45	3			
7	.3	1.440	2.17	.956		15.5	16.5	45	4	32	91		.3	2		82	7	56	92	2	6.5	5.2	6.7	7.1	6.8	.76	BDL	25	54	<1			
8	.9	1.604	2.21	1.070		15.5	17	44	4	36	91		.1	1		103	7	62	93	.5	6.5	5.1	6.9	7.1	7.3	.87	BDL	24	52	3			
9	.1	1.888	2.32	1.307		15.5	16.5	34	6	65	82		.1	1		52	11	120	79			5.3	6.4	7.2	7.0		BDL	28	41				
10	.2	1.524	2.16	1.037		15.5	16.5															4.8	7.8	7.1	7.4		BDL	20	36				
11	.1	1.342	2.1	.859																									22	32			
12		1.243	2.07	.744																									21	34			
13		1.176	2.07	.723		15.5	16													2	6.5	4.2	6.8	6.9	6.4	.93	BDL	21	33	1			
14		1.221	2.09	.753		16	16	108	3	19	97		.2	1		151	4	25	97	8	6.5	2.6	7.6	7.0	6.8	.93	BDL	19	28	2			
15	.9	1.648	2.62	1.140		16	16.5	74	3	28	96		.2	2		153	7	67	95	2	6.5	3.6	7.2	7.0	6.7	.88	BDL	20	28	3			
16		1.846	2.62	1.315		16.5	17	40	3	33	92		.1	1		67	7	77	90			6.1	6.5	7.2	6.8		BDL	21	33				
17	.2	1.597	2.56	1.138		16	16.5	20														4.8	6.7	7.1	7.1		BDL	21	30				
18	1.6	2.537	3.69	1.744																									19	27			
19		1.815	3.38	1.363																									25	31			
20		1.661	3.32	1.140		16	17													7	6.5	3.7	7.4	7.1	7.2	1.24	BDL	26	29	10			
21		1.621	3.36	1.096		17	17	46	4	37	91		.5	5		95	8	73	92	6	6.5	2.7	6.8	7.0	6.8	.69	BDL	27	30	7			
22	.3	1.569	3.33	1.067		17	18	20	5	44	93		.1	1		98	17	151	83	6	6.5	2.5	6.5	7.1	6.7	.83	BDL	30	40	11			
23		1.576	3.12	1.076		17	18	62	4	36	94		.1	1		93	7	63	92			3.1	6.6	7.0	6.5		BDL	30	87				
24		1.505	2.98	.991		17	18															2.9	6.7	7.0	7.0		BDL	22	66				
25		1.577	2.54	1.050																									29	61			
26	1.1	1.731	3.58	1.183																									31	10			
27	.4	2.516	3.66	1.690		17.5	18													1	6.5	6.7	7.1	7.3	7.4		BDL	32	42				
28		2.331	3.61	1.586		17	18	30	10	132	67		.1	1		52	15	198	71	1.5	6.5	4.7	6.8	7.1	7.3		BDL	65	68				
29		2.057	3.42	1.393		17	18	28	22	223	793		.1	1		66	8	93	88	1	6.5	3.9	7.3	7.2	7.2		BDL	44	62				
30		1.820	5.0	1.246		17	17.5	27	22	221	793		.1	1		84	8	83	90			3.9	7.3	7.2	7.2	7.2	BDL	48	20	1			
31		1.293	2.6	.895		17	18															3.0	6.7	7.2	6.7	1.78	BDL	46	59	<1			
TOTAL		48.558		32.348						541				20				1106											827	1312			
AVERAGE		1.566		1.04		16	17	58	4	39	93		.2	1		105	8	79	92									27	42	3			
MAXIMUM		2.516	5.0	1.690		17.5	18	108	10	132	96		.5	5		209	17	198	97	10	6.5	6.7	8.2	7.5	7.4		6.5	65	87	11			
MINIMUM		.800		.413		15	16	27	22	14	67		.1	1		52	4	25	71	.5		1.8	6.4	6.9	6.4			16	10	<1			

RECEIVED
JUN 10 2024

JOHNSON CITY
LEWY FIELD OFFICE

REMARKS: C.B.O.D. SOLID DID NOT MEET CRITERIA ON 5/10, 5/13
C.B.O.D. BLENDS DID NOT MEET CRITERIA ON 5/16, 5/17, 5/22, 5/24
DOR M/L FOR TSS = .04 / FOR NH3-N = .1

T-NIT = 17.0 MG/L / 5.9 LBS T-PHOS = 1.71 MG/L 6 LBS 5/2/24

CERTIFIED OPERATOR SIGNATURE [Signature] CERTIFICATION NO. 2481 GRADE IV

DATE	RECEIVING STREAM ANALYSES																UNIT OPERATIONS*																					
	BOD		G.S.		SETT'S		D.O.		PH		TEMP		FECAL		NH ₄		MLSS	MLSS	P.O.	30 mg/l	Sett.	Est. B	W.A.S	A.H.T.	D.T.O	A.H.T. Temp	A.H.T.	A.H.T. %	T.S. %	Pre S.S	Q. Cond.	Pre S.S	T.S. %					
	ABOVE	BELOW	ABOVE	BELOW	ABOVE	BELOW	ABOVE	BELOW	ABOVE	BELOW	ABOVE	BELOW	ABOVE	BELOW	ABOVE	BELOW																		49	50	51	52	53
32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	2144	3.2	680	7000																		
1																	3.1	620	6000							7.0	1.3	1073	2.2									
2																	2624	3.1	640	7000																		
3																			550	7000																		
4																			650	7000																		
5																	2256	3.9	550	7000																		
6																	321	610	7000																			
7																	2246	2.9	650	8000																		
8																	3.5	440	5000							7.1	1.2	10618	2.1									
9																	2218	3.2	730	7000					.1	18												
10																			650	7000																		
11																			750	7000																		
12																	2156	3.4	700	8000																		
13																			3.1	500	7000																	
14																	2162	3.3	600	5000																		
15																			3.6	400	6000				.1	18	7.2	2.2	8202	2.3								
16																	2220	3.2	450	7000					.1	18												
17																			540	7000																		
18																				7000																		
19																	2052	2.5	410	6000					.1	18.5												
20																			2.3	410	7000																	
21																	2258	3.0	470	7000					.1	18												
22																			3.0	440	6000					.1	19.5	7.6	1.6	7477	2.2							
23																	2052	3.1	460																			
24																			420																			
25																			440																			
26																			3.1	450																		
27																			1.3																			
28																			1.3																			
29																	2378	2.1	470	5000																		
30																	2656	3.3	530	7000																		
31																				163000																		
TOT																				6520					.1	18.5												
AVE																	2656	3.9	750	8000					.1	19.5	7.6	2.2	1073	2.3								
MAX																	2052	1.3	440	4000					.1	18	7.0	1.2	10618	2.1								
MIN																																						

SLUDGE DISPOSAL

QUANTITY OF WET SLUDGE GENERATED: _____ GALLONS/MONTH

QUANTITY OF WET SLUDGE DISPOSED OF: _____ GALLONS/MONTH

% SOLIDS: _____

WEIGHT OF SLUDGE (DRY) GENERATED: _____ METRIC TONS/MONTH

WEIGHT OF SLUDGE (DRY) DISPOSED OF: _____ METRIC TONS/MONTH

$\left(\frac{\text{GALLONS} \times 8.34}{2205}\right) \times \left(\frac{\% \text{ SOLIDS}}{100}\right) = \text{METRIC TONS}$

VOLATILE SOLIDS REDUCTION* FROM WASTE SLUDGE TO DISPOSAL: _____

ULTIMATE METHOD OF DISPOSAL: **S.S.D.T. LANDFILL**

DIGESTER DETENTION TIME: _____

METHOD OF DIGESTION: _____

LIST DAILY SLUDGE DATE IN COLUMNS TO LEFT

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JOHNSON CITY
ENV. FIELD OFFICE

*UNIT OPERATIONS — THE ANALYSES BELOW SHOULD BE PERFORMED WHERE APPLICABLE

AERATION OR REAERATION
 SUSPENDED SOLIDS (MLSS)
 SLUDGE VOLUME INDEX (SVI)
 DISSOLVED OXYGEN (DAILY AVERAGE)
 TEMPERATURE
 SLUDGE AGE, FOOD TO MICROORGANISM RATIO
 OR MEAN-CELL RESIDENCE TIME

AEROBIC DIGESTER
 SUSPENDED SOLIDS (MLSS)
 SETTLEABLE SOLIDS (1000 ML)
 DISSOLVED OXYGEN (DAILY AVERAGE)
 TEMPERATURE
 PERCENT VOLATILE SOLIDS

ANAEROBIC DIGESTER
 TEMPERATURE
 pH
 VOLATILE ACIDS
 ALKALINITY
 TEMPERATURE
 PERCENT VOLATILE SOLIDS (OF SLUDGE)

SLUDGE HANDLING
 HOURS OPERATED
 VOLUME OF SLUDGE REMOVED
 POUNDS OF WET SLUDGE PRODUCED
 MOISTURE CONTENT
 CHEMICALS USED