



700 West Liberty Street | Louisville, KY 40203-1911
Phone: 502.540.6000 | LouisvilleMSD.org

January 18, 2022

Crystal Dennis
Permit Support Section
Surface Water Permits Branch
Division of Water
200 Fair Oaks Lane 4th Floor
Frankfort, KY 40601

Re: Morris Forman Water Quality Treatment Center
KPDES Permit No. KY0022411

Dear Ms. Dennis:

In accordance with the provisions of the KPDES Permit referenced above, the monthly Discharge Monitoring Report (DMR) and monthly Discharge (overflow) Reports for the reporting period December 1st through December 31st, 2021, are provided through NetDMR. The Morris Forman Water Quality Treatment Center (MFWQTC) did not meet permit for 30 day BOD, 7 day BOD, 30 day TSS, 7 day TSS, TSS and BOD percent removal reporting requirements.

Compromised solids handling equipment continue to contribute to our effluent exceedances. MSD has installed dewatering services at a satellite facility. This dewatering service has reduced the solids loading to the Morris Forman plant. Additionally, an Emergency Design Build Project for new solids handling equipment will be installed and in service in Early 2022 at Morris Forman.

Should you have any questions, please contact me at (502) 540-6765.

Sincerely,

James Skinner
Treatment Facilities Manager

01074	Nickel, total recoverable	G - Raw Sewage Influent	0	--	Sample	=	0.0505	=	0.0505	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01079	Silver total recoverable	1 - Effluent Gross	0	--	Sample	<	0.004	<	0.004	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01079	Silver total recoverable	G - Raw Sewage Influent	0	--	Sample	<	0.004	<	0.004	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01094	Zinc, total recoverable	1 - Effluent Gross	0	--	Sample	=	0.0792	=	0.0792	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01094	Zinc, total recoverable	G - Raw Sewage Influent	0	--	Sample	=	0.0796	=	0.0796	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01113	Cadmium, total recoverable	1 - Effluent Gross	0	--	Sample	<	0.0025	<	0.0025	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01113	Cadmium, total recoverable	G - Raw Sewage Influent	0	--	Sample	=	0.01	=	0.01	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01114	Lead, total recoverable	1 - Effluent Gross	0	--	Sample	=	0.0503	=	0.0503	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01114	Lead, total recoverable	G - Raw Sewage Influent	0	--	Sample	=	0.0501	=	0.0501	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01118	Chromium, total recoverable	1 - Effluent Gross	0	--	Sample	<	0.01	<	0.01	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01118	Chromium, total recoverable	G - Raw Sewage Influent	0	--	Sample	=	0.01	=	0.01	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01119	Copper, total recoverable	1 - Effluent Gross	0	--	Sample	=	0.0338	=	0.0338	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
01119	Copper, total recoverable	G - Raw Sewage Influent	0	--	Sample	=	0.0549	=	0.0549	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
03582	Oil and grease	1 - Effluent Gross	0	--	Sample	<	5.0	<	5.0	19 - mg/L	01/YR - Annual	GR - GRAB
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	GR - GRAB
					Value NODI							
03582	Oil and grease	G - Raw Sewage Influent	0	--	Sample	<	5.0	<	5.0	19 - mg/L	01/YR - Annual	GR - GRAB
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	GR - GRAB
					Value NODI							
34043	Phenolics, total	1 - Effluent Gross	0	--	Sample	<	0.02	<	0.02	19 - mg/L	01/YR - Annual	GR - GRAB
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	GR - GRAB
					Value NODI							
34043	Phenolics, total	G - Raw Sewage Influent	0	--	Sample	=	0.05	=	0.05	19 - mg/L	01/YR - Annual	GR - GRAB
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	GR - GRAB
					Value NODI							
71901	Mercury, total recoverable	1 - Effluent Gross	0	--	Sample	=	0.0000409	=	0.0000409	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
71901	Mercury, total recoverable	G - Raw Sewage Influent	0	--	Sample	=	0.0000147	=	0.0000147	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							
78247	Chromium, hexavalent tot recoverable	1 - Effluent Gross	0	--	Sample	=	0.005	=	0.005	19 - mg/L	01/YR - Annual	CP - COMPOS
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI							

78247	Chromium, hexavalent tot recoverable	G - Raw Sewage Influent	0	--	Sample																=	0.009	=	0.009	19 - mg/L	01/YR - Annual	CP - COMPOS				
					Permit Req.																					Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L	01/YR - Annual	CP - COMPOS
					Value NODI																										

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Attachments

No attachments.

Report Last Saved By

Morris Forman WQTC MSD

User: SKINNER@LOUISVILLEMSD.ORG
 Name: James skinner
 E-Mail: james.skinner@louisvillemsd.org
 Date/Time: 2022-01-19 14:38 (Time Zone: -05:00)

Report Last Signed By

User: SKINNER@LOUISVILLEMSD.ORG
 Name: James skinner
 E-Mail: james.skinner@louisvillemsd.org
 Date/Time: 2022-01-20 07:18 (Time Zone: -05:00)

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

Parameter		Monitoring Location	Field	Type	Description	Acknowledge
Code	Name					
81011	Solids, suspended percent removal	K - Percent Removal	Quality or Concentration Sample Value 1	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
00310	BOD, 5-day, 20 deg. C	E - Secondary/Biological Process Complete	Quality or Concentration Sample Value 2	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
00310	BOD, 5-day, 20 deg. C	E - Secondary/Biological Process Complete	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
00530	Solids, total suspended	E - Secondary/Biological Process Complete	Quality or Concentration Sample Value 2	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
00530	Solids, total suspended	E - Secondary/Biological Process Complete	Quality or Concentration Sample Value 3	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes
81010	BOD, 5-day, percent removal	K - Percent Removal	Quality or Concentration Sample Value 1	Soft	The provided sample value is outside the permit limit. Please verify that the value you have provided is correct.	Yes

Comments**Attachments**

Name	Type	Size
MFWQTC12021.pdf	pdf	131538.0
MFWQTCCoverLetter12021.pdf	pdf	43653.0

Report Last Saved By**Morris Forman WQTC MSD**

User: AJOP1117
 Name: Amber Pauly
 E-Mail: amber.pauly@louisvillemmsd.org
 Date/Time: 2022-01-18 08:17 (Time Zone: -05:00)

Report Last Signed By

User: SKINNER@LOUISVILLEMSD.ORG
 Name: James skinner
 E-Mail: james.skinner@louisvillemmsd.org
 Date/Time: 2022-01-18 14:15 (Time Zone: -05:00)

DMR Copy of Record

Permit		Permit #: KY0022411		Permittee: Morris Forman WQTC MSD		Facility: MORRIS FORMAN WQTC MSD	
Major: Yes		Permittee Address: 700 W Liberty St Louisville, KY 40203		Facility Location: 4522 ALGONQUIN PKWY LOUISVILLE, KY 40211			
Permitted Feature: 001 External Outfall		Discharge: 001-B SECONDARY BYPASS					

Report Dates & Status			
Monitoring Period: From 12/01/21 to 12/31/21	DMR Due Date: 01/28/22	Status:	NetDMR Validated

Considerations for Form Completion
 MONITORING DURING PERIODS OF SECONDARY BYPASS IN ADDITION TO REGULAR MONITORING.1 - FINAL EFFLUENTF - SECONDARY BYPASS AFTER PRIMARYTREATMENT.

Principal Executive Officer			
First Name: James A	Title: Executive Director	Telephone: 502-540-6000	
Last Name: Parrott			

No Data Indicator (NODI)
 Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI	Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type	
					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3				Value 3
00310	BOD, 5-day, 20 deg. C	1 - Effluent Gross	0	--	Sample						=	131.0	=	148.0	19 - mg/L	0	10/30 - Ten Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L			
					Value NODI													
00310	BOD, 5-day, 20 deg. C	F - Primary/Preliminary Process Complete	0	--	Sample						=	207.0	=	271.0	19 - mg/L	0	10/30 - Ten Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L			
					Value NODI													
00530	Solids, total suspended	1 - Effluent Gross	0	--	Sample						=	209.0	=	251.0	19 - mg/L	0	10/30 - Ten Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L			
					Value NODI													
00530	Solids, total suspended	F - Primary/Preliminary Process Complete	0	--	Sample						=	130.0	=	132.0	19 - mg/L	0	10/30 - Ten Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L			
					Value NODI													
00610	Nitrogen, ammonia total [as N]	1 - Effluent Gross	0	--	Sample						=	5.4	=	9.3	19 - mg/L	0	10/30 - Ten Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L			
					Value NODI													
00610	Nitrogen, ammonia total [as N]	F - Primary/Preliminary Process Complete	0	--	Sample						=	9.5	=	16.7	19 - mg/L	0	10/30 - Ten Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L			
					Value NODI													
50050	Flow, in conduit or thru treatment plant	F - Primary/Preliminary Process Complete	0	--	Sample	=	32.5	=	61.1	03 - MGD					0	10/30 - Ten Per Month WH/DS - When Discharging	CN - CONTIN CN - CONTIN	
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	03 - MGD								
					Value NODI													

Submission Note
 If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors
 No errors.

Comments

Attachments
 No attachments.

Report Last Saved By
 Morris Forman WQTC MSD

User: AJOP1117
 Name: Amber Pauly
 E-Mail: amber.pauly@louisvillemd.org
 Date/Time: 2022-01-18 08:05 (Time Zone: -05:00)

Report Last Signed By
 User: SKINNER@LOUISVILLEMSD.ORG

Name: James skinner
E-Mail: james.skinner@louisvillemsd.org
Date/Time: 2022-01-18 14:23 (Time Zone: -05:00)

DMR Copy of Record

Permit			
Permit #:	KY0022411	Permittee:	Morris Forman WQTC MSD
Major:	Yes	Permittee Address:	700 W Liberty St Louisville, KY 40203
Permitted Feature:	001 External Outfall	Discharge:	001-Y BIOMONITORING/ONCE PER QUARTER
Facility:		Facility:	MORRIS FORMAN WQTC MSD
		Facility Location:	4522 ALGONQUIN PKWY LOUISVILLE, KY 40211

Report Dates & Status			
Monitoring Period:	From 10/01/21 to 12/31/21	DMR Due Date:	01/28/22
Status:	NetDMR Validated		

Considerations for Form Completion

Principal Executive Officer			
First Name:	James A	Title:	Executive Director
Last Name:	Parrott	Telephone:	502-540-6000

No Data Indicator (NODI)
Form NODI: --

Code	Parameter Name	Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration					# of Ex.	Frequency of Analysis	Sample Type
						Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3			
00900	Hardness, total [as CaCO3]	1 - Effluent Gross	0	--	Sample						=	402.0	=	402.0	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L				
					Value NODI													
01025	Cadmium, dissolved [as Cd]	1 - Effluent Gross	0	--	Sample						<	0.01	<	0.01	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L				
					Value NODI													
01040	Copper, dissolved [as Cu]	1 - Effluent Gross	0	--	Sample						<	0.01	<	0.01	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L				
					Value NODI													
01049	Lead, dissolved [as Pb]	1 - Effluent Gross	0	--	Sample						<	0.05	<	0.05	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L				
					Value NODI													
01090	Zinc, dissolved [as Zn]	1 - Effluent Gross	0	--	Sample						=	0.06	=	0.06	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L				
					Value NODI													
01094	Zinc, total recoverable	1 - Effluent Gross	0	--	Sample						=	0.06	=	0.06	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L				
					Value NODI													
01113	Cadmium, total recoverable	1 - Effluent Gross	0	--	Sample						<	0.01	<	0.01	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L				
					Value NODI													
01114	Lead, total recoverable	1 - Effluent Gross	0	--	Sample						<	0.05	<	0.05	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L				
					Value NODI													
01119	Copper, total recoverable	1 - Effluent Gross	0	--	Sample						=	0.011	=	0.011	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Permit Req.						Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L				
					Value NODI													
61406	Toxicity, final conc toxicity units	1 - Effluent Gross	0	--	Sample								<	1.0	2F - tox acute		01/90 - Quarterly	G2 - GRAB-2
					Permit Req.								<=	1.0 DAILY MX	2F - tox acute			
					Value NODI													

Submission Note
If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors
No errors.

Comments

Attachments

Name	Type	Size
------	------	------

Report Last Saved By**Morris Forman WQTC MSD**

User: AJOP1117
Name: Amber Pauly
E-Mail: amber.pauly@louisvillemad.org
Date/Time: 2022-01-18 08:17 (Time Zone: -05:00)

Report Last Signed By

User: SKINNER@LOUISVILLEMSD.ORG
Name: James skinner
E-Mail: james.skinner@louisvillemad.org
Date/Time: 2022-01-18 14:31 (Time Zone: -05:00)

Format: Month/Day/Year
 Enter Start Date : 12/1/21

MORRIS FORMAN WATER QUALITY TREATMENT CENTER JEFFERSON COUNTY, KENTUCKY MONTH OF December-21
 KPDES PERMIT NO. KY0022411 PLANT CAPACITY - 120 MGD RECEIVING STREAM-CHIO RIVER

DATE	WASTEWATER FLOWS (Million Gallons)			TEMP (DEGF)		pH		SETS (M/L)		TSS (mg/L)		D.O. (mg/L)	5-DAY BOD (mg/L)			RETURN SLUDGE			AERATION BASIN				ACTIVE		CHLORINATION			FINAL EFFLUENT		
	Final	Sec.	Bypass	raw	final	raw	final	raw	final	raw	final	final	raw	final	final	FLOW	TSS	TVSS	D.O.	MLSS	MLVSS	SET	SVI	Sludge Wasted	Primary Sludge	Chlorine Dosage	Resid	Fecal Coliform	NH3-N	Pump.
	MG	MG	MG										MG	g/L	g/L	MG	g/L	g/L	mg/L	g/L	g/L			MG	MG	KLBS	mg/L	#/100 ml	mg/L	Hours
12/1/21	71.26	71.26	0.00	62	62	6.6	6.3	10.5	0.2	320	142	5.8	413	228	84	24.3	15.5	13.8	9.5	4.2	3.8	329	78	0.42	0.58	2.99	0.016	164	9.5	0.0
12/2/21	69.23	69.23	0.00	65	65	6.9	6.4	10.0	0.2	300	168	6.1	422	178	73	24.7	17.4	15.6	8.6	6.5	5.8	350	54	0.16	0.25	2.78	0.016	88	7.7	0.0
12/3/21	66.28	66.28	0.00	64	64	6.7	6.2	9.0	0.3	260	236	5.7	453	283	106	25.0	15.8	14.3	6.6	4.8	4.3	336	70	0.00	0.06	2.78	0.016	100	6.2	0.0
12/4/21	64.20	64.20	0.00	63	63	6.8	6.2	10.0	1.8	293	265	5.7	469	342	154	25.1	15.3	13.9	2.2	5.0	4.6	437	91	0.00	0.03	2.70	0.016	55	7.4	0.0
12/5/21	68.01	68.01	0.00	63	63	6.7	6.2	12.5	4.0	288	333	6.4	451	336	172	25.0	17.0	16.2	0.9	4.7	4.5	421	90	0.00	0.01	3.03	0.016	188	6.1	0.0
12/6/21	185.14	121.95	63.19	65	65	6.8	6.2	10.0	10.5	244	280	5.9	210	222	216	24.0	13.6	12.9	6.8	3.2	3.0	237	73	0.09	0.03	7.95	0.016	120	5.1	0.0
12/7/21	109.11	108.52	0.59	56	56	7.1	6.3	9.0	0.1	250	102	5.9	358	224	62	24.0	16.6	15.2	5.1	4.0	3.8	262	60	0.29	0.37	7.95	0.016	1480	4.6	5.5
12/8/21	85.75	85.75	0.00	59	59	7.0	6.3	10.0	0.1	284	71	4.8	409	259	54	23.9	15.9	14.5	1.3	3.7	3.5	246	67	0.49	0.56	3.80	0.016	39	6.6	24.0
12/9/21	83.69	83.69	0.00	59	59	7.1	6.4	11.0	0.1	330	50	4.2	448	264	51	23.6	10.2	9.3	1.7	4.4	3.4	242	54	0.70	0.63	3.61	0.016	49	10.1	9.1
12/10/21	81.99	81.99	0.00	64	64	6.7	6.4	12.0	0.1	372	112	5.6	578	379	150	23.9	15.7	14.3	1.3	3.7	3.3	240	57	0.31	0.31	4.35	0.016	33	10.3	0.0
12/11/21	254.46	139.69	114.77	61	61	6.9	6.2	5.5	5.5	168	336	5.3	158	165	190	23.5	16.0	14.5	11.0	2.8	2.6	140	42	0.00	0.14	6.42	0.016	7170	4.1	0.0
12/12/21	140.86	133.46	7.40	59	59	7.2	6.3	6.0	0.3	190	166	4.8	206	152	86	23.0	15.1	13.6	6.5	2.3	2.0	116	43	0.18	0.13	6.42	0.016	35600	1.3	8.6
12/13/21	110.21	110.21	0.00	58	58	7.1	6.4	8.5	0.1	278	94	6.3	322	206	63	23.3	15.0	13.3	2.3	3.1	2.7	164	50	0.60	0.53	3.35	0.016	940	4.5	24.0
12/14/21	93.93	93.93	0.00	59	59	6.9	6.4	12.0	0.1	366	128	5.0	500	301	155	24.2	18.3	15.8	1.9	3.8	3.3	239	63	0.51	0.57	3.73	0.016	252	8.5	21.8
12/15/21	95.00	95.00	0.00	63	63	6.9	6.3	10.0	0.2	362	78	4.6	430	257	84	23.6	17.8	15.6	1.2	5.0	4.5	256	51	0.61	0.62	3.73	0.016	1060	9.0	0.0
12/16/21	120.51	101.24	19.27	66	66	7.0	6.3	14.0	1.2	324	240	4.8	466	314	204	24.0	19.5	17.4	0.5	5.7	5.1	279	51	0.52	0.61	3.74	0.016	92	10.7	0.0
12/17/21	144.51	111.99	32.52	60	60	6.8	6.2	6.5	0.4	237	173	5.8	496	311	128	24.0	22.7	20.3	1.8	2.5	2.3	234	95	0.27	0.37	3.74	0.016	4	6.1	0.0
12/18/21	170.39	138.39	32.00	58	58	7.0	6.4	4.9	0.7	128	165	4.8	263	187	113	24.0	22.1	19.4	2.9	3.2	2.7	211	67	0.00	0.05	5.10	0.016	140	1.5	0.0
12/19/21	110.12	110.12	0.00	58	58	7.1	6.4	6.0	0.2	348	158	6.2	330	318	149	23.6	17.6	15.4	1.9	5.2	4.6	241	47	0.20	0.06	5.10	0.016	580	1.9	0.0
12/20/21	94.46	94.46	0.00	58	58	7.0	6.3	10.5	0.1	298	86	6.0	345	210	90	23.3	20.9	18.3	1.4	4.0	3.5	246	63	0.66	0.58	3.75	0.016	268	6.5	0.0
12/21/21	90.06	90.06	0.00	59	59	6.6	6.3	10.0	0.5	273	61	5.1	449	258	70	23.7	18.7	17.0	1.1	4.0	3.6	268	68	0.53	0.72	3.87	0.016	192	7.0	0.0
12/22/21	82.01	82.01	0.00	60	60	6.8	6.5	12.3	0.1	330	76	5.0	469	276	89	23.7	21.0	19.3	0.5	5.4	5.0	298	56	0.54	0.73	3.87	0.016	204	7.6	0.0
12/23/21	81.65	81.65	0.00	59	59	6.9	6.2	11.0	0.1	260	138	5.3	433	294	173	24.1	22.5	20.1	0.7	4.6	4.2	330	71	0.22	0.36	4.04	0.016	2180	5.3	0.0
12/24/21	79.41	79.41	0.00	61	61	7.6	6.3	8.0	1.0	243	255	5.8	319	212	156	24.1	19.2	17.0	0.4	4.6	4.0	328	72	0.12	0.20	4.04	0.016	620	4.3	0.0
12/25/21	71.14	71.14	0.00	63	63	7.2	6.3	7.0	0.1	120	172	4.9	264	222	113	24.4	19.9	17.8	0.5	5.6	5.0	344	62	0.00	0.10	3.74	0.016	78	2.7	0.0
12/26/21	69.97	69.97	0.00	61	61	7.2	6.2	7.5	0.2	150	182	5.1	200	195	96	24.0	19.9	18.0	1.6	8.0	7.2	361	45	0.14	0.17	3.32	0.016	59	1.3	0.0
12/27/21	74.42	74.42	0.00	65	65	6.9	6.3	12.0	0.2	267	227	5.3	354	247	110	24.3	17.3	15.1	1.1	8.2	7.2	353	43	0.41	0.46	3.32	0.016	68	6.3	0.0
12/28/21	98.77	95.07	3.70	63	63	6.9	6.3	14.0	0.2	344	176	4.9	293	174	91	24.2	18.6	17.0	2.0	4.9	4.6	333	71	0.31	0.51	3.51	0.016	580	9.3	0.0
12/29/21	189.34	138.23	51.11	61	61	6.8	6.4	5.5	5.5	336	312	6.3	168	162	144	24.1	17.9	15.9	9.7	3.3	2.9	228	69	0.37	0.39	4.43	0.016	3230	6.1	0.0
12/30/21	101.43	101.43	0.00	61	61	7.2	6.4	6.0	0.1	186	70	5.0	259	198	44	23.4	18.0	15.9	3.5	3.4	3.0	274	82	0.49	0.33	4.43	0.016	75	6.5	6.2
12/31/21	92.37	92.18	0.19	61	61	7.3	6.3	7.0	0.2	166	142	5.1	198	160	75	24.5	18.6	16.7	6.8	4.3	3.9	299	69	0.17	0.19	3.12	0.016	240	5.0	24.0
Sum	3249.68	2924.94	324.74													744.5								9.33	10.62					123.2
Average	104.83	94.35	32.47	61	61	7.0	6.3	9.3	1.1	268	168	5.4	359	243	114	24.0	17.7	15.9	3.3	4.4	4.0	279	64	0.30	0.34	4.15	0.016	238	6.1	

SEWER CONNECTIONS 148371 TIMES 4 = 593484 SEWER POPULATION IND. WASTER POPULATION EQ CUSTOMERS 389
 FLOW 410089
 BOD 1309635
 TSS 555632

Authorized Agent

Certification No. 29841

MORRIS FORMAN WASTEWATER JEFFERSON COUNTY, KY

Month of Dec-21

Average Flow

Primary Secondary

SETTLING TANKS Battery A Battery B Battery C

Average Fl	105.38	32.54	28.26	8.49
Tanks in Se	4.00	7.0	8.0	2.8
Surface Are	77000.00	60538.61	69183.43	24443.30
Volume (M	8.33	6.20	7.09	2.50
Weir Leng	2860.00	2509.03	2867.31	1013.05
Avg. Weir C	36844.47	12970.57	9855.95	8385.48
Avg. Settle	1368.51	698.46	555.04	517.27
Avg. Deten	1.90	4.57	6.02	7.07

AERATION TANKS

Battery A Battery B Battery C

Volume (Gallons)	420000	420000	210000
Avg. Flow (MGD)	42.28	38.40	12.64
Avg. Detention Time (l	3.10	3.57	5.93

CHLORINE CONTACT CHAMBERS

Contact Ch 2.0

Volume (G 234000

Avg. Deten 0.86

Remarks: BY-PASS REPORTS (See Attached)