



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

January 17, 2019

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 to December 31st 2019 are provided through NetDMR. The Morris Forman Water Quality Treatment Center (MFWQTC) did not meet 30 day TSS, 7 day TSS, 30 day BOD, 7 day BOD, TSS and BOD percent removal for the reporting period.

Compromised solids handling equipment is contributing to our effluent exceedances. MSD is currently working with a 3rd party consultant to create a biosolids revitalization project that will overhaul our solids handling process. MFWQTC continues to employ Liquid Oxygen purchases in effort to assist in meeting permit requirements.

Should you have any questions, please contact me at (502) 540-6793.

Sincerely,

Alex E. Novak, P.E.
Treatment Facilities Director

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-B SECONDARY BYPASS
Facility:		Facility Location:	MORRIS FORMAN WQTC MSD 4522 ALGONQUIN PKWY LOUISVILLE, KY 40211

Report Dates & Status			
Monitoring Period:	From 12/01/19 to 12/31/19	DMR Due Date:	01/28/20
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
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				Value 3	Units
00310	BOD, 5-day, 20 deg. C	1 - Effluent Gross	0	--	Sample						=	114.0	=	153.0	19 - mg/L	15/30 - 15 Per Month	CP - COMPOS		
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L 0			WH/DS - When Discharging	CP - COMPOS
					Value NODI														
00310	BOD, 5-day, 20 deg. C	F - Primary/Preliminary Process Complete	0	--	Sample						=	174.0	=	296.0	19 - mg/L	15/30 - 15 Per Month	CP - COMPOS		
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L 0			WH/DS - When Discharging	CP - COMPOS
					Value NODI														
00530	Solids, total suspended	1 - Effluent Gross	0	--	Sample						=	188.0	=	276.0	19 - mg/L	15/30 - 15 Per Month	CP - COMPOS		
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L 0			WH/DS - When Discharging	CP - COMPOS
					Value NODI														
00530	Solids, total suspended	F - Primary/Preliminary Process Complete	0	--	Sample						=	194.0	=	309.0	19 - mg/L	15/30 - 15 Per Month	CP - COMPOS		
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L 0			WH/DS - When Discharging	CP - COMPOS
					Value NODI														
00610	Nitrogen, ammonia total [as N]	1 - Effluent Gross	0	--	Sample						=	6.5	=	9.1	19 - mg/L	15/30 - 15 Per Month	CP - COMPOS		
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L 0			WH/DS - When Discharging	CP - COMPOS
					Value NODI														
00610	Nitrogen, ammonia total [as N]	F - Primary/Preliminary Process Complete	0	--	Sample						=	9.4	=	15.1	19 - mg/L	15/30 - 15 Per Month	CP - COMPOS		
					Permit Req.							Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L 0			WH/DS - When Discharging	CP - COMPOS
					Value NODI														
50050	Flow, in conduit or thru treatment plant	F - Primary/Preliminary Process Complete	0	--	Sample	=	16.7	=	32.9	03 - MGD					15/30 - 15 Per Month	CN - CONTIN			
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	03 - MGD							0	WH/DS - When Discharging	CN - CONTIN
					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: kessel@louisvillemsd.org
 Name: John Kessel
 E-Mail: kessel@louisvillemsd.org
 Date/Time: 2020-01-23 07:18 (Time Zone: -05:00)

Report Last Signed By

User: kessel@louisvillemsd.org
 Name: John Kessel
 E-Mail: kessel@louisvillemsd.org
 Date/Time: 2020-01-23 07:20 (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-Y BIOMONITORING/ONCE PER QUARTER		

Report Dates & Status

Monitoring Period:	From 10/01/19 to 12/31/19	DMR Due Date:	01/28/20	Status:	NetDMR Validated
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Considerations for Form Completion

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
00900	Hardness, total [as CaCO3]	1 - Effluent Gross	0	--	Sample						=	211.0	=	211.0	19 - mg/L	0	01/90 - Quarterly	CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Value NODI													
01025	Cadmium, dissolved [as Cd]	1 - Effluent Gross	0	--	Sample						<	0.01	<	0.01	19 - mg/L	0	01/90 - Quarterly	CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Value NODI													
01040	Copper, dissolved [as Cu]	1 - Effluent Gross	0	--	Sample						=	0.05	=	0.05	19 - mg/L	0	01/90 - Quarterly	CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Value NODI													
01049	Lead, dissolved [as Pb]	1 - Effluent Gross	0	--	Sample						<	0.05	<	0.05	19 - mg/L	0	01/90 - Quarterly	CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Value NODI													
01090	Zinc, dissolved [as Zn]	1 - Effluent Gross	0	--	Sample						=	0.06	=	0.06	19 - mg/L	0	01/90 - Quarterly	CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Value NODI													
01094	Zinc, total recoverable	1 - Effluent Gross	0	--	Sample						=	0.06	=	0.06	19 - mg/L	0	01/90 - Quarterly	CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Value NODI													
01113	Cadmium, total recoverable	1 - Effluent Gross	0	--	Sample						<	0.01	<	0.01	19 - mg/L	0	01/90 - Quarterly	CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Value NODI													
01114	Lead, total recoverable	1 - Effluent Gross	0	--	Sample						<	0.05	<	0.05	19 - mg/L	0	01/90 - Quarterly	CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Value NODI													
01119	Copper, total recoverable	1 - Effluent Gross	0	--	Sample						=	0.012	=	0.012	19 - mg/L	0	01/90 - Quarterly	CP - COMPOS
					Permit Req.							Req Mon MO AVG		Req Mon DAILY MX	19 - mg/L		01/90 - Quarterly	CP - COMPOS
					Value NODI													
61406	Toxicity, final conc toxicity units	1 - Effluent Gross	0	--	Sample								<	1.0	2F - tox acute	0	01/90 - Quarterly	G2 - GRAB-2
					Permit Req.								<=	1.0 DAILY MX	2F - tox acute		01/90 - Quarterly	G2 - GRAB-2
					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: kessel@louisvillemd.org
 Name: John Kessel
 E-Mail: kessel@louisvillemd.org

Date/Time: 2020-01-23 07:17 (Time Zone: -05:00)

Report Last Signed By

User: kessel@louisvillemsd.org

Name: John Kessel

E-Mail: kessel@louisvillemsd.org

Date/Time: 2020-01-23 07:20 (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:	001-1 MUNICIPAL DISCHARGE		

Report Dates & Status					
Monitoring Period:	From 12/01/19 to 12/31/19	DMR Due Date:	01/28/20	Status:	NetDMR Validated

Considerations for Form Completion
 G - INFLUENTE - SECONDARY EFFLUENT1 - FINAL EFFLUENT - Parameter 74055 - Use Season 1 for summer months (May, June, July, August, September, and October) and Season 2 for winter months (November, December, January, February March, and April); enter NODI=9 for the Season not needed.

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	Units		
00300	Oxygen, dissolved [DO]	1 - Effluent Gross	0	--	Sample					=	3.1					19 - mg/L	0	01/01 - Daily	GR - GRAB		
					Permit Req.					>=	2.0 INST MIN					19 - mg/L		01/01 - Daily	GR - GRAB		
					Value NODI																
X 00310	BOD, 5-day, 20 deg. C	E - Secondary/Biological Process Complete	0	--	Sample	=	47959.0	=	72652.0	26 - lb/d		=	58.0	=	96.0	19 - mg/L	2	01/01 - Daily	CP - COMPOS		
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	26 - lb/d		<=	30.0 MO AVG	<=	45.0 MX WK AV	19 - mg/L		01/01 - Daily	CP - COMPOS		
					Value NODI																
00310	BOD, 5-day, 20 deg. C	G - Raw Sewage Influent	0	--	Sample	=	256037.0	=	303238.0	26 - lb/d		=	335.0	=	480.0	19 - mg/L	0	01/01 - Daily	CP - COMPOS		
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	26 - lb/d			Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L		01/01 - Daily	CP - COMPOS		
					Value NODI																
00400	pH	1 - Effluent Gross	0	--	Sample					=	6.3				12 - SU	0	01/01 - Daily	GR - GRAB			
					Permit Req.					>=	6.0 MINIMUM			<=	9.0 MAXIMUM		12 - SU	01/01 - Daily	GR - GRAB		
					Value NODI																
X 00530	Solids, total suspended	E - Secondary/Biological Process Complete	0	--	Sample	=	82612.0	=	124447.0	26 - lb/d		=	96.0	=	160.0	19 - mg/L	2	01/01 - Daily	CP - COMPOS		
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	26 - lb/d		<=	30.0 MO AVG	<=	45.0 MX WK AV	19 - mg/L		01/01 - Daily	CP - COMPOS		
					Value NODI																
00530	Solids, total suspended	G - Raw Sewage Influent	0	--	Sample	=	252993.0	=	323996.0	26 - lb/d		=	318.0	=	411.0	19 - mg/L	0	01/01 - Daily	CP - COMPOS		
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	26 - lb/d			Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L		01/01 - Daily	CP - COMPOS		
					Value NODI																
00610	Nitrogen, ammonia total [as N]	E - Secondary/Biological Process Complete	0	--	Sample	=	5372.0	=	5479.0	26 - lb/d		=	7.4	=	9.2	19 - mg/L	0	01/01 - Daily	CP - COMPOS		
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	26 - lb/d		<=	20.0 MO AVG	<=	30.0 MX WK AV	19 - mg/L		01/01 - Daily	CP - COMPOS		
					Value NODI																
00610	Nitrogen, ammonia total [as N]	G - Raw Sewage Influent	0	--	Sample	=	7539.0	=	8084.0	26 - lb/d		=	10.1	=	13.0	19 - mg/L	0	01/01 - Daily	CP - COMPOS		
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	26 - lb/d			Req Mon MO AVG		Req Mon MX WK AV	19 - mg/L		01/01 - Daily	CP - COMPOS		
					Value NODI																
50050	Flow, in conduit or thru treatment plant	E - Secondary/Biological Process Complete	0	--	Sample	=	94.3	=	120.79	03 - MGD							0	99/99 - Continuous	CN - CONTIN		
					Permit Req.		Req Mon MO AVG		Req Mon DAILY MX	03 - MGD								99/99 - Continuous	CN - CONTIN		
					Value NODI																
50060	Chlorine, total residual	1 - Effluent Gross	0	--	Sample									<	0.016	19 - mg/L	0	01/01 - Daily	GR - GRAB		
					Permit Req.											<=		0.019 DAILY MX	19 - mg/L	01/01 - Daily	GR - GRAB
					Value NODI																
74055	Coliform, fecal general	1 - Effluent Gross	2	--	Sample							=	70.0	=	88.0	13 - #/100mL	0	01/01 - Daily	GR - GRAB		
					Permit Req.							<=	1000.0 30DA GEO	<=	2000.0 7 DA GEO	13 - #/100mL		01/01 - Daily	GR - GRAB		
					Value NODI																
X 81010	BOD, 5-day, percent removal	K - Percent Removal	0	--	Sample					=	83.0				23 - %	1	01/30 - Monthly	CA - CALCTD			
					Permit Req.					>=	85.0 MO MIN				23 - %		01/30 - Monthly	CA - CALCTD			
					Value NODI																
X 81011	Solids, suspended percent removal	K - Percent Removal	0	--	Sample					=	70.0				23 - %	1	01/30 - Monthly	CA - CALCTD			
					Permit Req.					>=	85.0 MO MIN				23 - %		01/30 - Monthly	CA - CALCTD			
					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						
Code	Parameter Name	Monitoring Location	Field	Type	Description	Acknowledge

81011	Solids, suspended percent removal	K - Percent Removal	Quality or Concentration Sample Value 1	Soft	The provided sample value is outside the permit limit. (Error Code: 1)	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. (Error Code: 1)	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. (Error Code: 1)	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. (Error Code: 1)	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. (Error Code: 1)	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. (Error Code: 1)	Yes

Comments

Attachments

Name	Type	Size
MFWQTCMOR122019.pdf	pdf	86333.0
MFWQTCoverletter122019.pdf	pdf	35025.0
DischargeReport_MorrisForman_December2019.pdf	pdf	112504.0

Report Last Saved By

Morris Forman WQTC MSD

User: kessel@louisvillemsd.org
 Name: John Kessel
 E-Mail: kessel@louisvillemsd.org
 Date/Time: 2020-01-23 07:20 (Time Zone: -05:00)

Report Last Signed By

User: kessel@louisvillemsd.org
 Name: John Kessel
 E-Mail: kessel@louisvillemsd.org
 Date/Time: 2020-01-23 07:20 (Time Zone: -05:00)



KPDES #	Facility ID	Water Quality Treatment Center	Receiving Stream of Treatment Center	Region
KY0022411	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMHSewer Manhole	08935-SM	1001 BRECKENRIDGE LN		MIDDLE FORK BEARGRASS	STREAM

Activity Code / Description	WO #	Ref No	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed	Condition
: DISREV: RAIN EVENT DISCHARGE	3187889		12/17/2019	EBRAHIMI	MITCHELL	DOCUMENTE D	11/29/2001	LACK OF SYSTEM CAPAC	UNAUTHORIZED DISCHARGE-WATER AM	12/17/19 01:17	MAIN

Discharge Reporting:

Discharge Amount:	6,700 GAL
Cause:	LACK OF SYSTEM CAPACITY.
Clean Up:	NO CLEAN UP PERFORMED – PIPE DISCHARGING UNDERWATER, DIRECTLY INTO STREAM
Control Zone:	PERMANENT SIGNS LOCATED AT THE SITE.
Impact:	SEWAGE/WATER DISCHARGING FROM MANHOLE
Repair:	INVESTIGATION INDICATED THAT ADDITIONAL REPAIRS WERE NOT REQUIRED BY MSD
Public Notification:	PERMANENT SIGNS LOCATED AT THE SITE.

Notifications:

12/19/19 1:00 PM	DISNOT	EMAIL NOTIFICATION OF UNAUTHORIZED DISCHARGE SENT TO:DISCHARGENOTICES@LOUISVILLEMSD.ORG, SAYRE.DENNIS@EPAMAIL.EPA.GOV
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KPDES #	Facility ID	Water Quality Treatment Center	Receiving Stream of Treatment Center	Region
KY0022411	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMHSewer Manhole	28336	9707 WILLOWWOOD WAY		CHENOWETH RUN	DITCH

Activity Code / Description	WO #	Ref No	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed	Condition
: DISREV: RAIN EVENT DISCHARGE	3190212		12/29/2019	DAVIS BROWN	MITCHELL	DOCUMENTE D	08/30/2005	LACK OF SYSTEM CAPAC	UNAUTHORIZED DISCHARGE-WATER	12/30/19 11:00 AM	MAIN

Discharge Reporting:

Discharge Amount:	17,625 GAL
Cause:	LACK OF SYSTEM CAPACITY HEAVY RAIN.
Clean Up:	WO #3190211.
Control Zone:	BARRICADE AND TEMP DISCHARGE SIGNS PLACED AROUND DISCHARGE SITE.
Impact:	MANHOLE DISCHARGING.
Repair:	LOCATION INCLUDED IN IOAP.
Public Notification:	PUBLIC NOTIFIED THROUGH TEMP SIGNS AT DISCHARGE SITE AND DOOR HANGERS TO AVOID DISCHARGED CONTENT.

Notifications:

12/30/19 1:00 PM	DISNOT	EMAIL NOTIFICATION OF UNAUTHORIZED DISCHARGE SENT TO:DISCHARGENOTICES@LOUISVILLEMSD.ORG, SAYRE.DENNIS@EPAMAIL.EPA.GOV
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KPDES #	Facility ID	Water Quality Treatment Center	Receiving Stream of Treatment Center	Region
KY0022411	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMHSewer Manhole	28340	3620 CHARLANE PKY		CHENOWETH RUN	GROUND

<u>Activity Code / Description</u>	<u>WO #</u>	<u>Ref No</u>	<u>Initiated</u>	<u>Initiated By</u>	<u>Assigned To</u>	<u>Disch Status</u>	<u>Event Date</u>	<u>Problem</u>	<u>Result</u>	<u>Completed</u>	<u>Condition</u>
: DISREV: RAIN EVENT DISCHARGE	3190210		12/29/2019	DAVIS BROWNMITCHELL		DOCUMENTE D	01/03/2005	LACK OF SYSTEM CAPAC	UNAUTHORIZED DISCHARGE-WATER	12/30/19 06:55 AM	MAIN

Discharge Reporting:

Discharge Amount:	11,375 GAL
Cause:	LACK OF SYSTEM CAPACITY HEAVY RAIN.
Clean Up:	WO #3190209.
Control Zone:	BARRICADE AND TEMP DISCHARGE SIGNS PLACED AROUND DISCHARGE SITE.
Impact:	MANHOLE DISCHARGING.
Repair:	LOCATION INCLUDED IN IOAP.
Public Notification:	PUBLIC NOTIFIED THROUGH TEMP SIGNS AT DISCHARGE SITE AND DOOR HANGERS TO AVOID DISCHARGED CONTENT.

Notifications:

12/30/19 1:00 PM	DISNOT	EMAIL NOTIFICATION OF UNAUTHORIZED DISCHARGE SENT TO:DISCHARGENOTICES@LOUISVILLEMSD.ORG, SAYRE.DENNIS@EPAMAIL.EPA.GOV
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KPDES #	Facility ID	Water Quality Treatment Center	Receiving Stream of Treatment Center	Region
KY0022411	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMHSewer Manhole	28415	3406 DELL RD		CHENOWETH RUN	GROUND

<u>Activity Code / Description</u>	<u>WO #</u>	<u>Ref No</u>	<u>Initiated</u>	<u>Initiated By</u>	<u>Assigned To</u>	<u>Disch Status</u>	<u>Event Date</u>	<u>Problem</u>	<u>Result</u>	<u>Completed</u>	<u>Condition</u>
: DISREV: RAIN EVENT DISCHARGE	3190198		12/29/2019	DAVIS BROWN	MITCHELL	DOCUMENTE D	12/19/2002	LACK OF SYSTEM CAPAC	UNAUTHORIZED DISCHARGE-WATER	12/30/19 06:41 AM	MAIN

Discharge Reporting:

Discharge Amount:	12,150 GAL
Cause:	LACK OF SYSTEM CAPACITY HEAVY RAIN.
Clean Up:	WO#3190197.
Control Zone:	BARRICADE AND TEMP DISCHARGE SIGNS PLACED AROUND DISCHARGE SITE.
Impact:	MANHOLE DISCHARGING.
Repair:	LOCATION INCLUDED IN IOAP.
Public Notification:	PUBLIC NOTIFIED THROUGH TEMP SIGNS AT DISCHARGE SITE AND DOOR HANGERS TO AVOID DISCHARGED CONTENT.

Notifications:

12/30/19 1:00 PM	DISNOT	EMAIL NOTIFICATION OF UNAUTHORIZED DISCHARGE SENT TO:DISCHARGENOTICES@LOUISVILLEMSD.ORG, SAYRE.DENNIS@EPAMAIL.EPA.GOV
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KPDES #	Facility ID	Water Quality Treatment Center	Receiving Stream of Treatment Center	Region
KY0022411	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMHSewer Manhole	28451	3406 CHARLANE PKY		CHENOWETH RUN	GROUND

Activity Code / Description	WO #	Ref No	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed	Condition
: DISREV: RAIN EVENT DISCHARGE	3190208		12/29/2019	DAVIS BROWNMITCHELL		DOCUMENTE D	10/28/2015	LACK OF SYSTEM CAPAC	UNAUTHORIZED DISCHARGE-WATER	12/30/19 06:49 AM	MAIN

Discharge Reporting:

Discharge Amount:	11,950 GAL
Cause:	LACK OF SYSTEM CAPACITY HEAVY RAIN.
Clean Up:	WO#3190207.
Control Zone:	BARRICADE AND TEMP DISCHARGE SIGNS PLACED AROUND DISCHARGE SITE.
Impact:	MANHOLE DISCHARGING.
Repair:	LOCATION INCLUDED IN IOAP.
Public Notification:	PUBLIC NOTIFIED THROUGH TEMP SIGNS AT DISCHARGE SITE AND DOOR HANGERS TO AVOID DISCHARGED CONTENT.

Notifications:

12/30/19 1:00 PM	DISNOT	EMAIL NOTIFICATION OF UNAUTHORIZED DISCHARGE SENT TO:DISCHARGENOTICES@LOUISVILLEMSD.ORG, SAYRE.DENNIS@EPAMAIL.EPA.GOV
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KPDES #	Facility ID	Water Quality Treatment Center	Receiving Stream of Treatment Center	Region
KY0022411	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMHSewer Manhole	28452	3402 CHARLANE PKY		CHENOWETH RUN	DITCH

Activity Code / Description	WO #	Ref No	Initiated	Initiated By	Assigned To	Disch Status	Event Date	Problem	Result	Completed	Condition
: DISREV: RAIN EVENT DISCHARGE	3190206		12/29/2019	DAVIS BROWNMITCHELL		QUEUED FOR REPAIR	11/30/2019	LACK OF SYSTEM CAPAC	UNAUTHORIZED DISCHARGE-WATER	12/30/19 06:45 AM	MAIN

Discharge Reporting:

Discharge Amount:	11,950 GAL
Cause:	LACK OF SYSTEM CAPACITY HEAVY RAIN.
Clean Up:	WO#3190201.
Control Zone:	BARRICADE AND TEMP DISCHARGE SIGNS PLACED AROUND DISCHARGE SITE.
Impact:	MANHOLE DISCHARGING.
Repair:	LOCATION INCLUDED IN IOAP.
Public Notification:	PUBLIC NOTIFIED THROUGH TEMP SIGNS AT DISCHARGE SITE AND DOOR HANGERS TO AVOID DISCHARGED CONTENT.

Notifications:

12/30/19 1:00 PM	DISNOT	EMAIL NOTIFICATION OF UNAUTHORIZED DISCHARGE SENT TO:DISCHARGENOTICES@LOUISVILLEMSD.ORG, SAYRE.DENNIS@EPAMAIL.EPA.GOV
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KPDES #	Facility ID	Water Quality Treatment Center	Receiving Stream of Treatment Center	Region
KY0022411	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMHSewer Manhole	28453	3402 CHARLANE PKY		CHENOWETH RUN	DITCH

<u>Activity Code / Description</u>	<u>WO #</u>	<u>Ref No</u>	<u>Initiated</u>	<u>Initiated By</u>	<u>Assigned To</u>	<u>Disch Status</u>	<u>Event Date</u>	<u>Problem</u>	<u>Result</u>	<u>Completed</u>	<u>Condition</u>
: DISREV: RAIN EVENT DISCHARGE	3190126		12/29/2019	DAVIS BROWNMITCHELL		DOCUMENTE D	10/28/2015	LACK OF SYSTEM CAPAC	UNAUTHORIZED DISCHARGE-WATER	12/30/19 10:55 AM	MAIN

Discharge Reporting:

Discharge Amount:	25,000 GAL
Cause:	LACK OF SYSTEM CAPACITY HEAVY RAIN.
Clean Up:	WO#3190236.
Control Zone:	BARRICADES PLACED AROUND IMPACTED AREA.
Impact:	MANHOLE DISCHARGING.
Repair:	LOCATION INCLUDED IN IOAP.
Public Notification:	TEMP DISCHARGE SIGNS PLACED AT DISCHARGE SITES AND DOOR CARDS.

Notifications:

12/30/19 1:00 PM	DISNOT	EMAIL NOTIFICATION OF UNAUTHORIZED DISCHARGE SENT TO:DISCHARGENOTICES@LOUISVILLEMSD.ORG, SAYRE.DENNIS@EPAMAIL.EPA.GOV
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KPDES #	Facility ID	Water Quality Treatment Center	Receiving Stream of Treatment Center	Region
KY0022411	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SSL Sewer Service Line	HP10884619	9420 BLOSSOM LN		LITTLE GOOSE CREEK	CATCH BASIN

<u>Activity Code / Description</u>	<u>WO #</u>	<u>Ref No</u>	<u>Initiated</u>	<u>Initiated By</u>	<u>Assigned To</u>	<u>Disch Status</u>	<u>Event Date</u>	<u>Problem</u>	<u>Result</u>	<u>Completed</u>	<u>Condition</u>
: DISDW: DRY WEATHER DISCHARGE	3182413		12/02/2019	BIVIN	BIVIN	REPAIRED - ISSUE RESOLVED	12/02/2019	OBSTRUCTION- NOT GREASE / ROOTS	UNAUTHORIZED DISCHARGE- WATERS	12/02/19 06:51 PM	LAT

Discharge Reporting:

Discharge Amount:	30 GAL
Cause:	HEAVY PAPER.
Clean Up:	NO CLEAN REQUIRED NO SOLIDS DRAINING INTO PRIVATE BASIN.
Control Zone:	MSD PERSONNEL ADVISED CUSTOMER TO AVOID CONTACT WITH SEWAGE.
Impact:	MSD PERSONNEL OBSERVED DISCHARGE FROM CLEANOUT NO SOLIDS WATER ONLY.
Repair:	FLUSHED MAIN SEWER.
Public Notification:	ON SITE.

Notifications:

12/3/19 1:00 AM	DISNOT	EMAIL NOTIFICATION OF UNAUTHORIZED DISCHARGE SENT TO:DISCHARGENOTICES@LOUISVILLEMSD.ORG, SAYRE.DENNIS@EPAMAIL.EPA.GOV
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KPDES #	Facility ID	Water Quality Treatment Center	Receiving Stream of Treatment Center	Region
KY0022411	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMHSewer Manhole	IS021A-SI	1201 OLD CANNONS LN		MIDDLE FORK BEARGRASS	STREAM

<u>Activity Code / Description</u>	<u>WO #</u>	<u>Ref No</u>	<u>Initiated</u>	<u>Initiated By</u>	<u>Assigned To</u>	<u>Disch Status</u>	<u>Event Date</u>	<u>Problem</u>	<u>Result</u>	<u>Completed</u>	<u>Condition</u>
: DISREV: RAIN EVENT DISCHARGE	3186627		12/16/2019	DAVIS BROWNMITCHELL		REPAIRED - ISSUE RESOLVED	12/02/2019	LACK OF SYSTEM CAPACITY	UNAUTHORIZED DISCHARGE-WATERS	12/17/19 01:45 PM	MAIN

Discharge Reporting:

Discharge Amount:	1,700,000 GAL
Cause:	LACK OF SYSTEM OF SYSTEM CAPACITY HEAVY RAIN.
Clean Up:	CLEAN-UP NOT REQUIRED, MANHOLE DISCHARGE DIRECTLY INTO THE CREEK.
Control Zone:	CONTROL ZONE WAS NOT ESTABLISHED DUE TO THE SIZE OF THE CREEK AND DIFFICULTY ACCESSING DISCHARGE SITE.
Impact:	NONE OBSERVED OVER FLOW NOTIFICATION RECEIVED FROM REMOTE DISCHARGE ALARM.
Repair:	LOCATION IN THE IOAP.
Public Notification:	PUBLIC NOTIFIED THROUGH PERMANENT OVERFLOW ADVISORY SIGNS POSTED ALONG THE CREEK, TO AVOID CONTACT WITH DISCHARGED CONTENT.

Notifications:

12/17/19 1:00 AM	DISNOT	EMAIL NOTIFICATION OF UNAUTHORIZED DISCHARGE SENT TO:DISCHARGENOTICES@LOUISVILLEMSD.ORG, SAYRE.DENNIS@EPAMAIL.EPA.GOV
12/17/19 1:00 AM	DISSNO	WAITING TO COMPLETE THE DISCHARGE INFORMATION



KPDES #	Facility ID	Water Quality Treatment Center	Receiving Stream of Treatment Center	Region
KY0022411	MSD0278	MORRIS FORMAN	OHIO RIVER	WEST

Facility Type	Facility ID	Facility Address	If Pump Station, Name of Pump Station:	Receiving Stream	Discharge to
SMHSewer Manhole	IS021A-SI	1201 OLD CANNONS LN		MIDDLE FORK BEARGRASS	STREAM

<u>Activity Code / Description</u>	<u>WO #</u>	<u>Ref No</u>	<u>Initiated</u>	<u>Initiated By</u>	<u>Assigned To</u>	<u>Disch Status</u>	<u>Event Date</u>	<u>Problem</u>	<u>Result</u>	<u>Completed</u>	<u>Condition</u>
: DISREV: RAIN EVENT DISCHARGE	3186627		12/16/2019	DAVIS BROWNMITCHELL		REPAIRED - ISSUE RESOLVED	12/02/2019	LACK OF SYSTEM CAPACITY	UNAUTHORIZED DISCHARGE-WATERS	12/17/19 01:45 PM	MAIN

Discharge Reporting:

Discharge Amount:	1,700,000 GAL
Cause:	LACK OF SYSTEM OF SYSTEM CAPACITY HEAVY RAIN.
Clean Up:	CLEAN-UP NOT REQUIRED, MANHOLE DISCHARGE DIRECTLY INTO THE CREEK.
Control Zone:	CONTROL ZONE WAS NOT ESTABLISHED DUE TO THE SIZE OF THE CREEK AND DIFFICULTY ACCESSING DISCHARGE SITE.
Impact:	NONE OBSERVED OVER FLOW NOTIFICATION RECEIVED FROM REMOTE DISCHARGE ALARM.
Repair:	LOCATION IN THE IOAP.
Public Notification:	PUBLIC NOTIFIED THROUGH PERMANENT OVERFLOW ADVISORY SIGNS POSTED ALONG THE CREEK, TO AVOID CONTACT WITH DISCHARGED CONTENT.

Notifications:

12/17/19 1:00 AM	DISNOT	EMAIL NOTIFICATION OF UNAUTHORIZED DISCHARGE SENT TO:DISCHARGENOTICES@LOUISVILLEMSD.ORG, SAYRE.DENNIS@EPAMAIL.EPA.GOV
12/17/19 1:00 AM	DISSNO	WAITING TO COMPLETE THE DISCHARGE INFORMATION

Total Facilities Printed: 9

Total Work Orders Printed: 11

Format: Month/Day/Year

Enter Start Date : 12/1/19

MORRIS FORMAN WATER QUALITY TREATMENT CENTER JEFFERSON COUNTY, KENTUCKY MONTH OF December-19
 KPDES PERMIT NO. KY0022411 PLANT CAPACITY - 120 MGD RECEIVING STREAM-OHIO RIVER

DATE	WASTEWATER FLOWS (Million Gallons)				TEMP (DEGF)		pH		SETS (ML)		TSS (mg/L)		D.O. (mg/L)	5-DAY BOD (mg/L)			RETURN SLUDGE			AERATION BASIN					ACTIVE		CHLORINATION			FINAL EFFLUENT				
	Effluent	Sec.	Bypass		raw	final	raw	final	raw	final	raw	final	final	raw	final	final	prim.	final	final	FLOW MG	TSS g/L	TVSS g/L	D.O. mg/L	MLSS g/L	MLVSS g/L	SET	SVI	Sludge Wasted MG	Primary Sludge MG	Chlorine Dosage KLBS	Resid mg/L	Fecal Coliform #/100 ml	NH3-N mg/L	Pump. Hours
12/1/19	212.09	133.71	78.38		55	55	7.2	6.8	3.2	0.6	68	88	5.8	57	49	52	21.0	17.6	15.2	15.6	6.2	5.4	142	23	0.91	0.14	4.02	0.016	140	3.4	15.4			
12/2/19	137.98	119.18	18.78		58	58	7.2	6.6	7.2	0.1	170	45	5.3	212	90	37	20.8	18.8	16.0	9.1	2.4	2.0	121	51	0.91	0.26	2.50	0.016	67	5.9	24.0			
12/3/19	115.00	113.47	1.53		56	56	7.1	6.6	10.9	0.1	260	16	6.3	260	135	14	20.7	18.4	15.6	6.5	2.7	2.4	153	56	0.94	0.28	1.96	0.016	840	6.2	24.0			
12/4/19	93.47	93.47	0.00		60	60	7.0	6.5	12.1	0.1	266	16	8.2	313	154	10	20.8	17.8	15.0	13.2	3.3	2.9	177	53	1.07	0.24	1.60	0.016	70	8.6	24.0			
12/5/19	79.31	79.31	0.00		63	63	7.2	6.6	12.5	0.1	228	16	7.1	346	210	22	21.3	18.0	15.5	11.7	3.3	2.9	197	61	0.85	0.13	1.54	0.016	39	7.5	12.1			
12/6/19	78.21	76.21	0.00		63	63	7.3	6.5	14.0	0.1	287	18	6.0	489	270	9	21.3	17.3	14.8	13.4	6.1	5.2	228	34	0.94	0.13	1.71	0.016	9	6.4	0.0			
12/7/19	69.11	69.11	0.00		61	61	7.1	6.7	15.0	0.1	340	17	6.2	384	302	11	21.3	15.6	13.4	13.9	3.7	3.2	203	62	1.08	0.11	1.59	0.016	27	9.4	0.0			
12/8/19	64.22	64.22	0.00		63	63	7.1	6.5	11.5	0.2	376	65	5.6	386	412	29	21.6	17.9	15.5	8.6	4.5	3.9	284	64	1.02	0.09	1.42	0.016	4	6.5	0.0			
12/9/19	91.73	91.02	0.71		61	61	7.0	6.5	21.0	0.6	420	100	5.5	446	352	62	21.2	18.2	15.7	7.3	4.3	3.7	264	62	1.04	0.10	2.20	0.016	87	8.9	0.0			
12/10/19	68.70	68.70	0.00		61	61	7.3	6.4	17.0	0.5	356	98	5.8	402	247	58	21.6	19.9	15.4	5.6	7.3	6.1	269	38	1.04	0.19	1.76	0.016	90	8.6	0.0			
12/11/19	63.93	63.93	0.00		59	59	7.0	6.4	20.0	0.2	396	82	4.9	576	420	59	21.7	19.8	16.9	2.7	5.2	4.4	339	66	1.08	0.11	1.98	0.016	4	9.1	0.0			
12/12/19	61.39	61.39	0.00		63	63	7.1	6.3	22.5	2.0	480	160	5.4	695	398	87	21.8	21.0	17.9	1.2	5.5	4.7	336	61	1.08	0.20	2.35	0.016	37	10.2	11.0			
12/13/19	83.48	77.91	5.57		62	62	7.1	6.5	21.5	13.0	596	456	5.2	600	400	265	21.9	19.7	16.8	1.2	12.9	11.0	323	25	1.07	0.18	2.77	0.016	269	12.3	24.0			
12/14/19	122.56	114.05	8.51		61	61	7.4	6.5	10.5	6.5	252	272	3.1	258	137	132	21.9	19.8	16.8	11.7	2.8	2.4	171	61	1.08	0.07	4.97	0.016	4	6.2	24.0			
12/15/19	85.51	85.51	0.00		58	58	7.0	6.5	8.5	0.1	242	23	5.4	381	164	18	21.7	18.1	15.4	13.8	8.8	7.6	203	23	1.08	0.10	3.14	0.016	160	5.4	24.0			
12/16/19	138.53	120.14	18.39		57	57	7.0	6.3	11.1	17.1	280	475	4.4	281	202	308	21.6	18.2	15.8	14.2	5.3	4.7	173	34	1.08	0.09	4.35	0.016	4	6.5	24.0			
12/17/19	154.35	130.17	24.18		55	55	7.1	6.6	9.9	1.7	260	148	8.5	309	128	71	21.5	18.0	15.1	19.4	6.4	5.3	147	23	1.08	0.12	4.16	0.016	400	4.4	24.0			
12/18/19	142.19	130.76	11.43		54	54	7.1	6.6	8.9	0.4	320	88	8.3	211	163	65	21.6	18.5	15.6	19.2	6.7	5.8	158	23	1.07	0.11	3.75	0.016	4	5.5	24.0			
12/19/19	133.67	129.55	4.42		55	55	7.1	6.6	8.1	1.3	328	122	8.8	219	178	68	21.5	18.6	15.5	16.1	3.1	2.5	152	48	1.08	0.16	3.13	0.016	97	6.7	24.0			
12/20/19	134.48	125.86	8.62		58	58	6.9	6.3	9.5	1.9	352	150	6.3	390	267	121	21.6	21.2	17.3	13.0	3.1	2.5	144	45	1.08	0.25	2.89	0.016	241	6.5	24.0			
12/21/19	126.05	123.51	2.54		55	55	7.0	6.4	14.8	0.3	282	79	6.6	162	165	39	21.7	22.1	18.0	12.7	6.9	5.7	159	23	1.08	0.30	3.26	0.016	1670	3.8	24.0			
12/22/19	83.28	83.28	0.00		58	58	7.2	6.4	13.2	0.1	246	20	6.4	168	185	14	21.4	21.2	17.1	14.8	7.4	6.0	199	27	1.08	0.07	2.37	0.016	61	1.4	24.0			
12/23/19	70.07	70.07	0.00		60	60	7.2	6.4	16.2	0.1	356	19	8.7	444	299	63	21.6	22.0	17.6	8.6	5.2	4.1	253	49	1.08	0.19	1.99	0.016	275	4.1	24.0			
12/24/19	61.49	61.49	0.00		62	62	7.2	6.5	13.5	0.1	296	18	6.3	346	234	26	21.6	21.6	17.4	6.5	6.4	5.1	229	36	1.08	0.25	1.58	0.016	59	6.9	9.3			
12/25/19	55.12	55.12	0.00		62	62	7.2	6.4	12.1	0.1	272	29	7.3	166	140	18	21.6	20.5	16.5	13.6	5.6	4.5	259	47	1.08	0.12	1.31	0.016	7	10.3	0.0			
12/26/19	61.10	61.10	0.00		60	60	7.0	6.4	14.9	0.1	292	12	8.1	315	194	10	21.8	18.9	15.2	15.6	6.1	4.9	297	51	1.08	0.17	1.23	0.016	10	14.7	0.0			
12/27/19	71.13	71.13	0.00		65	65	7.0	6.3	16.0	0.2	556	53	7.3	543	317	26	21.8	18.9	15.3	7.3	5.1	4.1	291	57	1.07	0.19	1.54	0.016	14	15.5	0.0			
12/28/19	72.79	72.79	0.00		63	63	7.0	6.5	18.0	0.1	373	46	7.0	387	263	27	21.7	17.3	14.0	7.0	4.7	3.8	278	59	1.08	0.16	2.12	0.016	28	12.1	0.0			
12/29/19	133.24	115.34	17.90		65	65	6.9	6.4	24.2	17.2	568	492	6.3	225	182	286	21.9	19.6	15.8	10.9	4.3	3.4	228	53	1.09	0.18	4.26	0.016	212000	10.1	0.0			
12/30/19	155.81	133.00	22.81		60	60	7.1	6.4	7.2	3.9	195	202	6.9	171	74	106	22.6	18.1	14.4	22.1	3.0	2.4	149	49	1.08	0.21	4.01	0.016	117	5.5	9.5			
12/31/19	155.83	128.08	27.15		58	58	7.2	6.6	8.5	1.5	132	92	5.9	230	94	78	22.5	18.5	14.9	13.3	2.4	2.0	151	62	1.08	0.24	2.77	0.016	1870	6.2	24.0			
Sum	3174.10	2923.18	250.92		80	80	7.1	6.5	13.3	2.3	318	113	6.4	335	220	71	688.6	19.1	15.6	11.3	1.2	5.2	4.3	215.4	46.0	32.5	5.10	7.0	7.8	417.2				
Average	102.39	94.30	16.73		80	80	7.1	6.5	13.3	2.3	318	113	6.4	335	220	71	21.6	19.1	15.6	11.3	5.2	4.3	215.4	46.0	1.05	0.18	2.59	0.016	70	7.8				

SEWER CONNECTIONS 147893 TIMES 4 = 591532 SEWER POPULATION IND. WASTER POPULATION EQ
 CUSTOMERS 380
 FLOW 348521
 BOD 1073411
 TSS 695045

Authorized Agent

Certification No. 26893

MORRIS FORMAN WASTEWATER TREATMENT PLANT JEFFERSON COUNTY, KY

Month of Dec-19

Average Flow

SETTLING TANKS	Primary	Secondary		
		Battery A	Battery B	Battery C
Average Flow (MGD)	98.71	26.74	30.09	14.14
Tanks in Service	4.00	7.0	7.0	4.0
Surface Area (Ft.2)	77000.00	60065.01	69100.57	34600.00
Volume (MG)	8.33	6.15	7.08	3.54
Weir Length (Ft.)	2860.00	2489.40	2863.88	1434.00
Avg. Weir Overflow (GPD/Ft)	34512.42	10741.65	10505.60	9863.30
Avg. Settling Rate (GPD/Ft2)	1281.89	582.81	580.12	502.17
Avg. Detention Time	2.03	5.52	5.65	6.01

AERATION TANKS	Battery A	Battery B	Battery C
Volume (Gallons)	4200000	4200000	2100000
Avg. Flow (MGD)	35.01	40.09	17.38
Avg. Detention Time (Hours)	3.77	3.35	3.56

CHLORINE CONTACT CHAMBERS

Contact Chambers in Use	2.0
Volume (Gallons)	2340000
Avg. Detention Time (Hours)	1.05

Remarks: BY-PASS REPORTS (See Attached)