



700 West Liberty Street
Louisville Kentucky 40203-1911
502-540-6000
www.msdlouky.org

August 22, 2016

Cheryl Edwards
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. Edwards:

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 July 1st to July 31st are provided through NetDMR. All permit requirements were met for the month of July, 2016.

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

Sincerely,

A handwritten signature in cursive script that reads "Alex E. Novak".

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

vgt



Beneficial Use of Louisville's Biosolids
www.louisvillegreen.com

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 07/01/16 to 07/31/16	DMR Due Date:	08/28/16	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	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					19 - mg/L	0	01/01 - Daily	GR - GRAB
					Permit Req.					>=	2 INST MIN					19 - mg/L		01/01 - Daily	GR - GRAB
					Value NODI														
00310	BOD, 5-day, 20 deg. C	E - Secondary/Biological Process Complete	0	--	Sample	=	13495	=	20332	26 - lb/d	=	19	=	31	19 - mg/L	0	01/01 - Daily	CP - COMPOS	
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	26 - lb/d	<=	30 MO AVG	<=	45 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	=	243903	=	305118	26 - lb/d	=	355	=	487	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					=	6.5			=	6.8	12 - SU	0	01/01 - Daily	GR - GRAB
					Permit Req.					>=	6 MINIMUM			<=	9 MAXIMUM	12 - SU		01/01 - Daily	GR - GRAB
					Value NODI														
00530	Solids, total suspended	E - Secondary/Biological Process Complete	0	--	Sample	=	16982	=	22334	26 - lb/d	=	24	=	34	19 - mg/L	0	01/01 - Daily	CP - COMPOS	
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	26 - lb/d	<=	30 MO AVG	<=	45 MX WK AV	19 - mg/L		01/01 - Daily	CP - COMPOS	
					Value NODI														
00530	Solids, total suspended	G - Raw Sewage Influent	0	--	Sample	=	279211	=	333482	26 - lb/d	=	404	=	533	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	=	9848	=	11371	26 - lb/d	=	14.4	=	15.4	19 - mg/L	0	01/01 - Daily	CP - COMPOS	
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	26 - lb/d	<=	20 MO AVG	<=	30 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	=	7931	=	8911	26 - lb/d	=	11.6	=	14.1	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	=	83.91	=	125.74	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								<	0.012	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	1	--	Sample						=	94	=	120	13 - #/100mL	0	01/01 - Daily	GR - GRAB	
					Permit Req.						<=	200 30DA GEO	<=	400 7 DA GEO	13 - #/100mL		01/01 - Daily	GR - GRAB	
					Value NODI														
81010	BOD, 5-day, percent removal	K - Percent Removal	0	--	Sample					=	94				23 - %	0	01/30 - Monthly	CA - CALCTD	
					Permit Req.						>=	85 MO MIN			23 - %		01/30 - Monthly	CA - CALCTD	
					Value NODI														
81011	Solids, suspended percent removal	K - Percent Removal	0	--	Sample					=	93				23 - %	0	01/30 - Monthly	CA - CALCTD	
					Permit Req.						>=	85 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
 No errors.

Comments
 No overflows for this reporting period.

Attachments

Name	Type	Size
MFWQTCoverletter072016.pdf	pdf	40256
MFWQTCMOR072016.pdf	pdf	125883

Report Last Saved By

Morris Forman WQTC MSD

User: robin.burch@louisvillemsd.org

Date/Time: 2016-08-23 08:38 (Time Zone: -04:00)

Name: Robin Burch

E-Mail: robin.burch@louisvillemsd.org

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 07/01/16 to 07/31/16	DMR Due Date:	08/28/16
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	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
00310	BOD, 5-day, 20 deg. C	1 - Effluent Gross	0	--	Sample						=	46		=	79	19 - mg/L	13/30 - 13 Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.											19 - mg/L 0		
					Value NODI													
00310	BOD, 5-day, 20 deg. C	F - Primary/Preliminary Process Complete	0	--	Sample						=	245		=	379	19 - mg/L	13/30 - 13 Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.											19 - mg/L 0		
					Value NODI													
00530	Solids, total suspended	1 - Effluent Gross	0	--	Sample						=	63		=	94	19 - mg/L	13/30 - 13 Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.											19 - mg/L 0		
					Value NODI													
00530	Solids, total suspended	F - Primary/Preliminary Process Complete	0	--	Sample						=	291		=	440	19 - mg/L	13/30 - 13 Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.											19 - mg/L 0		
					Value NODI													
00610	Nitrogen, ammonia total [as N]	1 - Effluent Gross	0	--	Sample						=	13.2		=	16.2	19 - mg/L	13/30 - 13 Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.											19 - mg/L 0		
					Value NODI													
00610	Nitrogen, ammonia total [as N]	F - Primary/Preliminary Process Complete	0	--	Sample						=	15.3		=	20.5	19 - mg/L	13/30 - 13 Per Month WH/DS - When Discharging	CP - COMPOS CP - COMPOS
					Permit Req.											19 - mg/L 0		
					Value NODI													
50050	Flow, in conduit or thru treatment plant	F - Primary/Preliminary Process Complete	0	--	Sample	=	7.55	=	9.61	03 - MGD						13/30 - 13 Per Month WH/DS - When Discharging	CN - CONTIN CN - CONTIN	
					Permit Req.		Req Mon MO AVG		Req Mon MX WK AV	03 - MGD					0			
					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:	robin.burch@louisvillemsd.org	Date/Time:	2016-08-23 08:38 (Time Zone: -04:00)
Name:	Robin Burch		
E-Mail:	robin.burch@louisvillemsd.org		

Format: Month/Day/Year
 Enter Start Date : 7/1/16

Press (Ctrl r) to recalculate spreadsheet.

MORRIS FORMAN WATER QUALITY TREATMENT CENTER JEFFERSON COUNTY, KENTUCKY MONTH OF July-16
 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	Sec.	Bypass	raw	final	raw	final	raw	final	raw	final	raw	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 Doseage KLBS	Resid mg/L	Facal Coliform #/100 ml	NH3-N mg/L	Pump. Hours		
																																MG	MG
7/1/16	72.00	72.00	0.00	76	76	7.0	6.7	24.5	0.1	850	12	5.8	698	264	11	15.1	19.0	14.9	9.8	4.4	3.4	329	75	1.56	0.25	2.17	0.012	9	19	0.0			
7/2/16	67.34	67.34	0.00	76	76	7.3	6.7	11.5	0.1	344	11	5.8	317	185	8	16.4	18.6	14.9	10.9	5.1	4.1	336	65	1.58	0.28	2.08	0.012	2	18	0.0			
7/3/16	113.87	100.36	13.51	74	74	7.1	6.8	10.0	1.1	236	66	6.3	176	136	40	16.6	18.9	14.9	13.8	7.8	6.1	304	41	1.58	0.30	5.25	0.012	10	18	0.0			
7/4/16	137.72	125.75	11.97	73	73	7.1	6.6	6.0	0.2	180	23	6.8	87	112	13	16.7	17.7	13.6	18.7	3.3	2.6	196	59	1.33	0.32	3.57	0.012	92	8	0.0			
7/5/16	114.24	113.24	1.00	76	76	7.2	6.8	9.0	1.0	308	78	7.8	214	111	29	15.9	17.7	13.6	18.5	2.7	2.1	167	63	1.42	0.40	2.15	0.012	230	10	0.0			
7/6/16	116.71	108.01	8.70	77	77	7.1	6.8	12.0	0.4	442	42	8.1	312	207	25	19.6	8.7	6.4	17.6	7.8	5.7	148	40	1.42	0.34	3.15	0.012	400	14	0.0			
7/7/16	99.90	98.40	1.50	77	77	7.2	6.8	11.0	0.1	328	12	6.9	396	249	10	26.6	14.1	10.8	12.2	3.0	2.3	209	70	1.30	0.23	2.24	0.012	215	12	0.0			
7/8/16	98.04	96.04	0.00	75	75	7.2	6.8	4.0	0.1	204	14	5.8	248	248	10	29.5	14.7	11.5	11.1	3.6	2.8	200	56	1.30	0.27	1.99	0.012	16	17	0.0			
7/9/16	91.31	91.31	0.00	77	77	7.3	6.7	7.5	0.1	226	10	5.2	225	190	14	29.6	13.4	10.2	11.8	3.2	2.5	195	62	1.23	0.21	2.16	0.012	550	16	0.0			
7/10/16	74.87	74.87	0.00	77	77	7.4	6.8	6.0	0.1	164	11	6.2	166	153	11	29.4	15.0	11.6	12.8	2.9	2.3	199	70	1.20	0.22	1.69	0.012	60	16	0.0			
7/11/16	74.82	74.82	0.00	75	75	7.4	6.8	9.7	0.1	260	10	6.5	250	141	14	29.4	14.1	10.9	12.1	3.7	3.0	221	60	1.22	0.24	1.86	0.012	22	19	0.0			
7/12/16	117.69	103.72	13.97	77	77	7.2	6.8	4.5	1.4	170	68	6.3	194	151	52	29.2	10.4	8.2	12.6	2.5	2.0	182	74	1.22	0.25	3.70	0.012	270	16	0.0			
7/13/16	92.88	92.88	0.00	78	78	7.2	6.7	14.0	0.2	318	10	6.5	310	152	8	28.8	14.0	10.6	12.4	3.4	2.6	173	52	1.16	0.31	2.06	0.012	600	12	0.0			
7/14/16	91.23	91.23	0.00	77	77	7.2	6.8	10.0	0.3	300	16	6.9	289	110	12	28.9	13.3	10.1	12.2	2.8	2.2	154	54	1.10	0.35	0.89	0.012	185	15	0.0			
7/15/16	81.14	81.14	0.00	77	77	7.1	6.7	11.0	0.2	380	14	6.1	274	148	7	29.4	11.1	8.2	12.5	2.9	2.2	174	61	1.12	0.31	2.35	0.012	44	17	0.0			
7/16/16	71.43	71.43	0.00	77	77	7.0	6.6	20.0	0.2	600	14	6.0	398	180	8	29.3	12.1	9.7	12.3	2.7	2.2	167	63	1.05	0.24	2.07	0.012	300	15	0.0			
7/17/16	69.55	69.55	0.00	76	76	7.2	6.7	18.0	0.4	624	14	5.9	247	166	10	29.0	11.7	8.9	12.0	3.2	2.4	188	59	1.01	0.27	2.00	0.012	103	15	0.0			
7/18/16	80.86	80.86	0.00	79	79	7.0	6.8	25.0	0.4	412	24	6.1	353	163	14	29.1	10.8	8.3	10.5	3.3	2.5	191	58	0.86	0.29	2.09	0.012	44	15	0.0			
7/19/16	71.00	71.00	0.00	79	79	7.1	6.6	9.5	0.3	348	18	5.9	200	155	12	29.2	14.2	11.2	11.8	3.4	2.7	203	60	1.11	0.29	2.30	0.012	50	15	0.0			
7/20/16	78.82	77.44	1.38	81	81	7.0	6.6	18.0	0.9	724	54	4.6	383	288	25	29.4	12.2	10.0	7.9	3.9	3.2	225	58	0.99	0.38	2.69	0.012	104	17	0.0			
7/21/16	74.54	74.49	0.05	78	78	7.1	6.6	24.0	0.4	640	28	4.3	438	101	28	29.4	18.0	14.6	7.5	4.0	3.2	267	67	0.10	0.35	2.69	0.012	672	13	0.0			
7/22/16	69.82	69.82	0.00	80	80	7.0	6.6	13.4	0.3	444	18	4.7	522	307	21	29.5	16.9	13.7	9.6	5.0	4.1	314	63	1.14	0.34	2.10	0.012	22	14	0.0			
7/23/16	63.82	63.82	0.00	81	81	7.2	6.6	13.1	0.2	412	14	4.5	434	372	12	29.5	16.4	13.6	10.1	5.1	4.2	261	51	1.49	0.34	1.96	0.012	54	19	0.0			
7/24/16	62.52	62.52	0.00	81	81	7.0	6.6	21.0	0.1	548	16	4.5	424	398	13	29.1	14.4	12.1	10.5	4.1	3.5	265	65	1.54	0.29	1.74	0.012	11	19	0.0			
7/25/16	80.87	76.69	4.18	79	79	7.1	6.6	18.0	0.7	503	62	3.2	540	431	54	28.2	17.4	13.9	6.5	4.5	3.4	281	63	1.12	0.20	3.66	0.012	125	16	0.0			
7/26/16	72.42	72.42	0.00	79	79	7.1	6.7	18.0	0.5	508	32	4.2	583	361	43	29.1	17.9	14.5	3.9	4.7	3.8	316	67	1.54	0.21	2.92	0.012	450	19	0.0			
7/27/16	66.32	65.85	2.47	83	83	7.0	6.7	16.0	2.5	473	130	3.0	650	493	116	29.8	19.4	15.5	2.5	4.8	3.8	319	67	1.54	0.33	3.27	0.012	230	17	0.0			
7/28/16	138.36	116.16	22.18	80	80	7.0	6.5	11.0	1.7	368	90	3.0	254	213	66	29.3	21.1	17.0	2.8	4.4	3.6	228	53	1.54	0.18	7.78	0.012	570	10	0.0			
7/29/16	68.23	68.23	0.00	80	80	7.1	6.8	14.0	0.2	530	30	3.8	586	298	32	29.4	20.5	16.4	2.7	4.0	3.3	272	69	1.54	0.25	4.15	0.012	125	13	0.0			
7/30/16	97.76	86.85	10.91	79	79	7.1	6.7	13.0	1.8	436	104	3.4	554	313	84	29.2	20.1	16.2	4.9	4.9	4.0	279	57	1.54	0.30	5.40	0.012	280	15	0.0			
7/31/16	89.06	82.82	6.24	79	79	7.0	6.7	10.0	1.0	252	67	4.0	285	382	55	28.9	22.5	18.2	2.7	4.4	3.6	257	61	1.54	0.23	3.86	0.012	193	7	0.0			
Total	2699.1	2601.1	98.1													828.5																	
Average	87.1	83.9	7.5	77.8	77.8	7.1	6.7	13.3	0.6	404	36	5.4	355	232	28	28.7	15.7	12.4	10.2	4.0	3.2	233	61	1.27	0.28	2.84	0.012	94	15	0.0			

SEWER CONNECTIONS 147301 TIMES 4 = 589204 SEWER POPULATION

IND. WASTER POPULATION EQ
 CUSTOMERS 364
 FLOW 240025
 BOD 927458
 TSS 808874

Authorized Agent



Certification No. 5691

MORRIS FORMAN WASTEWATER TREATMENT PLANT

JEFFERSON COUNTY, KY

Month of Jul-16

Average Flow

SETTLING TANKS	Primary	Secondary		
		Battery A	Battery B	Battery C
Average Flow (MGD)	87.07	23.45	22.64	10.53
Tanks in Service	4.00	6.0	8.0	3.0
Surface Area (Ft.2)	77000.00	51747.27	68806.11	25870.53
Volume (MG)	8.33	5.30	7.05	2.65
Weir Length (Ft.)	2860.00	2144.67	2851.68	1072.21
Avg. Weir Overflow (GPD/Ft)	30443.72	10933.91	7940.69	9816.71
Avg. Settling Rate (GPD/Ft2)	1130.77	642.52	504.31	603.38
Avg. Detention Time	2.30	5.42	7.47	6.04

AERATION TANKS

	Battery A	Battery B	Battery C
Volume (Gallons)	4200000	4200000	2100000
Avg. Flow (MGD)	33.25	34.70	15.61
Avg. Detention Time (Hours)	4.30	4.45	4.79

CHLORINE CONTACT CHAMBERS

Contact Chambers in Use	1.9
Volume (Gallons)	2211375
Avg. Detention Time (Hours)	1.13

Remarks: BY-PASS REPORTS (See Attached)