S.S. PAPADOPULOS & ASSOCIATES, INC.
ENVIRONMENTAL & WATER-RESOURCE CONSULTANTS

October 26, 2018

Ms. Adria Palmer
Attn.: Jesse Cochran
Kansas City Regional Office
Missouri Department of Natural Resources
500 Northeast Colbern Road
Lee's Summit, Missouri 64086-4710

Subject: **Permit #0004863: Third Quarter 2018 Discharge Monitoring Report (July 1st – September 30st)**

Dear Ms. Palmer:

Enclosed is the quarterly discharge monitoring report required under the Missouri State Operating Permit (MSOP) #0004863 for the U.S. Department of Energy's Kansas City Plant, which was transferred to Bannister Transformation and Development (BT&D) on November 15, 2017.

This report covers the period from July 1, 2018 to September 30, 2018. During this period, there were no non-compliant events at any regulated location. Data summary tables for each of the four regulated outfalls are attached.

Table 1 provides monthly rainfall and flow data for the reporting period. Rainfall data are no longer available at USGS Gauging Station #06893400. Therefore, reported rainfall was measured at Station BL08-Bannister & Hwy 71; these rainfall data were downloaded from https://www.stormwatch.com/ on October 23, 2018. Table 2 provides daily mean discharge at USGS gauging station #06893500. Discharge data were downloaded from https://waterdata.usgs.gov/ on October 23, 2018.

New Best Management Practices (BMPs)

Effective as of April, 2018, the majority of stormwater passing through regulated stormwater outfalls is now processed through new BMPs prior to discharge to the Outfalls. Four stormwater/sediment retention basins, corresponding to Outfalls 001 through 004 (Figure 1), are now operational. These basins intercept the vast majority of stormwater passing through the site, although some stormwater inlets on the periphery of the site and along Bannister Road continue to join the stormwater flow downstream of these basins. Prior to discharge, stormwater collected in these basins is filtered for particulates, and processed through high capacity carbon filtration systems (500 gpm) to remove PCBs and volatile organic compounds.

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Outfall 002 PCB Corrective Actions

The baseflow diversion system was fully operational during the reporting period. The system is effectively capturing base flows; only rain events are discharged. Samples from Outfall 002 were collected during eight of the 13 weeks in the reporting period. During the weeks samples were not collected, there was insufficient rainfall run-off to bypass the flow diversion system; thus, there was no discharge.

Although it is not required under this permit, under the MHWMF Permit, water samples are taken twice monthly at the Outfall 002 flap gate, and sediment samples are collected twice a month and/or when sediment is present in the sediment collection tray at the Outfall 002 sluice gate. No sediment samples were collected during this reporting period. Results for the water samples are provided in the attached table for Outfall 002. One of six water samples collected from the flap gate had a PCB detection of 0.54 ug/L, consistent with sporadic historical detections at this location.

Sincerely,

S. S. PAPADOPULOS & ASSOCIATES, INC.

Harvey Cohen, PhD, RG
Principal

Enclosures

cc w/enclosures
D. Dicks, Permits Section, MDNR

cc w/enclosures (electronic via email)
T. Drake, Federal Facilities Section, MDNR

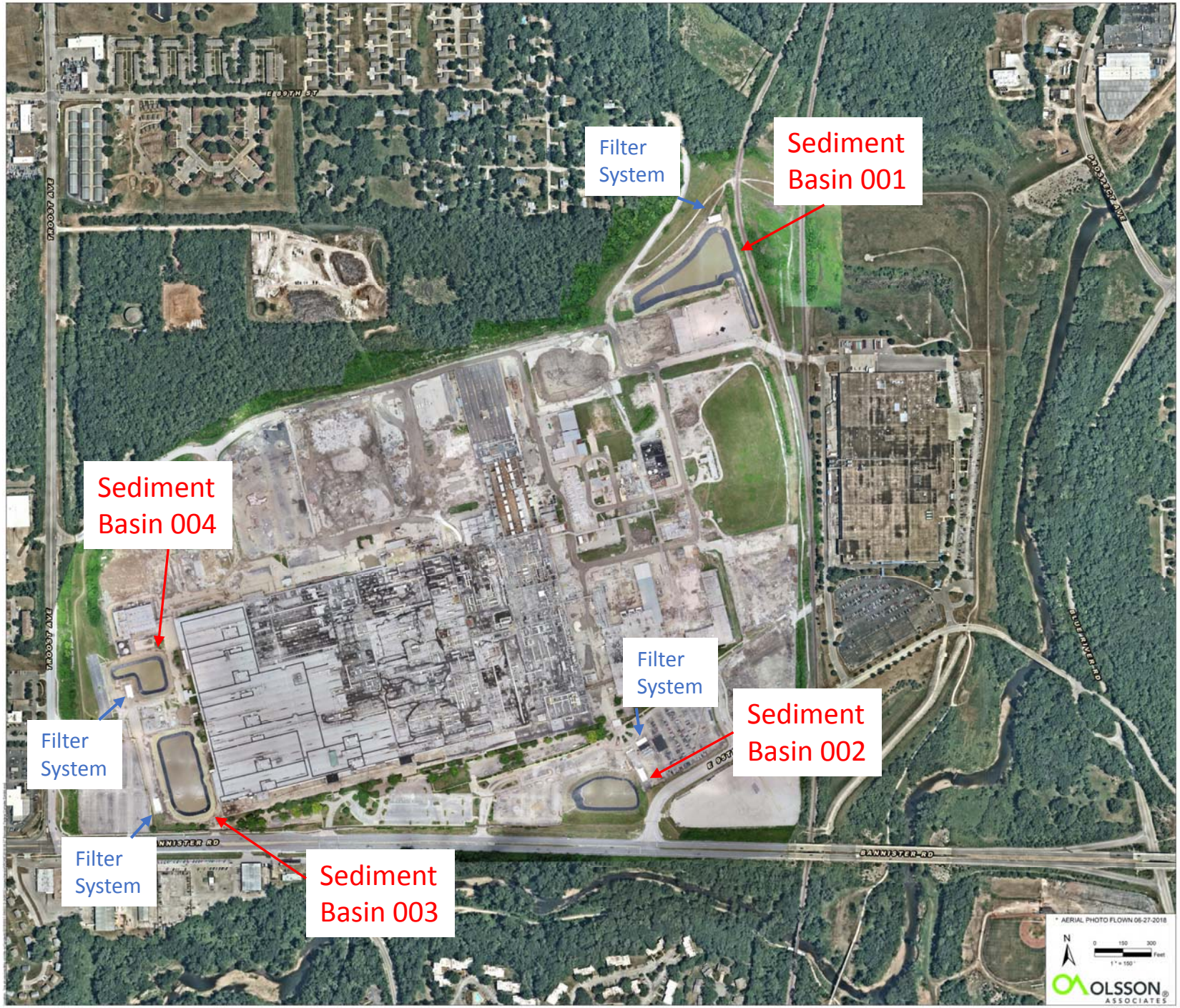

Figure 1 Sediment Retention Basins 001 through 004 on Aerial Photograph from June, 2018

TABLE 1
July 2018 Rainfall and Flow Calculations

Q_T = Total Flow Rate within Basin Storm Water System (MGD)

$Q_T = V_r + B_f + I_g$
V_r = Runoff Volume (MG)
$V_r = 0.027152*(k)*(I_T)*(A)$
0.027152 = Unit Conversion
k = Runoff Coefficient
I_T = Rainfall (inches)
A = Tributary Area (acres)
B_f = Base Flow Estimate (MGD)
B_f = Assumed Constant and Same for Each Basin

RESULT

Outfall	Average Q_T (MGD)
001S	**0.110**
001	**0.161**
002	**0.103**
003	**0.140**
004	**0.075**

Outfall	001S	001	002	003	004	Units	
B_f =	10	10	0	20	15	gpm	Gallons per Minute
B_f =	***0.0144***	***0.0144***	***0***	***0.0288***	***0.0216***	MGD	Million Gallons per Day

I_g = Groundwater Infilatration Assumed to be Zero (0)

	Area, A (Acres)				**Runoff Coefficient, k**			
Basin	**Paved**	**Unpaved**	**Roof**	***Total***	**Dry**	**Moderate**	**Wet**	***Used***
Acid Lot	15.26	0.06	11.63	***26.95***	0.802	0.802	0.803	***0.802***
001S	18.06	0.88	13.77	***32.71***	0.9	0.906	0.914	***0.906***
001	25.93	45.93	8.43	***80.29***	0.437	0.568	0.727	***0.568***
002	11.68	5.07	20.8	***37.55***	0.816	0.847	0.885	***0.847***
003	10.48	6.25	25.72	***42.45***	0.78	0.813	0.853	***0.813***
004	14.14	0.46	4.95	***19.55***	0.841	0.846	0.852	***0.846***
Total	95.55	58.65	85.3	***239.5***				

		Runoff Volume, V_r (MG)					**Total Flow, Q_T (MGD)**				
		Basin					Basin				
Day	Rainfall (I_T) (inches)	001S	001	002	003	004	001S	001	002	003	004
1	0.76	0.611539	0.9410771	0.6563096	0.71216997	0.3412971	0.625939	0.9554771	0.656309618	0.74097	0.3628971
2	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
3	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
4	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
5	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
6	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
7	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
8	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
9	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
10	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
11	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
12	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
13	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
14	1.12	0.9012154	1.3868505	0.9671931	1.04951364	0.5029641	0.91561537	1.4012505	0.967193122	1.0783136	0.5245641
15	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
16	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
17	0.84	0.6759115	1.0401379	0.7253948	0.78713523	0.3772231	0.69031153	1.0545379	0.725394841	0.8159352	0.3988231
18	0.64	0.5149802	0.792486	0.5526818	0.59972208	0.287408	0.52938021	0.806886	0.552681784	0.6285221	0.309008
19	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
20	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
21	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
22	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
23	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
24	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
25	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
26	0.08	0.0643725	0.0990607	0.0690852	0.07496526	0.035926	0.07877253	0.1134607	0.069085223	0.1037653	0.057526
27	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
28	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
29	0.2	0.1609313	0.2476519	0.1727131	0.18741315	0.089815	0.17533132	0.2620519	0.172713057	0.2162132	0.111415
30	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
31	0.04	0.0321863	0.0495304	0.0345426	0.03748263	0.017963	0.04658626	0.0639304	0.034542611	0.0662826	0.039563
	Total (MG)	**2.96**	**4.56**	**3.18**	**3.45**	**1.65**	**3.41**	**5.00**	**3.18**	**4.34**	**2.32**
	Anverage (MGD)	**0.096**	**0.147**	**0.103**	**0.111**	**0.053**	**0.110**	**0.161**	**0.103**	**0.140**	**0.075**

TABLE 1
August 2018 Rainfall and Flow Calculations

Q_T = Total Flow Rate within Basin Storm Water System (MGD)

$Q_T = V_r + B_f + I_g$
V_r = Runoff Volume (MG)
$V_r = 0.027152*(k)*(I_T)*(A)$
0.027152 = Unit Conversion
k = Runoff Coefficient
I_T = Rainfall (inches)
A = Tributary Area (acres)
B_f = Base Flow Estimate (MGD)
B_f = Assumed Constant and Same for Each Basin

RESULT

Outfall	Average Q_T (MGD)
001S	**0.139**
001	**0.206**
002	**0.134**
003	**0.174**
004	**0.091**

Outfall	001S	001	002	003	004	Units	
B_f =	10	10	0	20	15	gpm	Gallons per Minute
B_f =	***0.0144***	***0.0144***	***0***	***0.0288***	***0.0216***	MGD	Million Gallons per Day

I_g = Groundwater Infilatration Assumed to be Zero (0)

	Area, A (Acres)				**Runoff Coefficient, k**			
Basin	**Paved**	**Unpaved**	**Roof**	***Total***	**Dry**	**Moderate**	**Wet**	***Used***
Acid Lot	15.26	0.06	11.63	***26.95***	0.802	0.802	0.803	***0.802***
001S	18.06	0.88	13.77	***32.71***	0.9	0.906	0.914	***0.906***
001	25.93	45.93	8.43	***80.29***	0.437	0.568	0.727	***0.568***
002	11.68	5.07	20.8	***37.55***	0.816	0.847	0.885	***0.847***
003	10.48	6.25	25.72	***42.45***	0.78	0.813	0.853	***0.813***
004	14.14	0.46	4.95	***19.55***	0.841	0.846	0.852	***0.846***
Total	95.55	58.65	85.3	***239.5***				

		Runoff Volume, V_r (MG)					**Total Flow, Q_T (MGD)**				
		Basin					Basin				
Day	Rainfall (I_T) (inches)	001S	001	002	003	004	001S	001	002	003	004
1	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
2	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
3	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
4	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
5	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
6	0.28	0.2253038	0.3467126	0.2417983	0.26237841	0.125741	0.23970384	0.3611126	0.24179828	0.2911784	0.147341
7	0.2	0.1609313	0.2476519	0.1727131	0.18741315	0.089815	0.17533132	0.2620519	0.172713057	0.2162132	0.111415
8	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
9	0.48	0.3862352	0.5943645	0.4145113	0.44979156	0.215556	0.40063516	0.6087645	0.414511338	0.4785916	0.237156
10	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
11	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
12	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
13	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
14	0.6	0.4827939	0.7429556	0.5181392	0.56223945	0.269445	0.49719395	0.7573556	0.518139172	0.5910395	0.291045
15	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
16	0.48	0.3862352	0.5943645	0.4145113	0.44979156	0.215556	0.40063516	0.6087645	0.414511338	0.4785916	0.237156
17	0.04	0.0321863	0.0495304	0.0345426	0.03748263	0.017963	0.04658626	0.0639304	0.034542611	0.0662826	0.039563
18	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
19	1.16	0.9334016	1.4363809	1.0017357	1.08699627	0.5209271	0.94780163	1.4507809	1.001735733	1.1157963	0.5425271
20	0.28	0.2253038	0.3467126	0.2417983	0.26237841	0.125741	0.23970384	0.3611126	0.24179828	0.2911784	0.147341
21	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
22	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
23	0.48	0.3862352	0.5943645	0.4145113	0.44979156	0.215556	0.40063516	0.6087645	0.414511338	0.4785916	0.237156
24	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
25	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
26	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
27	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
28	0.16	0.1287451	0.1981215	0.1381704	0.14993052	0.071852	0.14314505	0.2125215	0.138170446	0.1787305	0.093452
29	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
30	0.52	0.4184214	0.6438949	0.4490539	0.48727419	0.233519	0.43282142	0.6582949	0.449053949	0.5160742	0.255119
31	0.12	0.0965588	0.1485911	0.1036278	0.11244789	0.053889	0.11095879	0.1629911	0.103627834	0.1412479	0.075489
	Total (MG)	**3.86**	**5.94**	**4.15**	**4.50**	**2.16**	**4.31**	**6.39**	**4.15**	**5.39**	**2.83**
	Anverage (MGD)	**0.125**	**0.192**	**0.134**	**0.145**	**0.070**	**0.139**	**0.206**	**0.134**	**0.174**	**0.091**

TABLE 1
September 2018 Rainfall and Flow Calculations

Q_T = Total Flow Rate within Basin Storm Water System (MGD)

$Q_T = V_r + B_f + I_g$
V_r = Runoff Volume (MG)
$V_r = 0.027152*(k)*(I_T)*(A)$
0.027152 = Unit Conversion
k = Runoff Coefficient
I_T = Rainfall (inches)
A = Tributary Area (acres)
B_f = Base Flow Estimate (MGD)
B_f = Assumed Constant and Same for Each Basin

RESULT

Outfall	Average Q_T (MGD)
001S	**0.085**
001	**0.123**
002	**0.076**
003	**0.111**
004	**0.061**

Outfall	001S	001	002	003	004	Units	
B_f =	10	10	0	20	15	gpm	Gallons per Minute
B_f =	***0.0144***	***0.0144***	***0***	***0.0288***	***0.0216***	MGD	Million Gallons per Day

I_g = Groundwater Infilatration Assumed to be Zero (0)

	Area, A (Acres)				Runoff Coefficient, k			
Basin	**Paved**	**Unpaved**	**Roof**	***Total***	**Dry**	**Moderate**	**Wet**	***Used***
Acid Lot	15.26	0.06	11.63	***26.95***	0.802	0.802	0.803	***0.802***
001S	18.06	0.88	13.77	***32.71***	0.9	0.906	0.914	***0.906***
001	25.93	45.93	8.43	***80.29***	0.437	0.568	0.727	***0.568***
002	11.68	5.07	20.8	***37.55***	0.816	0.847	0.885	***0.847***
003	10.48	6.25	25.72	***42.45***	0.78	0.813	0.853	***0.813***
004	14.14	0.46	4.95	***19.55***	0.841	0.846	0.852	***0.846***
Total	95.55	58.65	85.3	***239.5***				

		Runoff Volume, V_r (MG)					Total Flow, Q_T (MGD)				
		Basin					Basin				
Day	Rainfall (I_T) (inches)	001S	001	002	003	004	001S	001	002	003	004
1	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
2	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
3	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
4	0.04	0.0321863	0.0495304	0.0345426	0.03748263	0.017963	0.04658626	0.0639304	0.034542611	0.0662826	0.039563
5	1	0.8046566	1.2382594	0.8635653	0.93706575	0.4490751	0.81905658	1.2526594	0.863565287	0.9658658	0.4706751
6	0.04	0.0321863	0.0495304	0.0345426	0.03748263	0.017963	0.04658626	0.0639304	0.034542611	0.0662826	0.039563
7	1.04	0.8368428	1.2877897	0.8981079	0.97454838	0.4670381	0.85124284	1.3021897	0.898107899	1.0033484	0.4886381
8	0.08	0.0643725	0.0990607	0.0690852	0.07496526	0.035926	0.07877253	0.1134607	0.069085223	0.1037653	0.057526
9	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
10	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
11	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
12	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
13	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
14	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
15	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
16	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
17	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
18	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
19	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
20	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
21	0.2	0.1609313	0.2476519	0.1727131	0.18741315	0.089815	0.17533132	0.2620519	0.172713057	0.2162132	0.111415
22	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
23	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
24	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
25	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
26	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
27	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
28	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
29	0.24	0.1931176	0.2971822	0.2072557	0.22489578	0.107778	0.20751758	0.3115822	0.207255669	0.2536958	0.129378
30	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
	Total (MG)	**2.12**	**3.27**	**2.28**	**2.47**	**1.19**	**2.56**	**3.70**	**2.28**	**3.34**	**1.83**
	Anverage (MGD)	**0.071**	**0.109**	**0.076**	**0.082**	**0.040**	**0.085**	**0.123**	**0.076**	**0.111**	**0.061**

TABLE 2

USGS Gauging Station 06893500

Mean Discharge July 1 - September 30, 2018

Daily Mean Discharge, cubic feet per second			
DATE	**Jul**	**Aug**	**Sep**
	2018	**2018**	**2018**
1	214[P]	29.6[P]	58.4[P]
2	74.5[P]	23.6[P]	42.7[P]
3	43.2[P]	16.7[P]	34.4[P]
4	29.1[P]	13.9[P]	48.8[P]
5	21.9[P]	12.7[P]	813[P]
6	17.9[P]	18[P]	291[P]
7	14.8[P]	161[P]	753[P]
8	11.8[P]	54.2[P]	368[P]
9	11.1[P]	46.8[P]	162[P]
10	11.2[P]	40.4[P]	109[P]
11	8.8[P]	27.6[P]	77[P]
12	8.44[P]	20.9[P]	60.1[P]
13	8.05[P]	20.4[P]	50.2[P]
14	459[P]	109[P]	43.6[P]
15	114[P]	125[P]	42.3[P]
16	54.8[P]	105[P]	32.3[P]
17	976[P]	63.7[P]	30.1[P]
18	595[P]	31.8[P]	28[P]
19	144[P]	396[P]	28.7[P]
20	93.9[P]	291[P]	24.9[P]
21	61.6[P]	115[P]	74.2[P]
22	46.4[P]	58.9[P]	40.9[P]
23	39.5[P]	262[P]	29.9[P]
24	31.6[P]	164[P]	25.6[P]
25	28.8[P]	75.5[P]	23.3[P]
26	69.5[P]	49.3[P]	20[P]
27	70.5[P]	40.9[P]	15.1[P]
28	37.5[P]	85.5[P]	17.2[P]
29	45.9[P]	105[P]	97.7[P]
30	42.3[P]	204[P]	44.2[P]
31	36.4[P]	117[P]	
COUNT	**31**	**31**	**30**
MAX	**976**	**396**	**813**
MIN	**8.05**	**12.7**	**15.1**

Explanation

A- Available for publication

P- Provisional data subject to revision

MISSOURI DEPARTMENT OF NATURAL RESOURCES
Division of Environmental Quality
NPDES MONITORING REPORT FOR NON-MUNICIPAL WASTEWATER DISCHARGES

FACILITY NAME	**PERMIT NUMBER**	**COUNTY**	**OWNER**	**TYPE OF FACILITY**
U.S. Department of Energy Kansas City Plant	MO-0004863	Jackson	Bannister Transformation and Development	Industrial

REQUIRED FREQUENCY OF MONITORING: weekly, monthly, quarterly

THIS REPORT COVERS THE PERIOD - July 1, 2018 - September 30, 2018

RESULTS FOR OUTFALL 001

					DATES SAMPLED	07/02/18 - 07/03/18	07/10/18 - 07/11/18	07/17/18 - 07/18/18	07/24/18 - 07/25/18	07/31/18 - 08/01/18	08/07/18 - 08/08/18	08/14/18 - 08/15/18	08/21/18 - 08/22/18	08/28/18 - 08/29/18	09/04/18 - 09/05/18	09/11/18 - 09/12/18	09/18/18 - 09/19/18	09/25/18 - 09/25/18		
					TIME OF DAY SAMPLED	14:12	13:11	11:37	13:34	12:08	11:48	12:30	12:53	13:00	12:02	8:00	12:15	12:05		
					COLLECTED BY	LGR	LGR	LGR	LGR	LGR	LGR	BLG	BLG	BLG	BLG\LGR	LGR	BLG	LGR		
					DATES OF ANALYSES	07/02/18 - 07/14/18	07/10/18 - 07/24/18	07/17/18 - 07/28/18	07/24/18 - 08/08/18	07/31/18 - 08/08/18	08/07/18 - 08/21/18	08/14/18 - 08/28/18	08/21/18 - 08/31/18	08/28/18 - 09/11/18	09/04/18 - 09/17/18	09/11/18 - 09/26/18	09/18/18 - 10/04/18	09/25/18 - 10/08/18		
PARAMETERS	**MDL**	sample type	**Effluent Limitations** Daily Max	**Effluent Limitations** Monthly Avg	**Units**														**EPA Analytical Method**	**Comments**
Rainfall (daily)	n/a	24 - hr	inches			See Table 1													n/a	
weekly																				
flow (avg monthly total gpd)	n/a	estimate	*	*	mgd	See Table 1														
polychlorinated biphenyls	0.5	Composite	0.5 ug/L	0.5 ug/L	ug/L	<	<	<	<	<	<	<	<	<	<	<	<	<	EPA 8082	
pH	n/a	Grab	6.5-9		su	8	7.8	8	8.1	7.8	7.8	7.9	8.2		8	8.1	7.8	8	n/a	
monthly																				
settleable solids	0.2	Grab	1.5 mL/L/hr	1.0 mL/L/hr	mL/L/hr	<					<				<				SM 2540F	
total suspended solids	5	Grab	*	*	mg/L	<					10.8				<				SM 2540D	
Oil & Grease	5	Grab	15 mg/L	10 mg/L	mg/L	<					<				<				EPA 1664A	
quarterly																				
Aluminum, total recoverable	75	Grab	*	*	ug/L	531													EPA 200.7	
Chromium^{+6}	10	Grab	*	*	ug/L	<													EPA 7196	
Trichloroethylene	1	Grab	*	*	ug/L	<													EPA 624 Low	
1,2-Dichloroethylene	1	Grab	*	*	ug/L	<													EPA 624 Low	
Vinyl Chloride	1	Grab	*	*	ug/L	<													EPA 624 Low	
hardness	0.5	Grab	*	*	mg/L	121													EPA 200.7	

ANALYSES PERFORMED BY: Pace Analytical Services, Inc. Lenexa, KS

Signature of Analyst: hard copy reports maintained in facility file with analysts initials.

* Monitor only requirement.
Note 1 - pH is measured in pH units and is not averaged. The pH is limited to the range of 6.5 to 9.0 pH units.
w = weekly; m = monthly; q = quarterly; pc = Post Closure Permit requirement.
Grab samples collected on the first day of Dates Sampled. PCB composite collected on 2nd date.

REPORT APPROVED BY OWNER: _____ **DATE:** ___10/26/2018_____

MISSOURI DEPARTMENT OF NATURAL RESOURCES
Division of Environmental Quality
NPDES MONITORING REPORT FOR NON-MUNICIPAL WASTEWATER DISCHARGES

FACILITY NAME	**PERMIT NUMBER**	**COUNTY**	**OWNER**	**TYPE OF FACILITY**
U.S. Department of Energy Kansas City Plant	MO-0004863	Jackson	Bannister Transformation and Development	Industrial

REQUIRED FREQUENCY OF MONITORING: weekly, monthly, quarterly

THIS REPORT COVERS THE PERIOD - July 1, 2018 - September 30, 2018

RESULTS FOR OUTFALL 002

			DATES SAMPLED			7/2/2018	7/14/2018	07/16/18 - 07/18/18		7/30/2018	8/6/2018	8/14/2018	8/19/2018		9/4/2018				
			TIME OF DAY SAMPLED			5:01	14:08	12:01		5:56	23:01	7:51	19:25		14:42				
			COLLECTED BY			LGR	LGR	LGR		LGR	LGR	BLG	BLG		LGR				
			DATES OF ANALYSES			07/02/18 - 07/14/18	07/16/18 - 07/24/18	07/18/18 - 07/28/18		07/30/18 - 08/08/18	08/07/18 - 08/16/18	08/14/18 - 08/25/18	08/19/18 - 08/29/18		09/05/18 - 09/14/18				
PARAMETERS	**MDL**	sample type	**Effluent Limitations** Daily Max	Monthly Avg	**Units**				No discharge during week due to lack of run-off					No discharge during week due to lack of run-off		No discharge during week due to lack of run-off	No discharge during week due to lack of run-off	No discharge during week due to lack of run-off	**EPA Analytical Method**	**Comments**
Rainfall (daily)	n/a	24 - hr	inches			See Table 1													n/a	
weekly																				
flow (avg monthly total gpd)	n/a	estimate	*	*	mgd	See Table 1														
polychlorinated biphenyls	0.5	Grab	0.5 ug/L	0.5 ug/L	ug/L	<	<	<		<	<	<	<		<				EPA 8082	
pH	n/a	Grab	6.5-9		su	7.7	7.4	7.7		7.9	8	7.6	7.5		7.6				n/a	
monthly																				
settleable solids	0.2	Grab	1.5 mL/L/hr	1.0 mL/L/hr	mL/L/hr	<					<				<				SM 2540F	
total suspended solids	5	Grab	*	*	mg/L	<					16				17				SM 2540D	
Oil & Grease	5	Grab	15 mg/L	10 mg/L	mg/L	<					<				<				EPA 1664A	
quarterly																				
Aluminum, total recoverable	75	Grab	*	*	ug/L	274													EPA 200.7	
Chromium^{+6}	10	Grab	*	*	ug/L			<											EPA 7196	
Trichloroethylene	1	Grab	*	*	ug/L	<													EPA 624 Low	
1,2-Dichloroethylene	1	Grab	*	*	ug/L	<													EPA 624 Low	
Vinyl Chloride	1	Grab	*	*	ug/L	<													EPA 624 Low	
hardness	0.5	Grab	*	*	mg/L	104													EPA 200.7	
Post Closure Permit Requirements																				
			DATES SAMPLED			07/05/18 - 07/05/18		07/17/18 - 07/17/18			08/08/18 - 08/08/18	08/14/18 - 08/14/18			09/04/18 - 09/04/18		09/19/18 - 09/19/18			
Samples are not collected			**TIME OF DAY SAMPLED**			0.472222222		12:13			13:00	13:30			13:25		14:30			
at the NPDES compliance			**COLLECTED BY**			BLG		LGR			LGR	BLG			BLG		BLG			
point			**DATES OF ANALYSES**			07/06/18 - 07/17/18		07/18/18 - 07/24/18			08/14/18 - 08/21/18	08/20/18 - 08/20/18			09/14/18 - 09/14/18		09/22/18 - 10/03/18			
PCBs (flap gate)	0.5	Grab	**	**	ug/L	<		<			<				<		0.54		EPA 8082	
Trichloroethylene	1.2	Grab	**	**	ug/L	<		<			<	<			<		<		EPA 624 Low	
1,2-Dichloroethylene	0.5	Grab	**	**	ug/L	<		<			<	<			<		<		EPA 624 Low	
Vinyl Chloride	1.8	Grab	**	**	ug/L	<		<			<	<			<		<		EPA 624 Low	
PCB in sediments	0	n/a	**	**	ug/kg	***		***			***	***			***		***		EPA 8082	

ANALYSES PERFORMED BY: Pace Analytical Services, Inc. Lenexa, KS

Signature of Analyst: hard copy reports maintained in facility file with analysts initials.

* Monitor only requirement. . **Monitored at the flap gate as required by MDNR Hazardous Waste Program under the KCP's RCRA Part B Post Closure Permit. No Permit limit.
***Insufficient sediment for analysis.
Note 1 - pH is measured in pH units and is not averaged. The pH is limited to the range of 6.5 to 9.0 pH units.
w = weekly; m = monthly; q = quarterly; pc = Post Closure Permit requirement.
Grab samples collected on the first day of Dates Sampled. PCB composite collected on 2nd date.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

REPORT APPROVED BY OWNER: _____ **DATE:** __10/26/2018_____

MISSOURI DEPARTMENT OF NATURAL RESOURCES
Division of Environmental Quality
NPDES MONITORING REPORT FOR NON-MUNICIPAL WASTEWATER DISCHARGES

FACILITY NAME	**PERMIT NUMBER**	**COUNTY**	**OWNER**	**TYPE OF FACILITY**
U.S. Department of Energy Kansas City Plant	MO-0004863	Jackson	Bannister Transformation and Development	Industrial

REQUIRED FREQUENCY OF MONITORING: weekly, monthly, quarterly

THIS REPORT COVERS THE PERIOD - July 1, 2018 - September 30, 2018

RESULTS FOR OUTFALL 003

PARAMETERS	MDL	sample type	Effluent Limitations Daily Max	Effluent Limitations Monthly Avg	Units													EPA Analytical Method	Comments
DATES SAMPLED						07/02/18 - 07/03/18	07/10/18 - 07/11/18	07/17/18 - 07/18/18	07/24/18 - 07/25/18	07/31/18 - 08/01/18	08/07/18 - 08/08/18	08/14/18 - 08/15/18	08/21/18 - 08/22/18	08/28/18 - 08/29/18	09/04/18 - 09/05/18	09/11/18 - 09/12/18	09/18/18 - 09/19/18	9/25/2018		
TIME OF DAY SAMPLED						13:43	12:46	11:18	13:14	12:19	10:56	13:00	12:25	13:24	12:31	12:21	12:40	12:30		
COLLECTED BY						LGR	LGR	LGR	LGR	LGR	LGR	BLG	BLG	BLG	BLG\LGR	LGR	BLG	LGR		
DATES OF ANALYSES						07/02/18 - 07/14/18	07/10/18 - 07/24/18	07/17/18 - 07/28/18	07/24/18 - 08/08/18	07/31/18 - 08/08/18	08/07/18 - 08/21/18	08/14/18 - 08/28/18	08/21/18 - 08/31/18	08/28/18 - 09/11/18	09/04/18 - 09/17/18	09/11/18 - 09/26/18	09/18/18 - 10/04/18	09/25/18 - 10/08/18		
Rainfall (daily)	n/a	24 - hr	inches			See Table 1													n/a	
weekly																				
flow (avg monthly total gpd)	n/a	estimate	*	*	mgd	See Table 1														
polychlorinated biphenyls	0.5	Composite	0.5 ug/L	0.5 ug/L	ug/L	<	<	<	<	<	<	<	<	<	<	<	<	<	EPA 8082	
pH	n/a	Grab	6.5-9		su	8	7.7	7.8	7.9	7.9	7.5	7.8	8.2		7.9	7.9	8.1	7.8	n/a	
monthly																				
settleable solids	0.2	Grab	1.5 mL/L/hr	1.0 mL/L/hr	mL/L/hr	<					<				<				SM 2540F	
total suspended solids	5	Grab	*	*	mg/L	27					15				11				SM 2540D	
Oil & Grease	5	Grab	15 mg/L	10 mg/L	mg/L	<					<				<				EPA 1664A	
quarterly																				
Aluminum, total recoverable	75	Grab	*	*	ug/L	1080													EPA 200.7	
Chromium[*6]	10	Grab	*	*	ug/L	<													EPA 7196	
Trichloroethylene	1	Grab	*	*	ug/L	<													EPA 624 Low	
1,2-Dichloroethylene	1	Grab	*	*	ug/L	<													EPA 624 Low	
Vinyl Chloride	1	Grab	*	*	ug/L	<													EPA 624 Low	
hardness	0.5	Grab	*	*	mg/L	103													EPA 200.7	

ANALYSES PERFORMED BY: Pace Analytical Services, Inc. Lenexa, KS

Signature of Analyst: hard copy reports maintained in facility file with analysts initials.

* Monitor only requirement.
Note 1 - pH is measured in pH units and is not averaged. The pH is limited to the range of 6.5 to 9.0 pH units.
w = weekly; m = monthly; q = quarterly; pc = Post Closure Permit requirement.
Grab samples collected on the first day of Dates Sampled. PCB composite collected on 2nd date.

REPORT APPROVED BY OWNER: _____ **DATE:** ___10/26/2018_____

MISSOURI DEPARTMENT OF NATURAL RESOURCES
Division of Environmental Quality
NPDES MONITORING REPORT FOR NON-MUNICIPAL WASTEWATER DISCHARGES

FACILITY NAME	**PERMIT NUMBER**	**COUNTY**	**OWNER**	**TYPE OF FACILITY**
U.S. Department of Energy Kansas City Plant	MO-0004863	Jackson	Bannister Transformation and Development	Industrial

REQUIRED FREQUENCY OF MONITORING: weekly, monthly, quarterly

THIS REPORT COVERS THE PERIOD - July 1, 2018 - September 30, 2018

RESULTS FOR OUTFALL 004

PARAMETERS	MDL	sample type	Effluent Limitations Daily Max	Effluent Limitations Monthly Avg	Units													EPA Analytical Method	Comments
DATES SAMPLED						07/02/18 - 07/03/18	07/10/18 - 07/11/18	07/17/18 - 07/18/18	07/24/18 - 07/25/18	07/31/18 - 08/01/18	08/07/18 - 08/08/18	08/14/18 - 08/15/18	08/21/18 - 08/22/18	08/28/18 - 08/29/18	09/04/18 - 09/05/18	09/11/18 - 09/12/18	09/18/18 - 09/19/18	9/25/2018		
TIME OF DAY SAMPLED						13:40	12:48	11:16	13:12	12:20	10:58	13:01	12:30	13:25	12:35	12:23	12:40	12:30		
COLLECTED BY						LGR	LGR	LGR	LGR	LGR	LGR	BLG	BLG	BLG	BLG\LGR	LGR	BLG	LGR		
DATES OF ANALYSES						07/02/18 - 07/14/18	07/10/18 - 07/24/18	07/17/18 - 07/28/18	07/24/18 - 08/08/18	07/31/18 - 08/08/18	08/07/18 - 08/21/18	08/14/18 - 08/29/18	08/21/18 - 08/31/18	08/28/18 - 09/11/18	09/04/18 - 09/17/18	09/11/18 - 09/26/18	09/18/18 - 10/04/18	09/25/18 - 10/08/18		
Rainfall (daily)	n/a	24 - hr	inches			See Table 1													n/a	
weekly																				
flow (avg monthly total gpd)	n/a	estimate	*	*	mgd	See Table 1														
polychlorinated biphenyls	0.5	Composite	0.5 ug/L	0.5 ug/L	ug/L	<	<	<	<	<	<	<	<	<	<	<	<	<	EPA 8082	
pH	n/a	Grab	6.5-9		su	7.9	7.8	7.9	7.8	7.9	7.8	7.9	8.3		8	7.9	8	7.7	n/a	
monthly																				
settleable solids	0.2	Grab	1.5 mL/L/hr	1.0 mL/L/hr	mL/L/hr	<					<				<				SM 2540F	
total suspended solids	5	Grab	*	*	mg/L	16.4					14.2				<				SM 2540D	
Oil & Grease	5	Grab	15 mg/L	10 mg/L	mg/L	<					<				<				EPA 1664A	
quarterly																				
Aluminum, total recoverable	75				ug/L	612													EPA 200.7	
Chromium^{+6}	10				ug/L	<													EPA 7196	
Trichloroethylene	1				ug/L	<													EPA 624 Low	
1,2-Dichloroethylene	1				ug/L	<													EPA 624 Low	
Vinyl Chloride	1				ug/L	<													EPA 624 Low	
hardness	0.5				mg/L	118													EPA 200.7	

ANALYSES PERFORMED BY: Pace Analytical Services, Inc. Lenexa, KS

Signature of Analyst: hard copy reports maintained in facility file with analysts initials.

* Monitor only requirement.
Note 1 - pH is measured in pH units and is not averaged. The pH is limited to the range of 6.5 to 9.0 pH units.
w = weekly; m = monthly; q = quarterly; pc = Post Closure Permit requirement.
Grab samples collected on the first day of Dates Sampled. PCB composite collected on 2nd date.

REPORT APPROVED BY OWNER: _____ **DATE:** _____**10/26/2018**_____

MISSOURI DEPARTMENT OF NATURAL RESOURCES
Division of Environmental Quality
NPDES MONITORING REPORT FOR NON-MUNICIPAL WASTEWATER DISCHARGES

FACILITY NAME	PERMIT NUMBER	COUNTY	OWNER	TYPE OF FACILITY
U.S. Department of Energy Kansas City Plant	MO-0004863	Jackson	Bannister Transformation and Development	Industrial

REQUIRED FREQUENCY OF MONITORING: weekly, monthly, quarterly

THIS REPORT COVERS THE PERIOD - July 1, 2018 - September 30, 2018

RESULTS FOR DOWNSTREAM MONITORING POINT

				DATES SAMPLED		7/3/2018	8/8/2018	9/5/2018							
				TIME OF DAY SAMPLED		15:02	10:23	14:06							
				COLLECTED BY		LGR	LGR	LGR							
				DATES OF ANALYSES		07/12/18 - 07/12/18	08/14/18 - 08/21/18	09/07/18 - 09/14/18							
			Effluent Limitations												
PARAMETERS	**MDL**	sample type	**Daily Max**	**Monthly Avg**	**Units**						**EPA Analytical Method**	**Comments**			
monthly															
polychlorinated biphenyls	0.5	Grab	*	*		<	<	<			EPA 8082				
hardness**	0.5	Grab	*	*		163	180	135			EPA 200.7				
flow ((USGS gauging station 06893500)						see attached USGS staton data									

ANALYSES PERFORMED BY: Pace Analytical Services, Inc. Lenexa, KS

Signature of Analyst: hard copy reports maintained in facility file with analysts initials.

* Monitor only requirement.
**Hardness is noted in the permit as measured at the USGS gauging station 06893500. However, hardness data (measured as specific conductance) is not available in real time data from this station. Therefore, actual samples are collected and submitted for analysis.

REPORT APPROVED BY OWNER: _____ **DATE:** _____10/26/2018_____