



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

April 24, 2018

Mr. Mitchell Roberts, Director
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: First Quarter 2018 Discharge Monitoring Report (January 1st
– March 31st)**

Dear Mr. Roberts:

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 January 1, 2018 to March 31, 2018. During this period, there was one measurement above permit standards: on January 10, 2018, PCB-1242 (Aroclor 1242) concentration at Outfall 004 was 0.85 ug/L, which exceeds the daily maximum of 0.5 ug/L. Follow-up sampling failed to verify this exceedance, and PCB concentrations were below quantitation limits in all subsequent samples.

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 April 16, 2018. Table 2 provides daily mean discharge at USGS gauging station #06893500. Discharge data were downloaded from <https://waterdata.us.gso.gov/> on April 16, 2018.

Outfall 002 PCB Corrective Actions

Base Flow Diversion

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 five of the 13 weeks in the reporting period. During the weeks samples were not

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collected, there was insufficient rainfall run-off to bypass the flow diversion system; thus, there was no discharge. Samples for the monthly parameters were collected in January and March. In February, there was insufficient discharge volume for a monthly sample.

Sincerely,

S. S. PAPADOPULOS & ASSOCIATES, INC.

A handwritten signature in blue ink, appearing to read "Harvey Cohen".

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

TABLE 1
January 2018 Rainfall and Flow Calculations

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

RESULT

Outfall	Average Q_T (MGD)
001S	0.030
001	0.038
002	0.017
003	0.047
004	0.030

$Q_T = V_r + B_f + I_g$

V_r = Runoff Volume (MG)

$V_r = 0.027152 * (k) * (I_r) * (A)$

0.027152 = Unit Conversion

k = Runoff Coefficient

I_r = Rainfall (inches)

A = Tributary Area (acres)

B_f = Base Flow Estimate (MGD)

B_f = Assumed Constant and Same for Each Basin

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 Infiltration Assumed to be Zero (0)

Basin	Area, A (Acres)				Runoff Coefficient, k			
	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				

Day	Rainfall (I_r) (inches)	Runoff Volume, V_r (MG)					Total Flow, Q_T (MGD)				
		Basin					Basin				
		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	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
7	0.12	0.0965588	0.1485911	0.1036278	0.11244789	0.053889	0.11095879	0.1629911	0.103627834	0.14124789	0.075489
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	0.4	0.3218626	0.4953037	0.3454261	0.3748263	0.17963	0.33626263	0.5097037	0.34542615	0.4036263	0.20123
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	0.08	0.0643725	0.0990607	0.0690852	0.07496526	0.035926	0.07877253	0.1134607	0.069085223	0.10376526	0.057526
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	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	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	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
30	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
31	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
	Total (MG)	0.48	0.74	0.52	0.56	0.27	0.93	1.19	0.52	1.46	0.94
	Average (MGD)	0.016	0.024	0.017	0.018	0.009	0.030	0.038	0.017	0.047	0.030

TABLE 1
February 2018 Rainfall and Flow Calculations

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

RESULT

$Q_T = V_r + B_f + I_g$

V_r = Runoff Volume (MG)

$V_r = 0.027152 * (k) * (I_r) * (A)$

0.027152 = Unit Conversion

k = Runoff Coefficient

I_r = Rainfall (inches)

A = Tributary Area (acres)

B_f = Base Flow Estimate (MGD)

B_f = Assumed Constant and Same for Each Basin

Outfall	Average Q_T (MGD)
001S	0.053
001	0.075
002	0.042
003	0.074
004	0.043

Outfall	001S	001	002	003	004	Units
B_f =	10	10	0	20	15	gpm
B_f =	0.0144	0.0144	0	0.0288	0.0216	MGD

Gallons per Minute
Million Gallons per Day

I_g = Groundwater Infiltration Assumed to be Zero (0)

Basin	Area, A (Acres)				Runoff Coefficient, k			
	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				

Day	Rainfall (I_r) (inches)	Runoff Volume, V_r (MG)					Total Flow, Q_T (MGD)				
		Basin					Basin				
		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	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
7	0.04	0.0321863	0.0495304	0.0345426	0.03748263	0.017963	0.046586263	0.0639304	0.034542611	0.0662826	0.039563
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	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	0.04	0.0321863	0.0495304	0.0345426	0.03748263	0.017963	0.046586263	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	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
20	0.56	0.4506077	0.6934252	0.4835966	0.524756821	0.251482	0.465007685	0.7078252	0.483596561	0.5535568	0.273082
21	0.24	0.1931176	0.2971822	0.2072557	0.22489578	0.107778	0.207517579	0.3115822	0.207255669	0.2536958	0.129378
22	0.2	0.1609313	0.2476519	0.1727131	0.18741315	0.089815	0.175331316	0.2620519	0.172713057	0.2162132	0.111415
23	0.08	0.0643725	0.0990607	0.0690852	0.07496526	0.035926	0.078772526	0.1134607	0.069085223	0.1037653	0.057526
24	0.2	0.1609313	0.2476519	0.1727131	0.18741315	0.089815	0.175331316	0.2620519	0.172713057	0.2162132	0.111415
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
	Total (MG)	1.09	1.68	1.17	1.27	0.61	1.50	2.09	1.17	2.08	1.22
	Average (MGD)	0.039	0.060	0.042	0.046	0.022	0.053	0.075	0.042	0.074	0.043

TABLE 1
March 2018 Rainfall and Flow Calculations

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

RESULT

Outfall	Average Q _T (MGD)
001S	0.090
001	0.131
002	0.081
003	0.117
004	0.064

Q_T = V_r + B_f + I_g

V_r = Runoff Volume (MG)

V_r = 0.027152*(k)*(I_r)*(A)

0.027152 = Unit Conversion

k = Runoff Coefficient

I_r = Rainfall (inches)

A = Tributary Area (acres)

B_f = Base Flow Estimate (MGD)

B_f = Assumed Constant and Same for Each Basin

Outfall	001S	001	002	003	004	Units
B _f =	10	10	0	20	15	gpm
B _f =	0.0144	0.0144	0	0.0288	0.0216	MGD

Gallons per Minute
Million Gallons per Day

I_g = Groundwater Infiltration Assumed to be Zero (0)

Basin	Area, A (Acres)				Runoff Coefficient, k			
	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				

Day	Rainfall (I _r) (inches)	Runoff Volume, V _r (MG)					Total Flow, Q _T (MGD)				
		Basin					Basin				
		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	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	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	0.08	0.0643725	0.0990607	0.0690852	0.07496526	0.035926	0.07877253	0.1134607	0.069085223	0.1037653	0.057526
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	1.72	1.3840093	2.1298061	1.4853323	1.61175309	0.7724091	1.39840932	2.1442061	1.485332294	1.6405531	0.7940091
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	1.04	0.8368428	1.2877897	0.8981079	0.97454838	0.4670381	0.85124284	1.3021897	0.898107899	1.0033484	0.4886381
27	0.04	0.0321863	0.0495304	0.0345426	0.03748263	0.017963	0.04658626	0.0639304	0.034542611	0.0662826	0.039563
28	0.04	0.0321863	0.0495304	0.0345426	0.03748263	0.017963	0.04658626	0.0639304	0.034542611	0.0662826	0.039563
29	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
30	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
31	0	0	0	0	0	0	0.0144	0.0144	0	0.0288	0.0216
	Total (MG)	2.35	3.62	2.52	2.74	1.31	2.80	4.06	2.52	3.63	1.98
	Average (MGD)	0.076	0.117	0.081	0.088	0.042	0.090	0.131	0.081	0.117	0.064

TABLE 2
 USGS Gauging Station 06893500
 Mean Discharge January 1 - March 31, 2018

Daily Mean Discharge, cubic feet per second			
DATE	Jan 2018	Feb 2018	Mar 2018
1	19.9 ^P	36 ^A	55.1 ^P
2	19.6 ^A	34.8 ^A	46.7 ^P
3	19.1 ^A	35 ^A	38.1 ^P
4	18 ^A	28.7 ^A	36.1 ^P
5	16.4 ^A	25.7 ^A	35.8 ^P
6	15.3 ^A	22.7 ^A	34.7 ^P
7	27.8 ^A	21 ^P	29.1 ^P
8	44.9 ^A	21.5 ^P	28.3 ^P
9	28 ^A	23.8 ^P	26.8 ^P
10	24.2 ^A	21.8 ^P	24.2 ^P
11	180 ^A	21.6 ^P	24.4 ^P
12	82.5 ^A	22.1 ^P	30.7 ^P
13	64.3 ^A	20.8 ^P	29.5 ^P
14	37.4 ^A	17.2 ^P	30.1 ^P
15	35.4 ^A	20.1 ^P	25.3 ^P
16	36.7 ^A	16.1 ^P	66.3 ^P
17	26.5 ^A	18.2 ^P	54 ^P
18	26.9 ^A	27.4 ^P	33.1 ^P
19	27.9 ^A	24.4 ^P	2140 ^P
20	31.7 ^A	156 ^P	532 ^P
21	39.6 ^A	138 ^P	254 ^P
22	69.9 ^A	78.3 ^P	185 ^P
23	59.7 ^A	90.5 ^P	155 ^P
24	44.5 ^A	181 ^P	136 ^P
25	38.2 ^A	155 ^P	125 ^P
26	35.1 ^A	105 ^P	1820 ^P
27	40.4 ^A	75.3 ^P	693 ^P
28	34.9 ^A	62.4 ^P	365 ^P
29	36.5 ^A		284 ^P
30	37.5 ^A		238 ^P
31	37.5 ^A		195 ^P
COUNT	31	28	31
MAX	180	181	2140
MIN	15.3	16.1	24.2


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 - January 1, 2018 - March 31, 2018																								
RESULTS FOR OUTFALL 001																												
DATES SAMPLED		1/2/18 - 1/3/18		1/9/18 - 1/10/18		1/19/2018		1/23/18 - 1/24/18		1/30/18 - 1/31/18		2/6/18 - 2/7/18		2/13/18 - 2/14/18		2/20/18 - 2/21/18		2/27/18 - 2/28/18		3/6/18 - 3/7/18		3/13/18 - 3/14/18		3/20/18 - 3/21/18		3/27/18 - 3/28/18		
TIME OF DAY SAMPLED		12:54		14:18		11:33		12:32		12:43		14:27		12:47		12:48		11:48		13:31		13:24		14:08		12:39		
COLLECTED BY		LGR		LGR		LGR		LGR		LGR		LGR		LGR		LGR		LGR/BLG		LGR		LGR		BLG		LGR		
DATES OF ANALYSES		1/2/18 - 1/5/18		1/9/18 - 1/18/18		1/19/18 - 1/27/18		1/23/18 - 1/30/18		1/30/18 - 2/3/18		2/6/17 - 2/13/18		2/13/18 - 2/23/18		2/20/18 - 3/2/18		2/27/18 - 3/12/18		3/6/18 - 3/12/18		3/13/18 - 3/26/18		3/20/18 - 3/30/18		3/27/18 - 4/4/18		
PARAMETERS	MDL	sample type	Effluent Limitations			Units													EPA Analytical Method	Comments								
			Daily Max	Monthly Avg																								
Rainfall (daily)	n/a	24 - hr	inches			See Table 1												n/a										
weekly						See Table 1																						
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	7.8	8	8.1	8.1	8	7.5	8.2	8.1	7.6	7.9	7.5									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		11.2					<				<											SM 2540D	
Oil & Grease	5	Grab	15 mg/L	10 mg/L	mg/L																						1664A	
quarterly																												
Aluminum, total recoverable	75	Grab	*	*	ug/L		<																				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		25.8																				EPA 624 Low	
Vinyl Chloride	1	Grab	*	*	ug/L		<																				EPA 624 Low	
hardness	0.5	Grab	*	*	mg/L		683																				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: 4/24/2018

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 - January 1, 2018 - March 31, 2018

RESULTS FOR OUTFALL 002

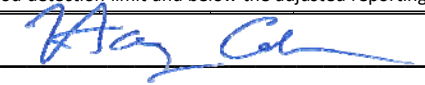
PARAMETERS	MDL	sample type	DATES SAMPLED	1/1/18 - 1/6/18	1/7/18 - 1/11/18	1/14/18 - 1/20/18	1/21/18 - 1/27/18	1/28/18 - 2/3/18	2/4/18 - 2/10/18	2/17/2018	2/20/2018	2/25/18 - 3/3/18	3/4/18 - 3/10/18	3/11/18 - 3/17/18	3/19/2018	3/26/2018	EPA Analytical Method	Comments
			TIME OF DAY SAMPLED		13:40					9:41	1:56				13:00	6:15		
			COLLECTED BY		LGR					LGR	LGR				BLG	LGR		
			DATES OF ANALYSES		1/9/18 - 1/18/18					2/19/18 - 2/23/18	2/20/18 - 2/26/18				3/19/18 - 3/30/18	3/26/18 - 3/30/18		

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	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	No discharge during week due to lack of run-off	EPA Analytical Method	Comments
Rainfall (daily)	n/a	24 - hr	inches															n/a	
weekly																			
flow (avg monthly total gpd)	n/a	estimate	*	*	mgd														
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		7.2											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		10.3											SM 2540D	
Oil & Grease	5	Grab	15 mg/L	10 mg/L	mg/L		<											1664A	
quarterly																			
Aluminum, total recoverable	75	Grab	*	*	ug/L		320											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		36											EPA 200.7	

Post Closure Permit Requirements			DATES SAMPLED	1/10/18	1/19/18	2/14/18	2/26/18	3/8/18	3/27/18
Samples are not collected at the NPDES compliance point			TIME OF DAY SAMPLED	11:10	13:35	13:36	14:10	8:40	13:09
			COLLECTED BY	LGR	LGR	LGR	BLG	LGR	LGR
			DATES OF ANALYSES	1/17/18 - 1/18/18	1/23/18 - 1/23/18	2/15/18 - 2/23/18	2/28/18 - 3/2/18	3/9/18 - 3/12/18	3/29/18 - 3/30/18
PCBs (flap gate)	0.5	Grab	**	**	ug/L	<	<	<	<
Trichloroethylene	1.2	Grab	**	**	ug/L	<	<	<	<
1,2-Dichloroethylene	0.5	Grab	**	**	ug/L	<	<	<	<
Vinyl Chloride	1.8	Grab	**	**	ug/L	<	<	<	<
PCB in sediments	0	n/a	**	**		***	***	***	n/a

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:** 4/24/2018

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 - January 1, 2018 - March 31, 2018															
RESULTS FOR OUTFALL 003																			
DATES SAMPLED		1/2/18 - 1/3/18	1/9/18 - 1/10/18	1/19/2018	1/23/18 - 1/24/18	1/30/18 - 1/31/18	2/6/18 - 2/7/18	2/13/18 - 2/14/18	2/20/18 - 2/21/18	2/27/18 - 2/28/18	3/6/18 - 3/7/18	3/13/18 - 3/14/18	3/20/18 - 3/21/18	3/27/18 - 3/28/18					
TIME OF DAY SAMPLED		11:56	13:35	11:33	12:32	12:24	13:44	13:11	12:24	11:23	12:59	12:56	14:33	12:11					
COLLECTED BY		LGR	LGR	LGR	LGR	LGR	LGR	LGR	LGR	LGR/BLG	LGR	LGR	BLG	LGR					
DATES OF ANALYSES		1/2/18 - 1/5/18	1/9/18 - 1/18/18	1/19/18 - 1/27/18	1/23/18 - 1/30/18	1/30/18 - 2/3/18	2/6/18 - 2/13/18	2/13/18 - 2/23/18	2/20/18 - 3/2/18	2/27/18 - 2/27/18	3/6/18 - 3/12/18	3/13/18 - 3/26/18	3/20/18 - 4/4/18	3/27/18 - 4/4/18					
PARAMETERS	MDL	sample type	Effluent Limitations		Units													EPA Analytical Method	Comments
			Daily Max	Monthly Avg															
Rainfall (daily)	n/a	24 - hr	inches			See Table 1												n/a	
weekly						See Table 1													
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	7.6	7.8	7.6	7.8	8	8	7.9	7.6	7.9	8	7.2	8.1	7.2	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	<					7.6				22.4				SM 2540D
Oil & Grease	5	Grab	15 mg/L	10 mg/L	mg/L	<					<				<				1664A
quarterly																			
Aluminum, total recoverable	75	Grab	*	*	ug/L	102													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	653													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: 4/24/2018

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:				THIS REPORT COVERS THE PERIOD - January 1, 2018 - March 31, 2018																		
weekly, monthly, quarterly																						
RESULTS FOR OUTFALL 004																						
DATES SAMPLED		1/2/18 - 1/3/18	1/9/18 - 1/10/18	1/19/2018	1/23/18 - 1/24/18	1/30/18 - 1/31/18	2/6/18 - 2/7/18	2/13/18 - 2/14/18	2/20/18 - 2/21/18	2/27/18 - 2/28/18	3/6/18 - 3/7/18	3/13/18 - 3/14/18	3/20/18 - 3/21/18	3/27/18 - 3/28/18								
TIME OF DAY SAMPLED		12:01	13:31	11:33	12:32	12:27	13:46	13:13	12:26	11:24	13:01	12:58	14:34	12:16								
COLLECTED BY		LGR	LGR	LGR	LGR	LGR	LGR	LGR	LGR	LGR/BLG	LGR	LGR	BLG	LGR								
DATES OF ANALYSES		1/2/18 - 1/5/18	1/9/18 - 1/18/18	1/19/18 - 1/27/18	1/23/18 - 1/30/18	1/30/18 - 2/3/18	2/6/17 - 2/13/18	2/13/18 - 2/23/18	2/20/18 - 3/2/18	2/27/18 - 2/27/18	3/6/18 - 3/12/18	3/13/18 - 3/26/18	3/20/18 - 3/30/18	3/27/18 - 4/4/18								
PARAMETERS		MDL	sample type	Effluent Limitations	Daily Max	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	<	0.85	<	<	<	<	<	<	<	<	<	EPA 8082				
pH		n/a	Grab	6.5-9	su	su	7.8	7.7	7.7	7.9	8.1	8.1	8	7.6	8	8	7.4	8.1	7.3	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	6.1					13.4					6.4				SM 2540D	
Oil & Grease		5	Grab	15 mg/L	10 mg/L	mg/L	<					<					<				1664A	
quarterly																						
Aluminum, total recoverable		75				ug/L	81.6														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	810														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: 4/24/2018

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 - January 1, 2018 - March 31, 2018

RESULTS FOR DOWNSTREAM MONITORING POINT

DATES SAMPLED	1/3/18 - 1/3/18	2/7/18 - 2/7/18	3/7/18 - 3/7/18
TIME OF DAY SAMPLED	13:47	16:09	15:27
COLLECTED BY	LGR	LGR	LGR
DATES OF ANALYSES	1/5/18 - 1/11/18	2/13/18 - 2/15/18	3/12/18 - 3/13/18

PARAMETERS	MDL	sample type	Effluent Limitations		Units				EPA Analytical Method	Comments
			Daily Max	Monthly Avg						
monthly										
polychlorinated biphenyls	0.5	Grab	*	*	ug/L	<	<	<	EPA 8082	
hardness**	0.5	Grab	*	*	mg/L	273	271	297	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:** 4/24/2018