



CITY OF COLUMBIA, MISSOURI

UTILITIES DEPARTMENT
SOLID WASTE DIVISION

July 27, 2018

Paul Dickerson, Chief
Water Pollution Compliance/ Enforcement
Missouri Department of Natural Resources
P.O. Box 176
Jefferson City, MO 65102

RE: Second Quarter 2018 NPDES Monitoring Report, Columbia Sanitary Landfill and Compost Facility, MDNR permit # MO-0112640, Boone County

This letter represents the Second Quarter 2018 NPDES Monitoring Report for permit number MO-0112640 for Outfalls 002, 003, 004, 005, 006 and 007. Monthly samples were collected from Outfall 004 on April 3, May 15, and June 21, 2018. Quarterly samples were collected from Outfalls 002, 003, 004, 005, 006, and 007 from April 3, May 15, May 21, June 27, and June 28 2018. Daily site precipitation amounts for the Second Quarter of 2018 are enclosed with this letter. The precipitation summarized by month is as follows:

Month	Recorded Precipitation
April	0.37"
May	2.68"
June	4.86"

The results of the quarterly samples collected from Outfalls 002, 004, 005, 006, and 007 indicate no exceedances.

An Iron exceedance of 4060 ug/L was identified from Outfall 003 on 06/27/2018. The Daily Maximum Iron limit for Outfall 003 is 4000 ug/L. The exceedance identified from Outfall 003 is the result of a high intensity rainfall event and the placement of recently crushed rock material within the letdown structure that directly discharges to the outfall. The recently crushed rock material utilized within the letdown was generated from material harvested on-site during the Cell 6 construction project. The rock material consisted of a limestone/shale mixture and was placed within a low water crossing present at the toe of the letdown structure to facilitate access to the northern portion of the facility and reduce potential for erosion.

If you have any questions please contact Adam J. White, Landfill Superintendent, at (573)874-7555 or adam.white@como.gov.

Sincerely,



Steve S. Hunt, P.E.
Solid Waste Utility Manager

SSH:wib

Enclosures

c: David A. Sorrell, P.E., Assistant Director
Adam J. White, Landfill Superintendent

Table 1
2nd Quarter 2018 Precipitation Recorded at the City of Columbia Landfill

2018	Day	Daily Rainfall (inches)
April	1	0
	2	0.16
	3	0.05
	4	0
	5	0
	6	0
	7	0
	8	0
	9	0.06
	10	0
	11	0
	12	0
	13	0.09
	14	0
	15	0
	16	0
	17	0
	18	0
	19	0
	20	0
	21	0
	22	0
	23	0
	24	0
	25	0.01
	26	0
	27	0
	28	0
	29	0
	30	0
	31	0
Monthly Total		0.37

2018	Day	Daily Rainfall (inches)
May	1	0
	2	0.38
	3	0.16
	4	0
	5	0
	6	0
	7	0
	8	0
	9	0
	10	0
	11	0.01
	12	0
	13	0
	14	0.25
	15	0
	16	0
	17	0
	18	0
	19	0.19
	20	1.45
	21	0
	22	0
	23	0
	24	0
	25	0.24
	26	0
	27	0
	28	0
	29	0
	30	0
	31	0
Monthly Total		2.68

2018	Day	Daily Rainfall (inches)
June	1	0
	2	0.25
	3	0
	4	0
	5	0
	6	0
	7	0.01
	8	0
	9	0
	10	0
	11	0
	12	0.08
	13	0
	14	0
	15	0
	16	0
	17	0
	18	0
	19	0.01
	20	1.16
	21	0.26
	22	0
	23	0
	24	0
	25	0
	26	3.09
	27	0
	28	0
	29	0
	30	0
Monthly Total		4.86

Table 2
 NPDES Monitoring for Non-Municipal Wastewater Discharges
 Outfalls 002, 003, 004, and 007
 Second Quarter 2018

Facility Name: Columbia Sanitary Landfill & Yard Waste Compost
 Permit Number: MO-0112640
 County: Boone
 Owner: City of Columbia, Missouri
 Type of Facility: Sanitary Landfill & Yard Waste Compost Facility

Required Frequency of Monitoring: Quarterly
 Report Period: Second Quarter 2018

Parameters	Units	Daily Maximum	Sample Type	Second Quarter 2018			
				Outfall 002 Results Collected 05/21/2018	Outfall 003 Results Collected 6/27/2018	Outfall 004 Results Collected on 6/3/2018	Outfall 004 Results Collected on 5/15/2018
Flow	MGD	90	Grab	0.0328	65	42	32
Chemical Oxygen Demand	mg/L		Grab	<2	<2	7	<3
BOD5	mg/L	80	Grab	<5	75	10	15
Total Suspended Solids	mg/L	6.5 - 9.0	Grab	7.43	7.59	NS	NS
pH (field)	SU		Grab	<0.2	<0.2	<0.2	<0.2
Settleable solids	mg/L		Grab	0.725	0.125	0.141	0.364
Ammonia as N	mg/L		Grab	<1.00	<1.00	<1.00	<1.00
Nitrogen, total	mg/L		Grab	<0.2	0.224	<0.5	<0.2
Phosphorus, total	mg/L	10	Grab	<5	<5	<5	<5
Oil & Grease	mg/L		Grab	286.2	167	561.2	516.2
Chloride + Sulfates	mg/L	1000	Grab	11.2	<5	37.2	29.2
Fluoride	mg/L		Grab	<0.5	<0.5	<0.5	<0.5
Sulfate	mg/L		Grab	275	162	524	487
Benzene	ug/L		Grab	<5	<5	<5	<5
Aluminum	ug/L		Grab	121	770	115	336
Aluminum (dissolved)	ug/L		Grab	<15	141	<15	<15
Antimony	ug/L		Grab	<108	<108	<108	<108
Arsenic	ug/L		Grab	<15	<15	<15	<15
Beryllium	ug/L		Grab	<15	<15	<15	<15
Cadmium	ug/L		Grab	<15	<15	<15	<15
Chromium	ug/L		Grab	<15	<15	<15	<15
Cobalt	ug/L		Grab	<15	<15	<15	<15
Copper	ug/L		Grab	<15	<15	<15	<15
Iron	ug/L	4000	Grab	468	4060	615	849
Lead	ug/L		Grab	<15	<500	<15	<15
Mercury	ug/L		Grab	<0.2	<0.2	<0.2	<0.2
Nickel	ug/L		Grab	<15	<15	16	<15
Selenium	ug/L		Grab	<15	<15	<15	<15
Silver	ug/L		Grab	<15	<15	<15	<15
Thallium	ug/L		Grab	<15	<15	<15	<15
Zinc	ug/L		Grab	<15	<15	<15	<15
Hexavalent Chromium	ug/L		Grab	<25	<25	<25	<25

** - Parameter not required
 NA - Not analyzed
 NS - Not Sampled
 Highlighted cell indicated an exceedance of the daily maximum or monthly average limits

Table 2 (Continued)
 NPDES Monitoring for Non-Municipal Wastewater Discharges
 Outfalls 002, 003, 004, and 007
 Second Quarter 2018

Facility Name: Columbia Sanitary Landfill & Yard Waste Compost
 Permit Number: MO-0112640

Required Frequency of Monitoring: Quarterly
 Report Period: Second Quarter 2018

County: Boone
 Owner: City of Columbia, Missouri
 Type of Facility: Sanitary Landfill & Yard Waste Compost Facility

Second Quarter 2018						
Parameters	Units	Daily Maximum	Sample Type	Outfall 004 Results Collected 6/21/2018	Outfall 007 Results Collected 4/3/2018	Outfall 007 Results Collected 5/15/2018
Flow	MGD	90	Ext	0.0091	NS	0.0097
Chemical Oxygen Demand	mg/L		Grab	33	36	26
BOD5	mg/L		Grab	<3	3	<12
Total Suspended Solids	mg/L	80	Grab	36	5	49
pH (field)	SU	6.5 - 9.0	Grab	7.37	NS	8.53
Settleable solids	ml/L		Grab	<0.2	<0.2	<0.2
Ammonia as N	mg/L		Grab	<0.1	0.157	<0.1
Nitrogen, total	mg/L		Grab	<1.0	NS	<1.0
Phosphorus, total	mg/L	10	Grab	<0.2	NS	<0.2
Oil & Grease	mg/L		Grab	<5	<5	<5
Chloride + Sulfates	mg/L	1000	Grab	594.2	468.8	462
Chloride	mg/L		Grab	37.2	11.8	13
Fluoride	mg/L		Grab	<0.5	2.5	<0.5
Sulfate	mg/L		Grab	557	457	448
Benzene	ug/L		Grab	<5	<5	<5
Aluminum	ug/L		Grab	1390	582	1870
Aluminum (dissolved)	ug/L		Grab	23	<15	<15
Antimony	ug/L		Grab	<108	<108	<108
Arsenic	ug/L		Grab	<15	<15	<15
Beryllium	ug/L		Grab	<15	<15	<15
Cadmium	ug/L		Grab	<15	<15	<15
Chromium	ug/L		Grab	<15	<15	<15
Cobalt	ug/L		Grab	<15	<15	<15
Copper	ug/L	4000	Grab	<15	798	1210
Iron	ug/L		Grab	<15	<15	<15
Lead	ug/L		Grab	<0.2	<0.2	<0.2
Mercury	ug/L		Grab	16	<15	<15
Nickel	ug/L		Grab	<15	<15	<15
Selenium	ug/L		Grab	<15	<15	<15
Silver	ug/L		Grab	<15	<15	<15
Thallium	ug/L		Grab	<15	<15	<15
Zinc	ug/L		Grab	<15	<15	<15
Hexavalent Chromium	ug/L		Grab	<25	<25	<25

NA - Not analyzed
 ND - No Discharge
 Highlighted cell indicated an exceedance of the daily maximum

Table 3
 NPDES Monitoring for Non-Municipal Wastewater Discharges
 Outfall 005
 Second Quarter 2018

Required Frequency of Monitoring: Quarterly
 Report Period: Second Quarter 2018

Facility Name: Columbia Sanitary Landfill & Yard Waste Compost
 Permit Number: MO-0112640
 County: Boone
 Owner: City of Columbia, Missouri
 Type of Facility: Sanitary Landfill & Yard Waste Compost Facility

Second Quarter 2018

Parameters	Units	Daily Maximum	Sample Type	Outfall 005 Collected on: 6-28-2018
Flow	MGD		Est	0.0818
COD	mg/L		Grab	70
Settleable Solids	mg/L		Grab	<0.2
Total Suspended Solids	mg/L		Grab	80
pH (field)	SU	6.5 - 9.0	Grab	7.41
Oil & Grease	mg/L		Grab	<5
Aluminum, Total Recoverable	ug/L		Grab	4150
Copper, Total Recoverable	ug/L		Grab	<15
Iron, Total Recoverable	ug/L		Grab	3900
Lead, Total Recoverable	ug/L		Grab	<15
Zinc, Total Recoverable	ug/l		Grab	16

ND - No Discharge

Table 4
 NPDES Monitoring for Non-Municipal Wastewater Discharges
 Outfall 006
 Second Quarter 2018

Facility Name: Columbia Sanitary Landfill & Yard Waste Compost
 Permit Number: MO-0112640

Required Frequency of Monitoring: Quarterly
 Report Period: Second Quarter 2018

County: Boone

Owner: City of Columbia, Missouri

Type of Facility: Sanitary Landfill & Yard Waste Compost Facility

Second Quarter 2018					
Parameters	Units	Daily Maximum	Sample Type	Outfall 006 Collected on: 4-3-2018	Outfall 006 Collected on: 5/15/2018
Flow	MGD		Est	NS	0.0492
COD	mg/L	9	Grab	<25	41
Settleable Solids	mL/L/hr		Grab	<0.2	<0.2
Total Suspended Solids	mg/L	100	Grab	<5	31
pH (field)	SU	6.5 - 9.0	Grab	NS	7.52
Oil & Grease	mg/L	10	Grab	<5	<5
TPH	mg/L		Grab	<1	<1
Aluminum	ug/L		Grab	561	1,940
Aluminum (dissolved)	ug/L		Grab	56	<15
Copper	ug/L		Grab	<15	<15
Iron	ug/L	4000	Grab	609	740
Lead	ug/L		Grab	<15	<15
Zinc	ug/L		Grab	<15	<15

NS - Not Sampled