Sewer Acct.#: **1003803000**

Company: **BRIDGETON LANDFILL LLC**

Address: **13570 St. Charles Rock Road**

City: **Bridgeton**

State and Zip: **MO 63044**

Industry ID	File Code	File Description
17931	31	INDUSTRY OVERFLOW

(3)

ACCOUNT NUMBER: **10038030-00**

COMPANY NAME: **BRIDGETON LANDFILL**

CORRESPONDENCE

Nov 2013	Last page 143	From: 11-01-13	Thru: 11-27-13
Oct 2013	First page 144	From: 10-09-13	Thru: 10-31-13
Sept 2013	First page 345	From: 09-02-13	Thru: 09-30-13
Aug 2013	First page 537	From: 08-06-13	Thru: 08-30-13

X	CORRESPONDANCE LOCATED IN OVERFLOW FILE

NOVEMBER 2013

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, November 27, 2013 10:37 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials have been posted to Barr's FTP site. Please let us know if you have any questions. Direct discharge to Missouri River Treatment Facility has not yet resumed, but we are working to arrange preparation of the tank and will keep you updated on schedule.

Following your email last Wednesday, the landfill team began daily checks of the flow meter for the currently empty 96K tank daily since the SCADA is not transmitting from the empty tank. These values have been recorded and reported with the weekly report. We hope this addresses your concern.

Please let us know if you have any additional questions, we appreciate your continued assistance. Have a happy Thanksgiving!

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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DW
12-2-13

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table

Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, November 17, 2013	Batch 316-137	22,500	22,500
	Batch 316-138	172,500	172,500
Monday, November 18, 2013	Batch 316-138	22,500	22,500
	Batch 316-139R	157,500	157,500
Tuesday, November 19, 2013	Batch 316-139R	22,500	22,500
	Batch 316-140	150,000	150,000
Wednesday, November 20, 2013	Batch 316-140	22,500	22,500
	Batch 316-141	172,500	172,500
Thursday, November 21, 2013	Batch 316-141	22,500	22,500
	Batch 316-142R	142,500	142,500
Friday, November 22, 2013	Batch 316-142R	22,500	22,500
	Batch 316-143	120,000	120,000
Saturday, November 23, 2013	Batch 316-143	22,500	22,500
	Batch 316-144R	127,500	127,500

Starting Date	*11/17/2013 6:00*
Ending Date	*11/24/2013 6:00*

MSD - Missouri River Tracking Table

Date	Operational Batch Transferred into 97KAST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97KAST pH Check
Sunday, November 17, 2013	NA	-	11/17/2013 6:00	11/18/2013 6:00	24.0	840	0.0	NA
Monday, November 18, 2013	NA	-	11/18/2013 6:00	11/19/2013 6:00	24.0	840	0.0	NA
Tuesday, November 19, 2013	NA	-	11/19/2013 6:00	11/20/2013 6:00	24.0	840	0.0	NA
Wednesday, November 20, 2013	NA	-	11/20/2013 6:00	11/21/2013 6:00	24.0	840	0.0	NA
Thursday, November 21, 2013	NA	-	11/21/2013 6:00	11/22/2013 6:00	24.0	840	0.0	NA
Friday, November 22, 2013	NA	-	11/22/2013 6:00	11/23/2013 6:00	24.0	840	0.0	NA
Saturday, November 23, 2013	NA	-	11/23/2013 6:00	11/24/2013 6:00	24.0	840	0.0	NA

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] Title: Environmental Specialist Date: 11/26/13

Weekly Volume Summary - Week 31 (11-17-13 through 11-23-13).xlsx

Daily Flow Reading — Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	11/18/2013 6:00:00 AM	11/17/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,479,215	1,479,215	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 11/18/13

Daily Flow Reading — Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	11/19/2013 6:00:00 AM	11/18/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,479,215	1,479,215	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/19/13

Daily Flow Reading — Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	11/20/2013 6:00:00 AM	11/19/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,479,215	1,479,215	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

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Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/20/13

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	11/21/2013 6:00:00 AM	11/20/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,479,215	1,479,215	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/21/13

MSD Daily Flow Reading, ending 11-21-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	11/22/2013 6:00:00 AM	11/21/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,479,215	1,479,215	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/22/13

MSD Daily Flow Reading, ending 11-22-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	11/23/2013 6:00:00 AM	11/22/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,479,215	1,479,215	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 11/23/13

MSD Daily Flow Reading, ending 11-23-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	11/24/2013 6:00:00 AM	11/23/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,479,215	1,479,215	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 11/24/13

MSD Daily Flow Reading, ending 11-24-2013

12-2-13

OB-316-137 Bridgeton Landfill

Fill Data

Fill Start Date	11/15/2013
Fill Start Time	18:25
Fill Stop Date	11/16/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	11/15/2013
Process Start Time	20:00
Process Stop Date	11/16/2013
Process Stop Time	03:55

Approval Data

Approval Details	NAL-13026-793
Test Results	Benzene = Non-detect (<100 ppb)
Reprocessed Batch	

Notes

MEK = 69,000 ppb

Tuesday, November 26, 2013

OB-316-138 Bridgeton Landfill

Fill Data

Fill Start Date	11/16/2013
Fill Start Time	06:10
Fill Stop Date	11/16/2013
Fill Stop Time	23:42
Process Battery	316 AST

Processing Data

Process Start Date	11/16/2013
Process Start Time	20:00
Process Stop Date	11/17/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL-13026-794
Test Results	Benzene = 35 ppb
Reprocessed Batch	

Notes

MEK = 85,000 ppb

Tuesday, November 26, 2013

OB-316-139R

Bridgeton Landfill

Fill Data

Fill Start Date	11/17/2013
Fill Start Time	18:30
Fill Stop Date	11/17/2013
Fill Stop Time	23:58
Process Battery	316 AST

Processing Data

Process Start Date	11/17/2013
Process Start Time	21:42
Process Stop Date	11/18/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL13026-796
Test Results	Benzene = 57 ppb
Reprocessed Batch	

Notes

MEK = 35,000 ppb

Tuesday, November 26, 2013

OB-316-140 Bridgeton Landfill

Fill Data

Fill Start Date	11/18/2013
Fill Start Time	18:30
Fill Stop Date	11/18/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	11/18/2013
Process Start Time	21:06
Process Stop Date	11/19/2013
Process Stop Time	04:00

Approval Data

Approval Details	NAL13026-797
Test Results	Benzene 42 ppb
Reprocessed Batch	

Notes

MEK = 37,000 ppb.

Tuesday, November 26, 2013

OB-316-141 Bridgeton Landfill

Fill Data

Fill Start Date	11/19/2013
Fill Start Time	18:20
Fill Stop Date	11/19/2013
Fill Stop Time	23:56
Process Battery	316 AST

Processing Data

Process Start Date	11/19/2013
Process Start Time	21:40
Process Stop Date	11/20/2013
Process Stop Time	06:35

Approval Data

Approval Details	NAL13026-798
Test Results	Benzene 73 ppb
Reprocessed Batch	

Notes

MEK = 40,000 ppb.

Tuesday, November 26, 2013

OB-316-142R

Bridgeton Landfill

Fill Data

Fill Start Date	11/20/2013
Fill Start Time	18:20
Fill Stop Date	11/20/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	11/20/2013
Process Start Time	21:40
Process Stop Date	11/21/2013
Process Stop Time	06:35

Approval Data

Approval Details	NAL13026-800
Test Results	Benzene 77 ppb
Reprocessed Batch	1st benzene = 120 ppb

Notes

MEK = 41,000 ppb. Processing started at 10-ft fill level.

Tuesday, November 26, 2013

OB-316-143 Bridgeton Landfill

Fill Data

Fill Start Date	11/21/2013
Fill Start Time	18:20
Fill Stop Date	11/22/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	11/21/2013
Process Start Time	20:00
Process Stop Date	11/22/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL13026-801
Test Results	Benzene 40 ppb
Reprocessed Batch	

Notes

MEK = 29,000 ppb.

Tuesday, November 26, 2013

OB-316-144R

Bridgeton Landfill

Fill Data

Fill Start Date	11/22/2013
Fill Start Time	18:10
Fill Stop Date	11/23/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	11/22/2013
Process Start Time	20:00
Process Stop Date	11/23/2013
Process Stop Time	08:00

Approval Data

Approval Details	NAL13026-803
Test Results	Benzene 96 ppb
Reprocessed Batch	1st benzene = 103 ppb

Notes

MEK = 27,000 MEK. Aeration continued past 8:00 AM 11/23/13.

Tuesday, November 26, 2013

Table 1
General Parameters and Metals
September 2013 - November 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	pH	Solids, total suspended
					NA	NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	pH units	mg/l
316-139R	11/18/2013	Pace	Validated	60157859	31000	47700	704	979	5.6	5.6	6.22	3380
316-138	11/17/2013	Pace	Validated	60157860	31400	51000	683	911	8.5	5.6 h	6.12	2800
316-137	11/16/2013	Pace	Validated	60157858	29000	46900	629	903	5.2	5.5 h	6.08	3880
316-136	11/15/2013	Pace	Validated	60157800	28400	57800	738	991	5.0	5.5	5.87	3360
316-135R	11/14/2013	Pace	Validated	60157659	31200	57900	649	1290	8.5	5.5	5.76	ND
316-134	11/13/2013	Pace	Validated	60157571	35700	62500	708	1160	7.2	5.5	5.65	5520
316-133	11/12/2013	Pace	Validated	60157435	31200	64000 *	645	1120	7.1	5.5	5.53	5600
316-132	11/11/2013	Pace	Validated	60157430	28500	58400	747	1160	7.5	5.6	5.77	6000

Table 1
General Parameters and Metals
September 2013 - November 2013
Bridgeton Landfill

					Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-139R	11/18/2013	Pace	Validated	60157859	6.45	ND	0.76	ND	ND	0.241	0.0544	ND
316-138	11/17/2013	Pace	Validated	60157860	6.76	ND	0.802	ND	ND	0.238	0.0530	ND
316-137	11/16/2013	Pace	Validated	60157858	5.7	ND	0.599	ND	ND	0.204	0.0436	ND
316-136	11/15/2013	Pace	Validated	60157800	7.58	ND	0.778	ND	ND	0.247	0.0590	ND
316-135R	11/14/2013	Pace	Validated	60157659	5.7	0.0724	0.878	ND	ND	0.264	0.0274	ND
316-134	11/13/2013	Pace	Validated	60157571	6.52	ND	0.778	ND	ND	0.261	0.0530	ND
316-133	11/12/2013	Pace	Validated	60157435	5.9	0.0685	1.09	ND	ND	0.261	ND	ND
316-132	11/11/2013	Pace	Validated	60157430	6.44	0.0702	1.05	ND	ND	0.266	ND	ND

Table 1
General Parameters and Metals
September 2013 - November 2013
Bridgeton Landfill

					Iron	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-139R	11/18/2013	Pace	Validated	60157859	845	0.181	ND	0.0901	ND	ND	ND	11.4
316-138	11/17/2013	Pace	Validated	60157860	829	0.166	ND	0.0905	ND	ND	ND	10.5
316-137	11/16/2013	Pace	Validated	60157858	672	0.132	ND	0.0804	ND	ND	ND	9.98
316-136	11/15/2013	Pace	Validated	60157800	802	0.173	0.0166	0.0984	ND	ND	ND	11.6
316-135R	11/14/2013	Pace	Validated	60157659	710	0.101	0.0199	0.101	ND	ND	ND	13.6
316-134	11/13/2013	Pace	Validated	60157571	836	0.165	0.0153	0.0908	ND	ND	ND	11.6
316-133	11/12/2013	Pace	Validated	60157435	804	0.112	0.0174	0.141	ND	ND	ND	12.4
316-132	11/11/2013	Pace	Validated	60157430	944	0.139	0.0073	0.161	ND	ND	ND	12

Table 1
VOCs and SVOCs
September 2013 - November 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-139R	11/18/2013	Pace	Validated	60157859	ND
316-138	11/17/2013	Pace	Validated	60157860	ND
316-137	11/16/2013	Pace	Validated	60157858	ND
316-136	11/15/2013	Pace	Validated	60157800	ND
316-135R	11/14/2013	Pace	Validated	60157659	ND
316-134	11/13/2013	Pace	Validated	60157571	ND
316-133	11/12/2013	Pace	Validated	60157435	ND
316-132	11/11/2013	Pace	Validated	60157430	ND

Doug Mendoza

From: Darin Lewis
Sent: Saturday, November 30, 2013 5:25 PM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Sara Kammerer; Steve Grace
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 11/24/2013 to 11/30/2013.
11/24 – 142,500 gallons
11/25 – 127,500 gallons
11/26 – 150,000 gallons
11/27 – 157,500 gallons
11/28 – 157,500 gallons
11/29 – 180,000 gallons
11/30 – 150,000 gallons
Total = 1,065,000 gallons

Doug Mendoza

From: Doug Mendoza
Sent: Wednesday, November 27, 2013 1:14 PM
To: Bret A. Berthold; Brian G. Gibson; 'Brian Power'; 'Bryan Sehie'; Catherine Politte; Christopher J. Bulmahn; 'Craig Almanza'; Darin Lewis; Doug Mendoza; 'Ed Galbraith'; 'Jessica Merrigan'; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; 'Michele Boussad'; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; 'Steve Smith'; Todd Heller; Tom Boehm; 'William Beck'
Subject: Bridgeton Landfill notice of potential prohibited discharge for benzene

All,

The following letter is being mailed to Brian Power. Please know that the original, uncorrected copy contained incorrect dates, but has already been mailed.

Doug Mendoza
MSD Industrial Pretreatment Manager

November 27, 2013 **CORRECTED COPY**

Brian Power, Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

RE: WASTEWATER DISCHARGE PERMIT NO. 0511559802 - 2
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Mr. Power:

As we were notified by Jessie Merrigan of Lathop Gage in an email on November 11, results for benzene did not demonstrate compliance for their Saturday, November 9, direct discharge. On the day prior, November 8, MSD personnel collected and analyzed samples of wastewater discharged to the MSD system from the premise above. Unfortunately, we identified the following exceedance of discharge gas/vapor toxic screening levels:

Certain volatile chemical compounds were found at elevated levels as indicated below:

DATE	TIME	SAMPLE POINT	SAMPLE TYPE	POLLUTANT	GAS/VAPOR TOXIC SCREENING LEVEL	VALUE FOUND
11/08/13	**1023**	**007**	**Grab**	**Benzene**	**0.14 mg/L**	**0.388 mg/L**
11/08/13	1023	007	Grab	1,4 Dichlorobenzene	3.55 mg/L	0.132 mg/L

mg/L = milligrams per liter SP007 - 14" pipe into Westlink Pump Station Wetwell, on S side

Any other toxic organics which are or may be present in your discharge returned analytical values less than the minimum reporting level.

Wastewater discharges are prohibited under Ordinance 12559, Article V, Section One.A.8 if they cause or contribute to emissions of toxic gases, vapors, or fumes into the sewer atmosphere at levels in excess of applicable exposure levels. The presence of volatile chemical compounds at concentrations above the screening levels can result in the generation of toxic gases or vapors in the sewer atmosphere. Such conditions pose a serious threat to the health and safety of MSD personnel and to other users of the sewer system. If several

compounds are present at elevated levels, the potential for the generation of toxic gases or vapors increases due to possible additive and/or synergistic effects.

We recognize that you ceased discharge upon receipt of the organics results and are already taking actions to determine the origin pursuant to numerous emails sent by Jessie Merrigan. Please keep MSD informed of your progress. We would like to stress that you should continue your efforts to reduce organic compound levels in your wastewater.

Thank you for helping us to comply with state and federal regulations. If you have any questions, please contact me at 314.436.8719.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Tom Boehm
Environmental Engineering Associate

Enclosure: SP map

cc: Doug Mendoza
Chris Bulmahn

Metropolitan St. Louis Sewer District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

November 27, 2013

CORRECTED COPY

Brian Power, Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

RE: WASTEWATER DISCHARGE PERMIT NO. 0511559802 - 2
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Mr. Power:

As we were notified by Jessie Merrigan of Lathop Gage in an email on November 11, results for benzene did not demonstrate compliance for their Saturday, November 9, direct discharge. On the day prior, November 8, MSD personnel collected and analyzed samples of wastewater discharged to the MSD system from the premise above. Unfortunately, we identified the following exceedance of discharge gas/vapor toxic screening levels:

Certain volatile chemical compounds were found at elevated levels as indicated below:

DATE	TIME	SAMPLE POINT	SAMPLE TYPE	POLLUTANT	GAS/VAPOR TOXIC SCREENING LEVEL	VALUE FOUND
11/08/13	**1023**	**007**	**Grab**	**Benzene**	**0.14 mg/L**	**0.388 mg/L**
11/08/13	1023	007	Grab	1,4 Dichlorobenzene	3.55 mg/L	0.132 mg/L

mg/L = milligrams per liter SP007 - 14" pipe into Westlink Pump Station Wetwell, on S side

Any other toxic organics which are or may be present in your discharge returned analytical values less than the minimum reporting level.

Wastewater discharges are prohibited under Ordinance 12559, Article V, Section One.A.8 if they cause or contribute to emissions of toxic gases, vapors, or fumes into the sewer atmosphere at levels in excess of applicable exposure levels. The presence of volatile chemical compounds at concentrations above the screening levels can result in the generation of toxic gases or vapors in the sewer atmosphere. Such conditions pose a serious threat to the health and safety of MSD personnel and to other users of the sewer system. If several compounds are present at elevated levels, the potential for the generation of toxic gases or vapors increases due to possible additive and/or synergistic effects.

We recognize that you ceased discharge upon receipt of the organics results and are already taking actions to determine the origin pursuant to numerous emails sent by Jessie Merrigan. Please keep MSD informed of your progress. We would like to stress that you should continue your efforts to reduce organic compound levels in your wastewater.

Thank you for helping us to comply with state and federal regulations. If you have any questions, please contact me at 314.436.8719.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Tom Boehm
Environmental Engineering Associate

Enclosure: SP map

cc: Doug Mendoza
Chris Bulmahn

Metropolitan St. Louis Sewer District

Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

November 27, 2013

Brian Power, Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

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For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Mr. Power:

As we were notified by Jessie Merrigan of Lathop Gage in an email on November 11, results for benzene did not demonstrate compliance for their Saturday, November 8, direct discharge. On the day prior, November 7, MSD personnel collected and analyzed samples of wastewater discharged to the MSD system from the premise above. Unfortunately, we identified the following exceedance of discharge gas/vapor toxic screening levels:

Certain volatile chemical compounds were found at elevated levels as indicated below:

DATE	TIME	SAMPLE POINT	SAMPLE TYPE	POLLUTANT	GAS/VAPOR TOXIC SCREENING LEVEL	VALUE FOUND
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We recognize that you ceased discharge upon receipt of the organics results and are already taking actions to determine the origin pursuant to numerous emails sent by Jessie Merrigan. Please keep MSD informed of your progress. We would like to stress that you should continue your efforts to reduce organic compound levels in your wastewater.

Thank you for helping us to comply with state and federal regulations. If you have any questions, please contact me at 314.436.8719.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Tom Boehm
Environmental Engineering Associate

Enclosure: SP map

cc: Doug Mendoza
Chris Bulmahn

TO: **Chris Verplancke, Finance Department**
Cynthia Chalk, Finance Department
Mary Wimsatt, Finance Department

FROM: **Darin Lewis**

DATE: **November 25, 2013**

SUBJECT: **BRIDGETON LANDFILL LLC**
WASTEWATER USER CHARGE BILLING
ACCOUNT NUMBER 0039145-8

Pursuant to the MSD Industrial Wastewater Discharge Permit for the above referenced facility, please bill this facility for the following charges for the indicated billing period:

VOLUME
On-Site Discharge

189,495 gallons with surcharge applied = $16,551.46

VOLUME
Hauled Waste Discharge

5,362,500 gallons X $0.08/Gal = $429,000.00

Department of Environmental Compliance (REG) labor fee is $1,507.73. Use Revenue Code "INFO" and utility type Q. Budget code is 1101-08050-51011 so revenue will be credited back to Department of Environmental Compliance budget.

Department of Environmental Compliance (OT) labor fee is $8,140.62. Use Revenue Code "INFO" and utility type Q. Budget code is 1101-08050-51020 so revenue will be credited back to Department of Environmental Compliance budget.

Total Bill = $455,199.81

The volume was obtained from the customer's on-site discharge self-monitoring report and hauled waste total truck capacities.
SOURCE OF WASTE: SP 801 Commingled landfill leachate and landfill gas collection system condensate
BILLING PERIOD: October 1, 2013 through October 31, 2013
Other applicable wastewater user charges, as per Ordinance 13402, should be included in this bill.
Please call me at 436-8716 if you have any questions.

bv

ec: Brian Gibson
Doug Mendoza
Laura Joiner
Cathy Politte
Keidra King

FILE: IU, Bridgeton Landfill LLC, 1003803000

Doug Mendoza

From: Darin Lewis
Sent: Sunday, November 24, 2013 5:09 PM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Sara Kammerer; Steve Grace
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 11/17/2013 to 11/23/2013.
11/17 – 195,000 gallons
11/18 – 180,000 gallons
11/19 – 172,500 gallons
11/20 – 195,000 gallons
11/21 – 165,000 gallons
11/22 – 142,500 gallons
11/23 – 150,000 gallons
Total = 1,200,000 gallons

Doug Mendoza

From: Jason T. Edwards
Sent: Saturday, November 23, 2013 9:02 AM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: Bridgeton Landfill Reading

Hi Doug,

The Bridgeton Landfill meter reading was 1,479,215 gal. The reading was taken at 9:53am on Friday, November 22, 2013.

Thanks,
Jason

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Friday, November 22, 2013 8:54 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good evening Doug,

To follow up on your email, we are monitoring oil and grease and assessing appropriate measures in advance of resuming direct discharge.

We also wanted to provide additional information on the daily confirmations. As you know from past reports it is the facility's practice to verify discharge daily, and report and certify flow volume. Following cessation of discharge the valve was manually closed on November 9th and last week the 96K tank was emptied for cleaning. After the 96K tank was emptied for cleaning the SCADA stopped transmitting readings. Because the tank had been emptied, the facility team did not check the meter as would be the practice if SCADA did not report data at other times. However, in the future we will ensure that the flow meter is monitored daily either through SCADA or at the meter regardless of tank contents and this will be recorded and reported with the weekly reports.

We hope this addresses your concern. Please let us know if you have any additional questions.

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Thursday, November 21, 2013 10:52 AM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Thank you for the weekly report materials.

Doug Mendoza

From: John Lodderhose
Sent: Friday, November 22, 2013 8:53 AM
To: Marie Collins; Rich Unverferth; Jonathon Sprague
Cc: Doug Mendoza; Bruce Litzsinger; Brad Nevois; Susan Myers; Ken Goins; Allen Muehlher
Subject: RE: Bridgeton Landfill

Marie, thanks for getting the price quote so quickly. We had a meeting with Bridgeton Landfill this week. They are now considering building a pump station and force main to get their discharge to the Bissell Point watershed to avoid the UV problems at the Missouri River WWTF. If they choose this option, they will not need the additional UV modules. It will probably take a couple of weeks for Bridgeton Landfill to decide which option is best. I will keep everyone informed as I get additional information.
Thanks for the help.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Marie Collins
Sent: Friday, November 22, 2013 8:26 AM
To: John Lodderhose; Rich Unverferth; Jonathon Sprague
Cc: Doug Mendoza; Bruce Litzsinger; Brad Nevois; Susan Myers; Ken Goins; Allen Muehlher
Subject: RE: Bridgeton Landfill

The District has received a price quote from Goodwin of $330,000 to add 24 UV modules to the facility. This quote is based on the requirement that the work be done within the current contract milestone dates.

Please provide direction as to whether or not the District should enter into a change order for this work. If we want the work to not impact the schedule the contractor would need to get NTP very quickly.

Since I am out of the office next week, please make sure that Allen Muehlher is copied on all emails.

Thanks.

Marie A. Collins, P.E.
Assistant Director of Engineering
Construction Management Division
Metropolitan St. Louis Sewer District
314-768-6316

From: John Lodderhose
Sent: Thursday, November 14, 2013 11:50 AM
To: Rich Unverferth; Jonathon Sprague
Cc: Doug Mendoza; Bruce Litzsinger; Brad Nevois; Marie Collins; Susan Myers; Ken Goins
Subject: Bridgeton Landfill

Rich and Jon, we had another meeting with Bridgeton Landfill this morning to talk about their pretreatment system. They would still like to at least evaluate the feasibility of a force main to the Bissell Point WWTF. They would

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, November 20, 2013 2:11 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good afternoon,

I wanted to update you that last week's materials were posted on Barr's FTP site this morning, I apologize for the tardiness in distributing this notice. Please let us know if you have any questions. Direct discharge to Missouri River Treatment Facility has not yet resumed, but we are working to arrange cleanout of the tank and will keep you updated on schedule.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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11/21/13

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table

Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, November 10, 2013	Batch 316-130	22,500	22,500
	Batch 316-131	172,500	172,500
Monday, November 11, 2013	Batch 316-131	22,500	22,500
	Batch 316-132	157,500	157,500
Tuesday, November 12, 2013	Batch 316-132	22,500	22,500
	Batch 316-133	165,000	165,000
Wednesday, November 13, 2013	Batch 316-133	22,500	22,500
	Batch 316-134	127,500	127,500
Thursday, November 14, 2013	Batch 316-134	22,500	22,500
	Batch 316-135R	165,000	165,000
Friday, November 15, 2013	Batch 316-135R	22,500	22,500
	Batch 316-136	142,500	142,500
Saturday, November 16, 2013	Batch 316-136	22,500	22,500
	Batch 316-137	60,000	60,000

Starting Date	***11/10/2013 6:00***
Ending Date	***11/17/2013 6:00***

MSD - Missouri River Tracking Table

Date	Operational Batch Transferred into 197K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, November 10, 2013	NA	-	11/10/2013 6:00	11/11/2013 6:00	24.0	840	0.0	6.49
Monday, November 11, 2013	NA	-	11/11/2013 6:00	11/12/2013 6:00	24.0	840	0.0	5.85
Tues. - Sat., Nov. 12-16, 2013	NA	-	11/12/2013 6:00	11/17/2013 6:00	120.0	840	0.0	6.02

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____ Title: Environmental Specialist Date: 11/19/13

Weekly Volume Summary - Week 30 (11-10-13 through 11-16-13).xlsx

Doug Mendoza

From: Doug Mendoza
Sent: Thursday, November 21, 2013 10:52 AM
To: 'Merrigan, Jessie (LG)'; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Thank you for the weekly report materials.

We note that the daily flow reading for discharge to MSD's Missouri River treatment plant was not recorded for 11/13/13, 11/14/13, 11/15/13, nor 11/16/13. While we understand that Bridgeton Landfill was not discharging during those days, MSD's expects daily readings and certifications as part of its conditional approval to Bridgeton Landfill. Were a discharge to have occurred for some reason between 11/12/13 and 11/17/13, a daily verification would have mitigated its duration and allowed a quicker investigation.

As you indicated in your submittal, this week's report was tardy. Please take all necessary steps to insure that future reports are submitted by noon on Wednesdays, per our July 18, 2013 agreement.

We also note that batches 316-127 and 316-129 had total oil & grease levels that would have exceeded the approved concentration, had those batches been discharged onsite to MSD's Missouri River treatment plant. While no discharges occurred to the plant from Bridgeton Landfill for these batches, please remain cognizant of the requirements.

Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Mgr

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, November 20, 2013 2:11 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
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We appreciate your continued assistance,

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	11/11/2013 6:00:00 AM	11/10/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,479,215	1,479,215	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: B H Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/11/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	11/12/2013 6:00:00 AM	11/11/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,479,215	1,479,215	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/12/13

MSD Daily Flow Reading, ending 11-12-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	11/17/2013 6:00:00 AM	11/12/2013 6:00:00 AM	120.0 hours
Reading (Gallons):	1,479,215	1,479,215	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/17/13

11/21/13 DRL

OB-316-130

Bridgeton Landfill

Fill Data

Fill Start Date	11/8/2013
Fill Start Time	18:19
Fill Stop Date	11/8/2013
Fill Stop Time	23:53
Process Battery	316 AST

Processing Data

Process Start Date	11/8/2013
Process Start Time	20:00
Process Stop Date	11/9/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL13026-779
Test Results	Benzene 40 ppb
Reprocessed Batch	

Notes

MEK = 55,000 ppb.

Monday, November 18, 2013

OB-316-131

Bridgeton Landfill

Fill Data

Fill Start Date	11/9/2013
Fill Start Time	18:10
Fill Stop Date	11/9/2013
Fill Stop Time	23:50
Process Battery	316 AST

Processing Data

Process Start Date	11/9/2013
Process Start Time	22:05
Process Stop Date	11/10/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL13026-781
Test Results	Benzene 62 ppb
Reprocessed Batch	

Notes

MEK = 56,000 ppb. Fill height 18.1 feet.

Monday, November 18, 2013

OB-316-132 Bridgeton Landfill

Fill Data

Fill Start Date	11/10/2013
Fill Start Time	18:15
Fill Stop Date	11/10/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	11/10/2013
Process Start Time	21:50
Process Stop Date	11/11/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-784
Test Results	Benzene 39 ppb
Reprocessed Batch	

Notes

MEK = 64,000 ppb. Processing started at 10.1-ft fill level, total fill height 16.3 feet.

Monday, November 18, 2013

OB-316-133 Bridgeton Landfill

Fill Data

Fill Start Date	11/11/2013
Fill Start Time	18:12
Fill Stop Date	11/11/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	11/11/2013
Process Start Time	21:50
Process Stop Date	11/12/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-786
Test Results	Benzene 44 ppb
Reprocessed Batch	

Notes

MEK = 71,000 ppb. Processing started at 10.0-ft fill level.

Monday, November 18, 2013

OB-316-134 Bridgeton Landfill

Fill Data

Fill Start Date	11/12/2013
Fill Start Time	18:12
Fill Stop Date	11/12/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	11/12/2013
Process Start Time	22:08
Process Stop Date	11/13/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL13026-789
Test Results	Benzene 44 ppb
Reprocessed Batch	

Notes

MEK = 94,000 ppb. Processing started at 10-ft fill level. Fill height 14.6 ft.

Monday, November 18, 2013

OB-316-135R

Bridgeton Landfill

Fill Data

Fill Start Date	11/13/2013
Fill Start Time	18:20
Fill Stop Date	11/13/2013
Fill Stop Time	23:58
Process Battery	316 AST

Processing Data

Process Start Date	11/13/2013
Process Start Time	21:32
Process Stop Date	11/14/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL13026-791
Test Results	Benzene 62 ppb
Reprocessed Batch	1st benzene = 110 ppb

Notes

MEK = 85,000 ppb. Processing started at 10-ft fill level. Batch includes approximately 37,000 gallons transferred in from the 96k AST.

Monday, November 18, 2013

OB-316-136 Bridgeton Landfill

Fill Data

Fill Start Date	11/14/2013
Fill Start Time	18:20
Fill Stop Date	11/15/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	11/14/2013
Process Start Time	20:00
Process Stop Date	11/15/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-792
Test Results	Benzene 50 ppb
Reprocessed Batch	

Notes

MEK = 83,000 ppb.

Monday, November 18, 2013

OB-316-137 Bridgeton Landfill

Fill Data

Fill Start Date	11/15/2013
Fill Start Time	18:25
Fill Stop Date	11/16/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	11/15/2013
Process Start Time	20:00
Process Stop Date	11/16/2013
Process Stop Time	03:55

Approval Data

Approval Details	NAL-13026-793
Test Results	Benzene = Non-detect (<100 ppb)
Reprocessed Batch	

Notes

MEK = 69,000 ppb

Monday, November 18, 2013

Table 1
General Parameters and Metals
August 2013 - November 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	pH, field	Solids, total suspended
					NA	NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	pH units	mg/l
316-131	11/10/2013	Pace	QC Pending	60157343	26300	39200 *	737	638	11.2	5.6	6.18	3080
316-130	11/9/2013	Pace	Validated	60157344	27100	45600	771	520	10.4	5.5	6.04	4020
316-129	11/8/2013	Pace	Validated	60157287	24200	47400	641	970	13.2	5.5	5.78	3900
316-128	11/7/2013	Pace	Validated	60157174	26000	54900	641 *	532	8.8	5.5	5.76	3220
316-127	11/6/2013	Pace	Validated	60157027	32500	59400	674	1140	16.8	5.5	5.57	4780
316-126R	11/5/2013	Pace	Validated	60156903	36000	57100	707	487	ND	5.5	5.70	3720

Table 1
General Parameters and Metals
August 2013 - November 2013
Bridgeton Landfill

					Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-131	11/10/2013	Pace	QC Pending	60157343	4.78	0.0646	0.732	ND	ND	0.235	ND	ND
316-130	11/9/2013	Pace	Validated	60157344	5.36	0.0602	0.888	ND	ND	0.288	0.0285	ND
316-129	11/8/2013	Pace	Validated	60157287	10.7	0.0845	0.795	ND	ND	0.284	0.0260	ND
316-128	11/7/2013	Pace	Validated	60157174	8.78	0.0690	0.752	ND	ND	0.27	0.0322	ND
316-127	11/6/2013	Pace	Validated	60157027	9.59	0.0706	0.79	ND	ND	0.321	0.0346	ND
316-126R	11/5/2013	Pace	Validated	60156903	14.7	ND	0.983	ND	ND	0.372	0.0492	ND

Table 1
General Parameters and Metals
August 2013 - November 2013
Bridgeton Landfill

					Iron	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-131	11/10/2013	Pace	QC Pending	60157343	678	0.0714	0.0075	0.0848	ND	ND	ND	8.08
316-130	11/9/2013	Pace	Validated	60157344	782	0.0838	ND	0.0912	ND	ND	ND	10.8
316-129	11/8/2013	Pace	Validated	60157287	848	0.134	0.0062	0.106	ND	ND	ND	11.4
316-128	11/7/2013	Pace	Validated	60157174	872	0.145	0.0103 *	0.108	ND	ND	ND	12.9
316-127	11/6/2013	Pace	Validated	60157027	939	0.165	0.0227	0.114	ND	ND	ND	14.6
316-126R	11/5/2013	Pace	Validated	60156903	1180	0.263	ND	0.151	0.113	ND	ND	16.5

Table 1
VOCs and SVOCs
August 2013 - November 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-131	11/10/2013	Pace	QC Pending	60157343	ND
316-130	11/9/2013	Pace	Validated	60157344	ND
316-129	11/8/2013	Pace	Validated	60157287	ND
316-128	11/7/2013	Pace	Validated	60157174	ND
316-127	11/6/2013	Pace	Validated	60157027	ND
316-126R	11/5/2013	Pace	Validated	60156903	ND

Doug Mendoza

From: Darin Lewis
Sent: Saturday, November 16, 2013 4:56 PM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Sara Kammerer; Steve Grace
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 11/10/2013 to 11/16/2013.
11/10 – 195,000 gallons
11/11 – 180,000 gallons
11/12 – 187,500 gallons
11/13 – 150,000 gallons
11/14 – 187,500 gallons
11/15 – 165,000 gallons
11/10 – 82,500 gallons
Total = 1,147,500 gallons

Doug Mendoza

From: Joe Pavlich
Sent: Friday, November 15, 2013 1:18 PM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: meter reading

Doug, the reading at Bridgeton Landfill on 11/15/13 @ 0940 was 1479215 with 0 gallons of discharge.

To: BRIDGETON LANDFILL LLC [1003803000]

From: Doug Mendoza

Date: November 15, 2013

Re: Summary of Technical Issues Meeting on 11/14/13

On 11/14/13, MSD and Bridgeton Landfill representatives held their periodic meeting to discuss issues related to Bridgeton Landfill's leachate. The following were among the items discussed:

Leachate deliveries to Bissell Point have been running below the allowed 195,000 GPD (truck capacity, up to 200,000 GPD allowed) because the available volume of treated leachate has been running low. It is a daily call. They know at midnight each day how full the storage tank is. However, a deep well is to be installed tomorrow, hopefully, which will increase volume.

For onsite discharges that go to the Missouri River plant, there was a benzene spike in the 96,000 gallon pre-discharge tank. They shut off flow, and think they need to clean out the tank. Adjustment of pH in the tank results in precipitate, and they believe that benzene affixed to solids builds up over time. This is supported by TCLP analysis of the material.

John Lodderhose mentioned that the down time could be used for the flow rate study of time from the landfill to the Missouri River plant. Clean water from the 96,000 gallon tank could be used to push flow. However, details are more complicated, and the study will need to wait for testing of the 1 M gallon tanks.

Potential reductions in volume hauled to Bissell may be necessary due to cold weather season. Normally MSD sees trends that allow time to give warnings. The same may apply for the onsite discharges to Mo River.

Ivan from CEC discussed minor changes to chemical tank locations and added cooling towers for the pretreatment system. For UV transmittance studies, they hope to avoid Fenton's reagent because while it gives good results, it is a nasty chemical to work with. Ozone bench results brought UVT up to about 15%. They are rerunning these tests, thinking that results should be higher. They are also testing nano-filtration, which typically gets rid of humic materials. But they need to consider fouling rates, reject volumes, UVT improvement, to make decisions. Use of sulfate radicals (from sodium persulfate) is another option to pursue. They are strong oxidizers.

Construction is proceeding on the 1 M gallon tanks and pretreatment bldg footings. They hope to replace the buffer tank farm with a 1 M gallon tank in mid-late December. Walls for the pretreatment bldg should arrive in the 2nd-3rd week of December. Equipment deliveries should start in mid-December through January. They hope to have liquid running through the process in March, possibly March-April.

They also are working on finalizing power outage contingencies. They system can take 1 to 1 ½ days without an issue. They are working on standby power sizing, etc.

The Missouri River Plant plans to start testing its UV disinfection March 1. The landfill will need to halt its onsite discharge then to allow the testing. That discharge alone lowers UVT at the plant about 10 %.

It was discussed that the high COD in the treated leachate should not be subject to surcharge, since it is not treatable. However, a BOD measurement using acclimated Missouri River plant seed will need to be used, and will probably show a higher BOD that using stock seed. A protocol will be worked out.

Kevin from CEC asked about the cost of adding more UV lamps to increase disinfection power. MSD's contractor is still working on the price. $500K is an order of magnitude estimate. However, the construction schedule at the plant cannot be allowed to slip. If it cannot be in place and running by April 1, it will have to wait until November 1 and the end of disinfection season.

MSD's consultant is still working on flow rates vs. % UV transmittance, leachate levels, etc. Estimates are that O&M costs for additional UV bulbs will be $20K-$50K-$100K/year. The extra UV bulb capacity will actually be renting, not selling. The plant expansion was designed for watershed growth, not Bridgeton Landfill's use.

The landfill is also "loosely" looking at getting the treated leachate to other MSD plants. This gives them stability for the future. MODOT will not allow a private force main in its right of way, but would allow it if MSD took ownership. MSD accepting the lines (with the landfill to maintain) will be checked out.

CEC is to redo the flow balance mentioned in the prior day's email for the pretreatment system plans. They also will be increasing the volumes treated to 300K GPD from 150K to reflect expected conditions. They plan to have this and other revisions from MSD's earlier comment letter done for the next meeting on December 5.

MSD AND BRIDGETON LANDFILL TECHNICAL ISSUES MEETING

November 14, 2013

AGENDA

1. Updates
    a. Discharges to Bissell Point and MO River Plants
    b. Pretreatment design and testing
2. Transmittance
    a. Discussion on available capacity
    b. Additional lamps – MSD needs direction from Bridgeton Landfill
3. Other issues

Pr

Doug Mendoza

From: John Lodderhose
Sent: Thursday, November 14, 2013 11:50 AM
To: Rich Unverferth; Jonathon Sprague
Cc: Doug Mendoza; Bruce Litzsinger; Brad Nevois; Marie Collins; Susan Myers; Ken Goins
Subject: Bridgeton Landfill

Rich and Jon, we had another meeting with Bridgeton Landfill this morning to talk about their pretreatment system. They would still like to at least evaluate the feasibility of a force main to the Bissell Point WWTF. They would still pretreat their leachate but they would not have to worry about addition treatment for the UV interference problem like they would for a discharge to the Missouri River WWTF.

They wanted to know if MSD would be willing to take over ownership of the force main once complete. They would follow all of MSD's rules and regulations for the design and construction of the force main but would need it to be an MSD job to get the easements. If this is a reasonable possibility, they would like to meet with the appropriate MSD staff as soon as possible. Please let me know how to proceed.
Thanks

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

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CONSULTANTS

November 13, 2013

Mr. Chris Bulmahn
Environmental Engineer
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, MO 63147-2913

Re: Metropolitan St. Louis Sewer District – Administrative Compliance Order
Action Items #5 and #6
Bridgeton Landfill, LLC.
Discharge Permit No. 0511559802-2

Dear Mr. Bulmahn:

On behalf of the Bridgeton Landfill, in accordance with the Metropolitan St. Louis Sewer District (MSD) Administrative Compliance Order (AO), which was signed by legal representatives of MSD and the Bridgeton Landfill, LLC and entered effect on October 29, 2012, respectfully submits this progress report as outlined in the AO, Action Items' #5 and #6.

As required per Action Items #5 and #6, the Bridgeton Landfill shall submit a schedule, for MSD approval, of actions for the design, installation, and operation of the procedures and pretreatment options identified in AO Finding #8 which states that the Bridgeton Landfill is in the process of investigation for the implementation of the following pretreatment options in which to eliminate the occurrence of future prohibited discharges at Leachate Outfall 008:

a.) Installation and operation of a supplemental "enclosed" flare, as well as a supplemental "candlestick" utility flare within the landfill's gas collection and control system;

b.) Design and operation of air monitoring/moving engineering controls at the landfill's outfall to the MSD sewer system within the Westlake Pump Station;

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c.) Installation and operation of a foam suppressing agent. The following table outlines current progress and planned actions to be taken at the Bridgeton Landfill in regard to the aforementioned items.

Finding No.	Proposed Option	Complete (Yes/No)	Completion Date
8a(1)	Installation and Operation of Additional Enclosed Flare	Yes	2-Oct-12
8a(2)	Installation and Operation of Supplemental Candlestick Flare	Yes	18-Jul-12
8b	Design and Operation of Air Monitoring/Moving Engineering Controls within Westlake Pump Station	Yes	6-Jun-13
8c	Installation and Operation of a Foam Suppression Agent	No	Installation Suspended

The Bridgeton Landfill completed the construction and testing phases of the supplemental candlestick flare on July 18, 2012 (Finding 8a(2)). This flare was subsequently replaced with a larger 3,500 scfm candlestick flare that became operational in January 2013. The supplement candlestick flare has been brought back on-line in June 2013.

The two existing 3,500 scfm enclosed flares were replaced with two 4,000 scfm candlestick flares in September 2013. The combined flow of the four candlestick flares is 14, 000 scfm which will further allow the ability to improve landfill gas collection and odors at the facility and the surrounding environment. The enclosed flares have been dismantled.

All candlestick flares are operated and maintained under a site-specific program which is designed to enable landfill personnel to minimize downtime and provide peak system performance efficiency.

In a letter from MSD dated December 4, 2012, it was declared that the Bridgeton Landfill was no longer required to construct and operate a foam suppression system at the facility unless future foaming incidents occur. The Bridgeton Landfill will continue to monitor the Westlake Pump Station as well as the Leachate Tank System for indicators of foaming.

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The design and development of the air quality engineering controls to be constructed and operated at the Westlake Pump Station (Finding 8b), were completed on December 20, 2012. Prior to finalization of the system design, meetings regarding the development of a plan of action for the preparation and construction of these air quality engineering controls were held at the MSD office on August 21, 2012, and September 24, 2012 between; MSD Environmental Compliance and Operations representatives and Bridgeton Landfill personnel. Additionally, series of on-site meetings were held at the Westlake Pump Station, involving the aforementioned parties, to determine the design of the system and to secure an incoming power supply.

On June 6, 2013 the air monitoring/moving engineering controls within the Westlake pump station became fully operational. Between the dates of June 6-16, 2013 a baseline evaluation of the 4-gas levels within the pump station wet well was conducted using the newly installed monitor. The purpose of this evaluation was to monitor the in-well conditions during discharge operations from the landfill. On June 17, 2013, following the baseline evaluation, the system's drum scrubber was activated. Bryan Sehie of Bridgeton Landfill coordinated this effort with Vince Stollhans of MSD, and both have reviewed MSD 4-gas monitoing data recorded by the system. Since operation of the drum scrubber the 4-gas meter levels within the pump station have decreased as confirmed by the MSD data maintained by Vince Stollhans.

Due to problems with the recirculator pump, flow to the lift station was shut down for twenty days during October resulting in a total flow for the month of 189,496 gallons with daily maximum flow each operational day up to 20,000 gallons. .

During discharge the 4-gas meter has continued to show reduced concentrations during drum scrubber operation than was reported during the baseline study, demonstrating the overall effectiveness of the air moving system. Elevated levels of hydrogen sulfide of approximately 10 ppm continue to be observed, however these levels were present at the outfall location without discharge from the landfill, as observed in the baseline study. Carbon monoxide levels have continued to decrease. During October it was determined the 4-gas meter was monitoring higher levels of carbon monoxide concentrations above the actual concentrations. This has been corrected by increasing the calibration frequency. In addition Civil and Environmental Consultants has been contracted to complete biweekly maintenance on the lift station to ensure proper operations. Additionally, the Bridgeton Landfill continues to coordinate with MSD Operations personnel to cease leachate discharge prior to all pump station maintenance events,

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routine or otherwise, to lower carbon monoxide concentrations to near non-detect levels for the duration of these events.

The facility has submitted the Leachate Pre-Treatment System Plan on August 30, 2013 and received comments from MSD on September 9, 2013. It is anticipated with the installation and operation of the pre-treatment system will further reduce the carbon monoxide levels observed at Outfall 008.

We will continue to provide ongoing updates on leachate and the pretreatment system to comply with the AO agreement as well as MSD ordinances. If there are any questions please contact Bryan Sehie with Bridgeton Landfill at 314-744-8190 or myself at 573-289-3379.

Sincerely,
Weaver Boos Consultants

Michele A Clark

Michele Clark
Senior Project Director

Cc: Bryan Sehie, Bridgeton Landfill, LLC.

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Doug Mendoza

From: Doug Mendoza
Sent: Wednesday, November 13, 2013 2:45 PM
To: 'Merrigan, Jessie (LG)'; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Jessie et al,

I need to point out that the Oil & Grease levels in most of the batches from 316-113R to 316-124 (the latest for which there are results) have exceeded the 800 mg/L variance that Bridgeton Landfill has been granted. However, none of these batches have been discharged on-site, so there are no violations as of yet. Regardless, this situation needs to be investigated and mitigated.

Doug Mendoza
MSD Industrial Pretreatment Manager

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, November 13, 2013 10:28 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. Please let us know if you have any questions. Direct discharge to Missouri River Treatment Facility has not yet resumed, but we are working to arrange cleanout of the tank and will keep you updated on schedule.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

Doug Mendoza

From: Doug Mendoza
Sent: Wednesday, November 13, 2013 1:19 PM
To: 'Brian Power'; 'Steve Smith'
Cc: John Lodderhose
Subject: Follow up re. Bridgeton Landfill discharge variances and pretreatment system comment response

Gentlemen,

I just wanted to follow up on a couple items from our 11/7/13 meeting. Please feel free to share this correspondence with any other persons on your end who may need to see it.

A question had been asked about when the temporary discharge variances that MSD granted Bridgeton Landfill would expire. I had thought they expired 12/31/13. I double checked, and MSD granted approval for up to two years from their issuance. So that means they could extend until May-July 2015. However, MSD also stated, "All variances listed above shall be granted for a period not to exceed two years from the date of this approval, may be revoked by MSD should conditions warrant, and shall terminate upon installation of a pretreatment system by Bridgeton Landfill."

Regarding the pretreatment system plans, MSD provided comments via 9/10/13 letter to Bridgeton Landfill with items that must be addressed. Bridgeton Landfill had planned to submit a response on 10/18/13, but this was delayed due to continued planning for additional pretreatment to improve UV transmittance. At our 11/7/13 meeting, I stated that we need to get the response submitted. Approval for Bridgeton Landfill to discharge from the pretreatment system to MSD will not be granted until MSD's questions and concerns are adequately addressed. During the meeting, we also noted that the anticipated long-term leachate volume generated would be 220,000-250,000 GPD vs. the 150,000 GPD average that was included in the design. We also observed that the flows do not balance for sheet P-305 of the plans. It appears that the sludge thickener stream and recycle stream may have been overstated. A sludge/recycle rate of 50% appears to balance the flows. However, this needs to be verified/corrected by you. Please submit your response to the comment letter. You should also include the P-305 flow balance issue, as well as verifying how the pretreatment system will meet the higher daily leachate volume. In particular, the 300,000 gallon equalization tank's operation and detention impact, along with the ultrafilters' operation.

We await your submittal.
Doug Mendoza
MSD Industrial Pretreatment Manager

To: BRIDGETON LANDFILL LLC [1003803000]

From: Doug Mendoza

Date: November 13, 2013

Re: Summary of Leachate Issues Discussion Meeting on 11/7/13

On 11/7/13, MSD and Bridgeton Landfill representatives met, at Jeff Theerman's request, to discuss various landfill leachate issues and make sure each side understood the other's concerns. The following were among the items discussed:

Bissell Point treatment plant sloughed a high amount of biomedia off the trickling filters the previous day. It was rainy and cold at the same time, but the plant is also under high load from the hauled leachate.

The Missouri River treatment plant is running okay. It will be without a final clarifier for several weeks in December, due to construction. Just something to be aware of and to watch.

Bridgeton Landfill is running near the discharge limit for arsenic, even after its pretreatment by the landfill. The limit is based on inhibition at the treatment plant, and actual plant loadings are close to allowable amount too.

In the future, ammonia and phosphate could be surcharged parameters, as nutrient limits are added to the treatment plants. Ammonia probably would surcharge at above about 20 mg/L.

The four 1 million gallon biological treatment tanks are under construction at the landfill.

Footings for the pretreatment bldg starts next week.

MSD is still waiting for the modifications to the pretreatment system plans so that final approval can be given. There also was a flow balance problem on sheet P-305 of the plans. It appears that the recycle stream should be 50% (~75K gpd), rather than the 200% that was shown. Discharge will not be approved by MSD until the revised plans have been received and accepted by MSD.

Final construction at the landfill has slipped to mid-March or early April 2014, with startup to follow.

For the Missouri River treatment plant, construction should be: complete construction in late January, split flow between trickling filters and activated sludge in mid-February, start up in late February/early March, then optimize and start UV disinfection.

MSD will need a 7 day test period for UV disinfection with the landfill's 20K gpd onsite discharge shut off.

Treated leachate effluent from the landfill's pilot plant still requires a large volume of dilution to be acceptable at the Missouri River treatment plant, mainly to absorbing the UV for disinfection.

In MSD's consultant bench tests, ozonation of the treated landfill leachate at 8 ppm got UV transmittance up to 20%, with 32 ppm bringing it up to 40%.

20% UVT is about the minimum MSD could allow, which would allow maybe up to 100K-120K gpd from the landfill if diurnal flow rates are matched.

Discussion was held about adding more UV bulbs, how medium pressure lamps will not fit existing structure, costs must be borne by the landfill, etc.

Republic Waste has a similar "thermal event/oxidation/fire" at a Chicago-area landfill. It is four years old, and continues at the same intensity.

When asked what their leachate generation is, landfill representatives said that it is running 220K-250K GPD and is expected to remain around that for the long term.

The landfill is adding another deep well next week, and another deep well after that about three weeks later. The deep wells should draw about 60K GPD each initially, but the volume drops as time passes. The leachate also is more dilute at deep levels.

For leachate that is not discharged onsite or hauled to MSD, Bridgeton Landfill has been hauling up to 30K GPD to American Bottoms treatment plant in Sauget, IL the past two months. This is up to 4 loads, from hauling 3 prior. The landfill is also working on setting up hauling with Eco-waters (?) in the Kansas City area.

Doug Mendoza

From: John Lodderhose
Sent: Wednesday, November 13, 2013 9:48 AM
To: Susan Myers
Cc: Doug Mendoza; Rich Unverferth; Brad Nevois; Marie Collins; Bruce Litzsinger; Jonathon Sprague; Todd Heller; Ken Gambaro
Subject: Bridgeton Landfill
Attachments: Arnold agreement.pdf

Susan, as I explained in my phone message, we need some specialized legal assistance to draft a contract with Bridgeton Landfill/Republic Services to accept the discharge of their treated leachate into the MSD sewer system. We will use the contract to "require payment to cover added costs of handling and treating the waste not covered by existing fees or user charges" as allowed in Article VI, Section One, A.5. of MSD's sewer use Ordinance No. 12559 (http://docs.stlmsd.com/OrdsRes/Docs/Ords/12559.pdf). Also, the MSD rate Ordinance No. 13402, Section 5 says "Pollutants. Any User which discharges any Pollutants which cause an increase in the cost of managing the effluent or sludge from the Wastewater System shall pay for such increased costs." (http://docs.stlmsd.com/OrdsRes/Docs/Ords/13402.pdf).

Their discharge, even after treatment, will reduce the efficiency of the UV (Ultraviolet) disinfection system currently under construction at our Missouri River WWTF (Wastewater Treatment Facility). We need to draft a contract that will:

- Require payment for the extra operation and maintenance costs for the reduced efficiency of our UV disinfection system and associated monitoring and administrative expenses
- Allow MSD to reduce or stop their discharge at any time if MSD determines that conditions have changed and we can no longer effectively treat their discharge
- Possibly provide for the recovery of cost to install and operate additional UV lamps at the Missouri River WWTF (we have a meeting tomorrow to discuss if Bridgeton Landfill would like for us to install 196 additional UV lamps)

We will probably have a limited amount of time to develop this contract but it needs to be carefully drafted to protect MSD's interest and ensure compliance with our Missouri State Operating Permit (http://www.dnr.mo.gov/env/wpp/permits/issued/0004391.pdf). I have attached the Sewerage System Agreement with the City of Arnold, Mo to treat their wastewater as a possible starting point for the contract. Doug Mendoza and I can work with you on the technical conditions and limitations.

The companies that I know of that are working for Bridgeton Landfill/Republic Services on this issue include:

MBI Hauling (Mr. Bults Inc.)
Barr Engineering
Feezor Engineering
Brown and Caldwell
CEC (Civil & Environmental Consultants)
Lathrop & Gage

Please let me know if you need any additional information before our meeting.
Thanks

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering

Brown AND Caldwell

Meeting Agenda

Prepared for: Republic Services
Project Title: Bridgeton Landfill Leachate
Project No.: 46995

Purpose of Meeting: Discuss Landfill Leachate Issues
Date: November 7, 2013
Meeting Location: MSD Environmental Compliance Offices
Time: 2:30 p.m.
Agenda Prepared by: Jeff Theerman, BC

Attendees:
Steve Smith, Republic
Brian Power, Republic
John Lodderhose, MSD
Jonathan Sprague, MSD
Doug Mendoza, MSD
Ken Gambaro, MSD
Jeff Theerman, BC

Agenda

1. Status of the Bissell Point Treatment Plant leachate treatment.

2. Status of the Missouri River Treatment Plant leachate treatment.

3. Status of pretreatment plant design/construction at Bridgeton.

4. Construction schedule at the Missouri River Plant.

5. MSD's present understanding of the UV transmittance issue.

6. Mitigating Strategies for Discussion.

   a. Leachate treatment testing when processes are available.
   b. Operation of a greater number of UV units to achieve bacterial kill.
   c. Increased operating costs.
   d. MOU between MSD and Republic regarding future capacity utilized for leachate.

7. Other leachate pollutants or characteristics of concern.

8. Other

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, November 13, 2013 10:28 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. Please let us know if you have any questions. Direct discharge to Missouri River Treatment Facility has not yet resumed, but we are working to arrange cleanout of the tank and will keep you updated on schedule.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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pm
11-7-13

OB-316-123

Bridgeton Landfill

Fill Data

Fill Start Date	11/1/2013
Fill Start Time	18:20
Fill Stop Date	11/2/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	11/1/2013
Process Start Time	20:45
Process Stop Date	11/2/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL-13026-763
Test Results	Benzene = 27 ppb
Reprocessed Batch	

Notes

MEK = 56,000 ppb

Monday, November 11, 2013

OB-316-124 Bridgeton Landfill

Fill Data

Fill Start Date	11/2/2013
Fill Start Time	18:12
Fill Stop Date	11/2/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	11/2/2013
Process Start Time	21:20
Process Stop Date	11/3/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL-13026-765
Test Results	Benzene = 29 ppb
Reprocessed Batch	

Notes

MEK = 75,000 ppb

Monday, November 11, 2013

OB-316-125 Bridgeton Landfill

Fill Data

Fill Start Date	11/3/2013
Fill Start Time	18:10
Fill Stop Date	11/4/2013
Fill Stop Time	00:05
Process Battery	316 AST

Processing Data

Process Start Date	11/3/2013
Process Start Time	21:20
Process Stop Date	11/4/2013
Process Stop Time	09:00

Approval Data

Approval Details	NAL13026-767
Test Results	Benzene = 50 ppb
Reprocessed Batch	

Notes

MEK = 92,000 ppb

Monday, November 11, 2013

OB-316-126R

Bridgeton Landfill

Fill Data

Fill Start Date	11/4/2013
Fill Start Time	18:12
Fill Stop Date	11/4/2013
Fill Stop Time	23:47
Process Battery	316 AST

Processing Data

Process Start Date	11/4/2013
Process Start Time	21:46
Process Stop Date	11/5/2013
Process Stop Time	12:15

Approval Data

Approval Details	NAL13026-771
Test Results	Benzene = 69 ppb
Reprocessed Batch	1st benzene = 130 ppb

Notes

MEK = 84,000 ppb. Power failure (no aeration) on 11/5/13 from 1:45a - 9:20a.

Monday, November 11, 2013

OB-316-127 *Bridgeton Landfill*

Fill Data

Fill Start Date	11/5/2013
Fill Start Time	18:24
Fill Stop Date	11/5/2013
Fill Stop Time	23:32
Process Battery	316 AST

Processing Data

Process Start Date	11/5/2013
Process Start Time	20:08
Process Stop Date	11/6/2013
Process Stop Time	06:00

Approval Data

Approval Details	NAL13026-773
Test Results	Benzene 33 ppb
Reprocessed Batch	

Notes

MEK = 78,000 ppb. Processing started at 10-ft fill level.

Monday, November 11, 2013

OB-316-128 Bridgeton Landfill

Fill Data

Fill Start Date	11/6/2013
Fill Start Time	18:30
Fill Stop Date	11/7/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	11/6/2013
Process Start Time	20:00
Process Stop Date	11/7/2013
Process Stop Time	06:00

Approval Data

Approval Details	NAL13026-775
Test Results	Benzene 47 ppb
Reprocessed Batch	

Notes

MEK = 68,000 ppb.

Monday, November 11, 2013

OB-316-129 Bridgeton Landfill

Fill Data

Fill Start Date	11/7/2013
Fill Start Time	18:30
Fill Stop Date	11/7/2013
Fill Stop Time	23:48
Process Battery	316 AST

Processing Data

Process Start Date	11/7/2013
Process Start Time	20:00
Process Stop Date	11/8/2013
Process Stop Time	05:20

Approval Data

Approval Details	NAL13026-777
Test Results	Benzene 47 ppb
Reprocessed Batch	

Notes

MEK = 63,000 ppb.

Monday, November 11, 2013

OB-316-130 Bridgeton Landfill

Fill Data

Fill Start Date	11/8/2013
Fill Start Time	18:19
Fill Stop Date	11/8/2013
Fill Stop Time	23:53
Process Battery	316 AST

Processing Data

Process Start Date	11/8/2013
Process Start Time	20:00
Process Stop Date	11/9/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL13026-779
Test Results	Benzene 40 ppb
Reprocessed Batch	

Notes

MEK = 55,000 ppb.

Monday, November 11, 2013

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table			
Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, November 03, 2013	Batch 316-123	22,500	22,500
	Batch 316-124	157,500	157,500
Monday, November 04, 2013	Batch 316-124	22,500	22,500
	Batch 316-125	150,000	150,000
Tuesday, November 05, 2013	Batch 316-125	22,500	22,500
	Batch 316-126R	75,000	75,000
Wednesday, November 06, 2013	Batch 316-126R	22,500	22,500
	Batch 316-127	172,500	172,500
Thursday, November 07, 2013	Batch 316-127	22,500	22,500
	Batch 316-128	120,000	120,000
Friday, November 08, 2013	Batch 316-128	22,500	22,500
	Batch 316-129	172,500	172,500
Saturday, November 09, 2013	Batch 316-129	22,500	22,500
	Batch 316-130	172,500	172,500

Starting Date	*11/3/2013 6:00*
Ending Date	*11/10/2013 6:00*

MSD - Missouri River Tracking Table								
Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, November 03, 2013	Accumulated	19,502	11/3/2013 6:00	11/4/2013 6:00	24.0	841	812.6	6.62
Monday, November 04, 2013	Accumulated	19,116	11/4/2013 6:00	11/5/2013 9:00	27.0	840	708.0	6.75
Tuesday, November 05, 2013	Batch 316-126R	3,419	11/5/2013 9:00	11/6/2013 6:00	21.0	840	162.8	6.10
Wednesday, November 06, 2013	Batch 316-127	3,252	11/6/2013 6:00	11/7/2013 6:00	24.0	840	135.5	6.13
Thursday, November 07, 2013	Batch 316-128	-	11/7/2013 6:00	11/8/2013 6:00	24.0	840	0.0	5.97
Friday, November 08, 2013	Batch 316-129	16,494	11/8/2013 6:00	11/9/2013 6:00	24.0	840	687.3	5.87
Saturday, November 09, 2013	Accumulated	3,317	11/9/2013 6:00	11/10/2013 6:00	24.0	840	138.2	6.17

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] Title: Environmental Specialist Date: 11/12/13

Weekly Volume Summary - Week 29 (11-03-13 through 11-09-13).xlsx

11-13-13

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	11/4/2013 6:00:00 AM	11/3/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,433,618	1,414,116	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/4/13

MSD Daily Flow Reading, ending 11-04-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	11/5/2013 9:00:00 AM	11/4/2013 6:00:00 AM	27.0 hours
Reading (Gallons):	1,452,734	1,433,618	19,116

Flow Meter Adjustment

Reading Adjustment:	0
Flow During Adjustment:	0

Total Flow: 19,116 gallons

Comments

Power was off for several hours, and SCADA data is not available from 1:45 AM to 8:07 AM. However the flowmeter readings indicate 5,295 gal was discharged during this time, for an average rate of 832 gal/hr, which is similar to the typical discharge rate.

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 11/5/13

MSD Daily Flow Reading, ending 11-05-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	11/6/2013 6:00:00 AM	11/5/2013 9:00:00 AM	21.0 hours
Reading (Gallons):	1,456,153	1,452,734	3,419

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 3,419 gallons

Bridgeton Landfill, LLC representative: Bryan Selvie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Selvie *Name:* Bryan Selvie

Title: Environmental Specialist *Date:* 11/6/13

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	11/7/2013 6:00:00 AM	11/6/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,459,405	1,456,153	3,252

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 3,252 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/7/13

MSD Daily Flow Reading, ending 11-07-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	11/8/2013 6:00:00 AM	11/7/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,459,405	1,459,405	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 11/8/13

MSD Daily Flow Reading, ending 11-08-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	11/9/2013 6:00:00 AM	11/8/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,475,898	1,459,405	16,494

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 16,494 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 11/9/13

MSD Daily Flow Reading, ending 11-09-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	11/10/2013 6:00:00 AM	11/9/2013 6:00:00 AM	24.0 hours
Reading (Gallons):	1,479,215	1,475,898	3,317

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 3,317 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/10/13

MSD Daily Flow Reading, ending 11-10-2013

Table 1
VOCs and SVOCs
August 2013 - November 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-125	11/4/2013	Pace	Validated	60156796	ND
316-124	11/3/2013	Pace	Validated	60156794	ND
316-123	11/2/2013	Pace	Validated	60156795	ND
316-122	11/1/2013	Pace	Validated	60156747	ND
316-121	10/31/2013	Pace	Validated	60156648	ND
316-120	10/30/2013	Pace	Validated	60156541	ND
316-119	10/29/2013	Pace	Validated	60156430	ND
316-118	10/28/2013	Pace	Validated	60156427	ND

Table 1
General Parameters and Metals
August 2013 - November 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	pH, field	Solids, total suspended
					NA	NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	pH units	mg/l
316-125	11/4/2013	Pace	Validated	60156796	29200	59300	753	642	ND	5.5	5.76	2980
316-124	11/3/2013	Pace	Validated	60156794	29700	58700	743	1230	6.0	5.5	5.82	5020
316-123	11/2/2013	Pace	Validated	60156795	27600	54500	643	1030	6.8	5.5	5.84	3980
316-122	11/1/2013	Pace	Validated	60156747	25100	45900	671	421	6.2	5.5	6.22	3000
316-121	10/31/2013	Pace	Validated	60156648	30800	57200	778	677	6.9	5.5	6.04	4800
316-120	10/30/2013	Pace	Validated	60156541	37300	43100	788	997	ND	5.5	6.07	2660
316-119	10/29/2013	Pace	Validated	60156430	32800	49800 *	804 *	1090	6.8	5.5	5.99	5580
316-118	10/28/2013	Pace	Validated	60156427	33300	61300	786	935	6.8	5.6	5.90	5420

Table 1
General Parameters and Metals
August 2013 - November 2013
Bridgeton Landfill

					Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron
					Total	Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-125	11/4/2013	Pace	Validated	60156796	9.38	ND	0.85	ND	ND	0.33	0.0374	ND	1110
316-124	11/3/2013	Pace	Validated	60156794	11.4	ND	0.794	ND	ND	0.319	0.0384	ND	1010 *
316-123	11/2/2013	Pace	Validated	60156795	8.62	ND	0.718	ND	ND	0.308	0.0375	ND	1020
316-122	11/1/2013	Pace	Validated	60156747	5.62	ND	0.72	ND	ND	0.269	0.0252	0.0524	864
316-121	10/31/2013	Pace	Validated	60156648	9.28	0.0774	1.04	ND	ND	0.332	0.0389	ND	1090
316-120	10/30/2013	Pace	Validated	60156541	7.54	0.0670	0.933	ND	ND	0.32	0.0396	ND	1010
316-119	10/29/2013	Pace	Validated	60156430	6.22	0.0684	0.84	ND	ND	0.302	0.0347	ND	946
316-118	10/28/2013	Pace	Validated	60156427	5.46	0.0690	0.832	ND	ND	0.289	0.0347	ND	847

Table 1
General Parameters and Metals
August 2013 - November 2013
Bridgeton Landfill

					Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-125	11/4/2013	Pace	Validated	60156796	0.189	0.0135	0.114	0.111	ND	ND	21.4
316-124	11/3/2013	Pace	Validated	60156794	0.194	0.0146	0.116	0.103	ND	ND	13.6
316-123	11/2/2013	Pace	Validated	60156795	0.188	0.0125	0.113	0.106	ND	ND	13.8
316-122	11/1/2013	Pace	Validated	60156747	0.146	0.0086	0.119	ND	ND	ND	13.9
316-121	10/31/2013	Pace	Validated	60156648	0.19	0.0198	0.134	ND	ND	ND	15.5
316-120	10/30/2013	Pace	Validated	60156541	0.166	0.01	0.127	ND	ND	ND	15.6
316-119	10/29/2013	Pace	Validated	60156430	0.136	0.00076 *	0.117	ND	ND	ND	15.2
316-118	10/28/2013	Pace	Validated	60156427	0.125	0.00062	0.122	ND	ND	ND	14.5

Doug Mendoza

BRIDGETON LANDFILL

From: John Lodderhose
Sent: Tuesday, November 12, 2013 3:49 PM
To: Ken Gambaro; Hunter, Gary L. (HunterGL@bv.com); kobylinskiEA@bv.com; RatzkiTJ@bv.com
Cc: Doug Mendoza; Todd Heller
Subject: RE: Transmittance
Attachments: Copy of UV Trans study MO vs CWC.xlsx

Here are the latest UVT results. Bridgeton Landfill stopped their discharge on Saturday because of a high Benzene concentration and the unfiltered UVT results are now much closer to that which we saw in the design study.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Ken Gambaro
Sent: Tuesday, November 05, 2013 3:11 PM
To: John Lodderhose; Hunter, Gary L. (HunterGL@bv.com); kobylinskiEA@bv.com; RatzkiTJ@bv.com
Cc: Doug Mendoza; Todd Heller
Subject: RE: Transmittance

It appears that the landfill discharge at 20,000 GPD is significantly impacting UVT at MO River. The data from the design studies was 51% filtered and 35% unfiltered.

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Missouri River WWTP
314-646-2421
Coldwater Creek WWTP
314-646-2431

From: John Lodderhose
Sent: Tuesday, November 05, 2013 3:07 PM
To: Hunter, Gary L. (HunterGL@bv.com); kobylinskiEA@bv.com; RatzkiTJ@bv.com
Cc: Ken Gambaro; Doug Mendoza
Subject: FW: Transmittance

Here are the transmittance numbers from Missouri River and Coldwater Creek. The lower numbers are obviously Mo River.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Stephen A. Bausano
Sent: Tuesday, November 05, 2013 2:55 PM
To: John Lodderhose
Subject: Transmittance

UV Transmittance (Results reported as % transmittance @ uv 254nm)

	Mo River Filtered	Mo River Unfiltered		Coldwater Filtered	Coldwater Unfiltered
5-Nov	27.91	24.90		63.63	62.77
6-Nov	23.49	21.34		64.02	60.71
7-Nov	22.81	22.44		60.07	58.56
8-Nov	26.94	26.16		58.75	58.57
12-Nov	32.48	32.16		60.30	60.98

2

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Monday, November 11, 2013 4:17 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good afternoon,

Sorry for the delayed notice, we have had some system issues at my office today, but I wanted to let you know that on Saturday the daily benzene test for direct discharge did not demonstrate compliance with the permitted limit and Bridgeton Landfill ceased discharge to the Missouri River treatment facility. The team is working to identify the source of the benzene increase in the 96K tank, since the source load from the treatment tank was compliant, and will keep MSD updated on this investigation and when discharge resumes.

Please let us know if you have any questions.
Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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From: Merrigan, Jessie
Sent: Tuesday, November 05, 2013 10:10 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace;

2

Doug Mendoza

From: Darin Lewis
Sent: Monday, November 11, 2013 5:34 AM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Sara Kammerer; Steve Grace
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 11/3/2013 to 11/9/2013.
11/3 – 180,000 gallons
11/4 – 172,500 gallons
11/5 – 97,500 gallons
11/6 – 195,000 gallons
11/7 – 142,500 gallons
11/8 – 195,000 gallons
11/9 – 195,000 gallons
Total = 1,177,500 gallons

Doug Mendoza

From: Joe Pavlich
Sent: Friday, November 08, 2013 12:24 PM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: Bridgeton Landfill reading.

Doug, the reading for Bridgeton Landfill on 11/8/13 at 1030 A.M. was 1459531 with a flow rate of 840 Gals./Hr.

Doug Mendoza

JEFFERSON LANDFILL

From: John Lodderhose
Sent: Thursday, November 07, 2013 12:28 PM
To: Ken Gambaro; Doug Mendoza; Jonathon Sprague
Subject: FW: UV Trans study MO vs CWC.xlsx
Attachments: UV Trans study MO vs CWC.xlsx

I am running UVT on Coldwater and MO River effluent daily.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Stephen A. Bausano
Sent: Thursday, November 07, 2013 10:25 AM
To: John Lodderhose
Subject: UV Trans study MO vs CWC.xlsx

Updated with today's results.

UV Transmittance (Results reported as % transmittance @ uv 254nm)

	Mo River Filtered	Mo River Unfiltered		Coldwater Filtered	Coldwater Unfiltered
5-Nov	27.91	24.90		63.63	62.77
6-Nov	23.49	21.34		64.02	60.71
7-Nov	22.81	22.44		60.07	58.56

Doug Mendoza Bridgeton Landfill

From: John Lodderhose
Sent: Thursday, November 07, 2013 10:39 AM
To: Doug Mendoza
Subject: FW: Change order for additional UV lamp installation at Mo River

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Ratzki, Tom J. [mailto:RatzkiTJ@bv.com]
Sent: Wednesday, November 06, 2013 7:32 PM
To: Todd Heller; Jonathon Sprague; Ken Gambaro; John Lodderhose
Cc: Freese, Benjamin P.; Nelson, Kevin M.; Christanell, Alan E.; Hunter, Gary L.; Kobylinski, Edmund A. (Ed)
Subject: Change order for additional UV lamp installation at Mo River

We will have the Change Order documents completed by Monday

We have made a very rough initial estimate of the cost for the changes as we have designed them

We determined there should be little or no electrical work needed to be performed. Trojan quoted us $32,000 for the additional lamp modules. Our initial estimates of time for Goodwin to remove he baffle, uninstall the lamps already installed and install the new modules and reinstall all lamps is fairly difficult to estimate.

For the purposes of your meeting tomorrow I would talk in terms of $200K maybe as much as $450K. Goodwin may surprise us and be a lot more than that or be as low as $150K. The way we designed the additional bulb installation we tried to make it simple and straightforward to keep Goodwin from finding ways to complicate things. Only after giving them the Change Order package will we determine if we were successful.

TOM RATZKI | Vice President, Water
Black & Veatch Corporation |
| C +1 314-435-1899 | Direct +1 636-536-5814 | RatzkiTJ@BV.com

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Doug Mendoza Bridgeton Landfill

From: John Lodderhose
Sent: Thursday, November 07, 2013 10:39 AM
To: Doug Mendoza
Subject: FW: Potential Change Order to add Planned Future UV Bulb capacity at MO River WWTP now

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Rich Unverferth
Sent: Wednesday, November 06, 2013 6:20 AM
To: Marie Collins; John Lodderhose; Brad Nevois
Subject: Fwd: Potential Change Order to add Planned Future UV Bulb capacity at MO River WWTP now

This affects all, so I forwarded, we can discuss Friday.

Sent from my iPhone

Begin forwarded message:

> **From:** Jonathon Sprague <JSPRAGUE@stlmsd.com>
> **Date:** November 5, 2013, 12:02:38 PM CST
> **To:** Brad Nevois <BLNEVO@stlmsd.com>
> **Cc:** Rich Unverferth <RLUNVE@stlmsd.com>
> **Subject: FW: Potential Change Order to add Planned Future UV Bulb capacity at MO River WWTP now**
>
> See email below and let me know if you want to discuss.
>
> As you know Bridgeton is committing substantial resources building pretreatment system to lower BOD from Bridgeton so they can stop hauling 200k gallons/day to Bissell and pump all there flow to Mo River. However, in April Mo river will start UV disinfection to meet permit. This is a problem for Bridgeton because tests show that Bridgetons effluent even after pretreatment has zero transmittance. Even with advanced oxidation treatment they can only get it up to 20-25%. Our calculations show that this would limit there flow to 140k/day and still meet permit. Rather than haul the remaining 60k I am sure they would rather pump.
> Mo River was built to allow the addition of 15% more capacity by adding 3 more uv modules per flow channel. I requested that we seek the feasibility, cost and time needed to do this as is would allow Bridgeton to pump all or almost all of the remaining flows to Mo River. With only 5 months left until disinfection time is critical. I don' know how detailed we need the change order, but I feel strongly that we need this info to present the available options as part of our duty as the regional waste water provider.
>
> Jonathon Sprague
> Director of Operations
> Metropolitan St. Louis Sewer District
> 2350 Market Street

St. Louis, MO 63103
314 768-6261

From: Ratzki, Tom J. [mailto:RatzkiTJ@bv.com]
Sent: Monday, November 04, 2013 4:43 PM
To: Jonathon Sprague
Cc: Bunch, David G.; Christanell, Alan E.; Ken Gambaro; Todd Heller
Subject: Potential Change Order to add Planned Future UV Bulb capacity at MO River WWTP now

Per our meeting this morning, Nov 4, 2013, MSD requested Black & Veatch to look into the steps required to issue a Construction Change order to Goodwin Brothers , through your Construction Manager KWAME, in order to ascertain the cost and schedule impact of adding the "future" UV lamps now versus a future date as part of the ongoing MO River WWTP improvements construction project. .

Black & Veatch would complete an abbreviated set of drawings, specifications and instructions for to be given to Goodwin , so that they can offer to the District the cost and impact on schedule for doing this work as part of the current contract for the MO WWTP Improvements.

Preparation of such drawings and associated material by Black & Veatch, are outside our current scope, and would be done at this time solely to address the options available to MSD for handling the high strength Leachate waste coming from the Republic Bridgeton landfill and being discharged to the Missouri River WWTP.

Due the critical time factor, we will initiate the Change Order preparation immediately. We will provide you an estimate of our Engineering cost for preparing the Change Order by Wednesday November 6th. We will be able to complete the change order and deliver to KWAME no later than November 15th

Please advise if this is acceptable to the District and confirm that Black & Veatch will be compensated for our effort on this matter as part of a future amendment to our MO River WWTP construction phase engineering services contract.

In addition, please be aware Goodwin began installing UV lamps last week . We are trying to ascertain if this current lamp installation would be affected by the proposed changes order to add additional lamps. Furthermore, we will not mention the potential for this change order to Goodwin at tomorrow's (Nov 5ht) Construction Progress meeting, unless directed to do so otherwise from you. However, we feel it would be beneficial to discuss what is transpiring with the District Construction Management staff, Dave Frederick, and your Construction Manager, KWAME to determine if the possibility of the change order to install additional lamps would affect any other portion of the work and impact the schedule other than the additional effort Goodwin will needs to install the extra lamps.

TOM RATZKI | Vice President, Water
Black & Veatch Corporation |
| C +1 314-435-1899 |Direct +1 636-536-5814 | RatzkiTJ@BV.com

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Doug Mendoza

Bridgeton Landfill

From: John Lodderhose
Sent: Thursday, November 07, 2013 10:38 AM
To: Doug Mendoza
Subject: FW: UV operating and admin costs due to higher UVT
Attachments: Estimate of UVT Admin costs.xlsx

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Ratzki, Tom J. [mailto:RatzkiTJ@bv.com]
Sent: Wednesday, November 06, 2013 7:06 PM
To: Jonathon Sprague; Ken Gambaro; Todd Heller; John Lodderhose
Cc: Hunter, Gary L.; Kobylinski, Edmund A. (Ed); Christanell, Alan E.
Subject: UV operating and admin costs due to higher UVT

Here is Gary's cost model – set for operation for 7.5 months per years for Your UV system . at transmittance values of 57% to 65%
Assumptions

Current design	1056	lamps	
	3	channels	
	2	banks per channel	
	7.5	operating season	
	0.08	$/kwh	
	80	mgd	design
	38	mgd	operating flow
	40	$/hr for labor	

Transmittance	power	materials	labor	chemicals	total
65	$27,500	$28,000	$29,000	$2,000	$86,500
64	$30,000	$31,000	$29,000	$2,000	$92,000
63	$32,500	$33,200	$29,000	$2,000	$96,700
62	$35,000	$35,700	$29,000	$2,000	$101,700
61	$37,400	$38,300	$29,000	$3,000	$107,700
60	$40,000	$41,000	$36,000	$3,000	$120,000
59	$42,400	$43,400	$36,000	$3,000	$124,800
58	$45,000	$46,000	$45,000	$3,000	$139,000
57	$47,400	$48,500	$45,000	$4,000	$144,900

Here is my estimate of the "non operations costs" associated with Admin additional monitoring and the ancillary facilities you will need to add at Bonfils, and Westlake Pump stations. Feel free to adjust the later numbers as you see fit for labor rates and assumed tasks at each facility.

Estimate of the Metropolitan St Louis Sewer District' Costs
Administrative, Monitoring and Management costs
Attributed to dealing with High UVT waste from the Republic/Bridgeton landfill

DRAFT FOR DISCUSSION ONLY

Cost associated with Additional District Duties or Facilities

			During Disinfection Season	MANHOURS Admin	Plant OPS/ Maint staff	Engineering OPS	Engineering DEC	Engineering Instr tech	Mgmt	Expenses
At the Landfill										
1 Regular visits to observe Pretreatment Plant operations Confirm data being provided Mad is accurate Asses Pretreatment plant condition	DEC staff	2 trips per year		4			16		2	$150
2 Observe , calibrate and perform Preventive maintenance on Flow meters and instruments needed of MSD data	Instrument tech	6 Hours/month	X					45		$200
3 Handling correspondence , legal papers, documents etc	Admin Staff	8 hours /year		8						
	Management staff								4	
At West Lake Pump station										
1 Maintain Flow Meter and UVT transmitter	Instrument tech	6 Hours/month	X					45		$450
2 Annual Startup and shutdown of UVT transmitter	Instrument tech	20 Hours/month						20		$250
3 Review and handling of flow data	Admin Staff	4 hours/year		2						
	Engineering staff	8 hours/year					6			
	Management Staff	4 hours/year							2	
At Bonfils Pump Station										
1 Regular Inspection of Station by Operations personnel related to Leachate discharge	DEC Staff	6 trips per year					30			$150
2 Testing and calibration of Flow meter	Instrument tech	8 hours/year						8		$150
3 Review and handling of flow data	Admin Staff	4 hours/year		4						
	Enginering staff	8 hours/year					8			
	Management Staff	4 hours/year							4	
At MO River WWTP										
1 Additional UV equipment inspection for UV T issues	Instrument tech	6 Hours/Month	X					45		$150
	Enginering Staff	8 hours/year				8				
2 Additional UV equipment Maintenance	Instrument tech	4 Hours/Month	X					30		$500
	Plant Maintenance Staff	16 Hours/Month	X		120					
	Enginering Staff	16 hours/year				16				
ANNUAL ADMINSTATIVE, MONITORING AND MANAGEMENT										
to initiate UV disinfection each April										
1 Initiation of Staff and resources for the Season				2		4			2	
2 Initial Paperwork, forms correspondence and cord.				2		2			4	
Monthly During the Disinfection Season - 7.5 Months										
1 Process data& correspondence from landfill				16					20	
2 Review and handling of Westlake UVT data				6		30			8	
3 UV operations at MO River WWTP										
a Ongoing Operations and Process adjustments related to variances in UVT					20	12			8	
b Review of Ops data, records and reports				8		12			8	
c Troubleshooting/Evaluations				4	32	16			10	
End of Season Shutdown										
1 Document and File year end data and information				4	4				4	
Off Season Activities - 4.5 Months				8		4			8	
1 Maintain correspondence and files, Coordinate as										
TOTAL				68	176	104	60	193	84	$2,000
Hourly Rate				$25.00	$40.00	$50.00	$75.00	$48.00	$85.00	
LABOR COST				$1,700	$7,040	$5,200	$4,500	$9,264	$7,140	$34,844

TOTAL

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table			
Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, October 27, 2013	Batch 316-116	22,500	22,500
	Batch 316-117	150,000	150,000
Monday, October 28, 2013	Batch 316-117	22,500	22,500
	Batch 316-118	172,500	172,500
Tuesday, October 29, 2013	Batch 316-118	22,500	22,500
	Batch 316-119	172,500	172,500
Wednesday, October 30, 2013	Batch 316-119	22,500	22,500
	Batch 316-120*	150,000	150,000
Thursday, October 31, 2013	Batch 316-120	22,500	22,500
	Batch 316-121	172,500	172,500
Friday, November 01, 2013	Batch 316-121	22,500	22,500
	Batch 316-122	172,500	172,500
Saturday, November 02, 2013	Batch 316-122	22,500	22,500
	Batch 316-123	172,500	172,500

Starting Date	*10/27/2013 7:00*
Ending Date	*11/3/2013 6:00*

** Upon QC review, it was discovered that Load 17 was greater than the quantity stated on the waste receipt. However due to conservative rounding on other loads, the 24-load total was less than 150,000 gal.*

MSD - Missouri River Tracking Table								
Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, October 27, 2013	NA	-	10/27/2013 7:00	10/28/2013 7:00	24.0	840	0.0	NA
Monday, October 28, 2013	NA	-	10/28/2013 7:00	10/29/2013 7:00	24.0	840	0.0	6.43
Tuesday, October 29, 2013	Batch 316-119	-	10/29/2013 7:00	10/30/2013 7:00	24.0	840	0.0	NA
Wednesday, October 30, 2013	NA	-	10/30/2013 7:00	10/31/2013 7:00	24.0	840	0.0	6.34
Thursday, October 31, 2013	NA	-	10/31/2013 7:00	11/1/2013 7:00	24.0	840	0.0	NA
Friday, November 01, 2013	Accumulated	17,258	11/1/2013 7:00	11/2/2013 7:00	24.0	841	719.1	5.84
Saturday, November 02, 2013	Accumulated	19,620	11/2/2013 7:00	11/3/2013 6:00	24.0**	840	817.5	6.70

*** Time interval is 24 hours due to change to Central Standard Time*

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____ Title: Environmental Specialist Date: 11/5/13

Weekly Volume Summary - Week 28 (10-27-13 through 11-02-13).xlsx

11-6-13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/28/2013 7:00:00 AM	10/27/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: B Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/28/13

MSD Daily Flow Reading, ending 10-28-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/29/2013 7:00:00 AM	10/28/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/29/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/30/2013 7:00:00 AM	10/29/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/30/13

MSD Daily Flow Reading, ending 10-30-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/31/2013 7:00:00 AM	10/30/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 10/31/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	11/1/2013 7:00:00 AM	10/31/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 11/1/13

MSD Daily Flow Reading, ending 11-01-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	11/2/2013 7:00:00 AM	11/1/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,394,496	1,377,238	17,258

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 17,258 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/2/13

MSD Daily Flow Reading, ending 11-02-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	11/3/2013 6:00:00 AM	11/2/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,414,116	1,394,496	19,620

Flow Meter Adjustment	
Reading Adjustment:	0
Flow During Adjustment:	0

Comments

Time interval represents 24.0 hours due to the change to Central Standard Time

Total Flow: 19,620 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 11/3/13

MSD Daily Flow Reading, ending 11-03-2013

11-6-13

OB-316-116

Bridgeton Landfill

Fill Data

Fill Start Date	10/25/2013
Fill Start Time	18:10
Fill Stop Date	10/25/2013
Fill Stop Time	22:35
Process Battery	316 AST

Processing Data

Process Start Date	10/25/2013
Process Start Time	20:00
Process Stop Date	10/26/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-750
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

MEK = 28,000 ppb. Both blowers operated all night.

Monday, November 04, 2013

OB-316-117 Bridgeton Landfill

Fill Data

Fill Start Date	10/26/2013
Fill Start Time	18:15
Fill Stop Date	10/26/2013
Fill Stop Time	22:58
Process Battery	316 AST

Processing Data

Process Start Date	10/26/2013
Process Start Time	20:00
Process Stop Date	10/27/2013
Process Stop Time	05:37

Approval Data

Approval Details	NAL13026-752
Test Results	Benzene 34 ppb
Reprocessed Batch	

Notes

MEK = 27,000 ppb.

Monday, November 04, 2013

OB-316-118 *Bridgeton Landfill*

Fill Data

Fill Start Date	10/27/2013
Fill Start Time	18:12
Fill Stop Date	10/27/2013
Fill Stop Time	23:37
Process Battery	316 AST

Processing Data

Process Start Date	10/27/2013
Process Start Time	20:20
Process Stop Date	10/28/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-753
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

MEK = 72,000 ppb. Resample (-118R) indicated MEK = 76,000 ppb and ND benzene again. 2 blowers operated, activated at 10-ft fill level.

Monday, November 04, 2013

OB-316-119 *Bridgeton Landfill*

Fill Data

Fill Start Date	10/28/2013
Fill Start Time	18:15
Fill Stop Date	10/28/2013
Fill Stop Time	23:32
Process Battery	316 AST

Processing Data

Process Start Date	10/28/2013
Process Start Time	21:10
Process Stop Date	10/29/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-756
Test Results	Benzene 30 ppb
Reprocessed Batch	

Notes

MEK = 79,000 ppb.

Monday, November 04, 2013

OB-316-120 Bridgeton Landfill

Fill Data

Fill Start Date	10/29/2013
Fill Start Time	19:16
Fill Stop Date	10/29/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	10/29/2013
Process Start Time	21:07
Process Stop Date	10/30/2013
Process Stop Time	06:15

Approval Data

Approval Details	NAL13026-757
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

MEK = 64,000 ppb. Processing started at 8.2-ft fill level.

Monday, November 04, 2013

OB-316-121 Bridgeton Landfill

Fill Data

Fill Start Date	10/30/2013
Fill Start Time	18:10
Fill Stop Date	10/31/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	10/30/2013
Process Start Time	20:00
Process Stop Date	10/31/2013
Process Stop Time	05:45

Approval Data

Approval Details	NAL13026-759
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

MEK = 82,000 ppb.

Monday, November 04, 2013

OB-316-122 Bridgeton Landfill

Fill Data

Fill Start Date	10/31/2013
Fill Start Time	18:35
Fill Stop Date	11/1/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	10/31/2013
Process Start Time	20:00
Process Stop Date	11/1/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-760
Test Results	Benzene 26 ppb
Reprocessed Batch	

Notes

MEK = 64,000 ppb.

Monday, November 04, 2013

OB-316-123 Bridgeton Landfill

Fill Data

Fill Start Date	11/1/2013
Fill Start Time	18:20
Fill Stop Date	11/2/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	11/1/2013
Process Start Time	20:45
Process Stop Date	11/2/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL-13026-763
Test Results	Benzene = 27 ppb
Reprocessed Batch	

Notes

MEK = 56,000 ppb

Monday, November 04, 2013

Table 1
VOCs and SVOCs
August 2013 - November 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-117	10/27/2013	Pace	Validated	60156333	ND
316-116	10/26/2013	Pace	Validated	60156334	ND
316-115R	10/25/2013	Pace	Validated	60156288	ND
316-114	10/24/2013	Pace	Validated	60156189	ND
316-113R	10/23/2013	Pace	Validated	60156091	ND
316-112	10/22/2013	Pace	Validated	60155988	ND
316-111	10/21/2013	Pace	Validated	60155874	ND

Table 1
General Parameters and Metals
August 2013 - November 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	pH, field	Solids, total suspended
					NA	NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	pH units	mg/l
316-117	10/27/2013	Pace	Validated	60156333	31200	61600	773	1100	8.1	5.5	5.86	4340
316-116	10/26/2013	Pace	Validated	60156334	31500	75000 *	805 *	1150	7.7	5.6	5.77	4660
316-115R	10/25/2013	Pace	Validated	60156288	25300	66500 *	773	910	11.2	5.5	5.86	4020
316-114	10/24/2013	Pace	Validated	60156189	30800	67100	745	1020	5.6	5.4	5.69	4660
316-113R	10/23/2013	Pace	Validated	60156091	38400	66200	703	1030	ND	5.4	5.67	3680
316-112	10/22/2013	Pace	Validated	60155988	35000	64800	689	554	ND	5.4	5.59	4120
316-111	10/21/2013	Pace	Validated	60155874	26700	69200	691	747	ND	5.4	5.95	3860

Table 1
General Parameters and Metals
August 2013 - November 2013
Bridgeton Landfill

					Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron
					Total	Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-117	10/27/2013	Pace	Validated	60156333	**5.96**	ND	**0.86**	ND	ND	**0.309**	**0.0486**	ND	**999**
316-116	10/26/2013	Pace	Validated	60156334	**8.79**	ND	**0.821**	ND	ND	**0.326**	**0.0529**	ND	**1070**
316-115R	10/25/2013	Pace	Validated	60156288	**8.74**	ND	**0.818**	ND	ND	**0.318**	**0.0534**	ND	**1050**
316-114	10/24/2013	Pace	Validated	60156189	**8.8**	ND	**0.922**	ND	ND	**0.344**	**0.0536**	ND	**1110**
316-113R	10/23/2013	Pace	Validated	60156091	**7.89**	ND	**0.933**	ND	ND	**0.386**	**0.0462**	ND	**1030**
316-112	10/22/2013	Pace	Validated	60155988	**8.51**	ND	**0.914**	ND	ND	**0.329**	**0.0438**	ND	**1120**
316-111	10/21/2013	Pace	Validated	60155874	**9.26 ***	ND	**1.13**	ND	ND	**0.401**	**0.0628**	ND	**1370**

Table 1
General Parameters and Metals
August 2013 - November 2013
Bridgeton Landfill

					Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-117	10/27/2013	Pace	Validated	60156333	0.162	0.00048	0.116	ND	ND	ND	14
316-116	10/26/2013	Pace	Validated	60156334	0.175	0.00058 *	0.125	ND	ND	ND	13.3
316-115R	10/25/2013	Pace	Validated	60156288	0.158	0.00054	0.121	ND	ND	ND	12.8
316-114	10/24/2013	Pace	Validated	60156189	0.157	0.0153	0.137	ND	ND	ND	13.8
316-113R	10/23/2013	Pace	Validated	60156091	0.122	0.0029	0.167	0.0982	ND	ND	13.1
316-112	10/22/2013	Pace	Validated	60155988	0.16	0.0019	0.143	0.0857	ND	ND	14.3
316-111	10/21/2013	Pace	Validated	60155874	0.273	ND	0.129	ND	ND	ND	14.8

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Tuesday, November 05, 2013 10:10 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good evening,

I wanted to update you that last week's materials are available on Barr's FTP site. Please let us know if you have any questions.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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Doug Mendoza

BRIDGETON LANDFILL

From: John Lodderhose
Sent: Tuesday, November 05, 2013 3:28 PM
To: Ken Gambaro; Hunter, Gary L. (HunterGL@bv.com); kobylinskiEA@bv.com; RatzkiTJ@bv.com
Cc: Doug Mendoza; Todd Heller
Subject: RE: Transmittance

We can talk to them on Thursday about shutting off their flow for a week so that we can see the UVT at MO River without their discharge.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Ken Gambaro
Sent: Tuesday, November 05, 2013 3:11 PM
To: John Lodderhose; Hunter, Gary L. (HunterGL@bv.com); kobylinskiEA@bv.com; RatzkiTJ@bv.com
Cc: Doug Mendoza; Todd Heller
Subject: RE: Transmittance

It appears that the landfill discharge at 20,000 GPD is significantly impacting UVT at MO River. The data from the design studies was 51% filtered and 35% unfiltered.

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Missouri River WWTP
314-646-2421
Coldwater Creek WWTP
314-646-2431

From: John Lodderhose
Sent: Tuesday, November 05, 2013 3:07 PM
To: Hunter, Gary L. (HunterGL@bv.com); kobylinskiEA@bv.com; RatzkiTJ@bv.com
Cc: Ken Gambaro; Doug Mendoza
Subject: FW: Transmittance

Here are the transmittance numbers from Missouri River and Coldwater Creek. The lower numbers are obviously Mo River.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Stephen A. Bausano
Sent: Tuesday, November 05, 2013 2:55 PM
To: John Lodderhose
Subject: Transmittance

Today:

Comments | Batch Summary | Prep Summary

Report Options: Include All ◉ Sample Data Only ○ QC Data Only

Commit | ReAnalyze | ReTest | Close All | Batch Objects

Batch Summary

Test Name	Run	Action	?1340573REC
Transmittance	1	No Action	No Action
Wavelength			254
UV Analysis (Filtered)			27.9
UV Analysis (Unfiltered)			24.9

Stephen A. Bausano
Lab Operations Manager
Metropolitan St. Louis Sewer District
(314) 436-8765
sbausano@stlmsd.com

DV

Doug Mendoza

From: John Lodderhose
Sent: Tuesday, November 05, 2013 8:38 AM
To: Kobylinski, Edmund A. (Ed); Doug Mendoza; Jonathon Sprague; Ken Gambaro; Hunter, Gary L.; Ratzki, Tom J.
Subject: RE: Bridgeton Landfill

Ed, I think you raised some good points but I cannot explain their data except to say that they may not have been at steady state and/or fully optimized their pilot plant operation. I know they were evaluating several treatment systems at the same time and were very limited on the time to do the studies.
Thanks for your comments.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Kobylinski, Edmund A. (Ed) [mailto:KobylinskiEA@bv.com]
Sent: Tuesday, November 05, 2013 8:31 AM
To: John Lodderhose; Doug Mendoza; Jonathon Sprague; Ken Gambaro; Hunter, Gary L.; Ratzki, Tom J.
Subject: [BULK] RE: Bridgeton Landfill
Importance: Low

John,

I couldn't find your e-mail late last night so I asked Ken to forward this one to everyone. I may be jumping the gun as Ken will forward this so I apologize for the duplication. However, the data provided to MSD on the MBR effluent changes how we may have to look at the landfill discharge and ultimately means additional testing is required to further sort through what in their effluent is causing the low UVT.

Ed

Copy of last night's e-mail

"""Ken,

Can you pass these comments on to Todd, Jon and John. This data implies some process issues that are different from what we discussed this morning.

They have stated that they are installing an MBR. The perception of an MBR system is a long SRT that will fully nitrify and produce an effluent with a very low BOD concentration. This is not what the data shows.

The effluent TSS at times is consistent with and an MBR effluent but the number of effluent TSS concentration in the double digits especially the over 20 mg/L values are not consistent with MF or UF filtration. What we should be seeing are TSS concentrations typically less than 5 mg/L. That is the beauty of an MBR, you don't have to worry about the SVI of the MLSS and settleability as the fine submicron pore size of the MF or the actual UF membrane should remove nearly all of the TSS. The range of MBR effluent solids in the data look more like a well-run final clarifier than a membrane separation process.

The effluent TSS concentrations are not the most troubling/ contradictory information. The effluent BOD concentrations are not consistent with the assumption/ presumption of an MBR process. There are two troubling aspects to the BOD data. The first item is the major difference between the total and soluble BOD concentrations. Even

Bridgeton Landfill

Doug Mendoza

From: Ken Gambaro
Sent: Tuesday, November 05, 2013 7:15 AM
To: Jonathon Sprague; John Lodderhose; Doug Mendoza; Todd Heller
Subject: FW: Bridgeton Pilot Plant Data

See Gary's comments below. We may want to consider moving the meeting to a time where all parties are available.

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Coldwater Creek WWTP
314-646-2431
Missouri River WWTP
314-646-2421

From: Hunter, Gary L. [mailto:HunterGL@bv.com]
Sent: Tuesday, November 05, 2013 6:40 AM
To: Kobylinski, Edmund A. (Ed); Ken Gambaro; Ratzki, Tom J.
Subject: RE: Bridgeton Pilot Plant Data

Ken

I would add that these issues need to be discussed in Thursday's meeting. Tom, Ed, and I are all in the MWEA Fall conference in Columbia but could (at least 2 of the three of us) dial in if needed. My talk is right at the same time as the meeting.

Looks like we have some information to you by Thursday morning on the additional testing.

Gary

From: Kobylinski, Edmund A. (Ed)
Sent: Monday, November 04, 2013 8:53 PM
To: Ken Gambaro; Hunter, Gary L.; Ratzki, Tom J.
Subject: RE: Bridgeton Pilot Plant Data

Ken,

Can you pass these comments on to Todd, John and John. This data implies some process issues that are different from what we discussed this morning.

They have stated that they are installing an MBR. The perception of an MBR system is a long SRT that will fully nitrify and produce an effluent with a very low BOD concentration. This is not what the data shows.

The effluent TSS at times is consistent with and an MBR effluent but the number of effluent TSS concentration in the double digits especially the over 20 mg/L values are not consistent with MF or UF filtration. What we should be seeing are TSS concentrations typically less than 5 mg/L. That is the beauty of an MBR, you don't have to worry about the SVI of the MLSS and settleability as the fine submicron pore size of the MF or the actual UF membrane should remove nearly all of the TSS. The range of MBR effluent solids in the data look more like a well-run final clarifier than a membrane separation process.

The effluent TSS concentrations are not the most troubling/ contradictory information. The effluent BOD concentrations are not consistent with the assumption/ presumption of an MBR process. There are two troubling aspects to the BOD data. The first item is the major difference between the total and soluble BOD concentrations. Even with the higher effluent TSS concentrations, there should not be the large difference between BOD and Soluble BOD. A true MBR effluent should have virtually no difference between the two forms of BOD. However, at times there are 100 mg/L or more difference between BOD and soluble BOD. This is inconsistent with an MBR effluent. Soluble and total BOD should be essentially the same with only analytical error as a difference between the data.

The second troubling aspect is the absolute concentration range of effluent BOD. While staring at 26,000 mg/L BOD one can definitely say the MBR pilot system was efficient in BOD removal. However, a 100-400 mg/L effluent BOD from and MBR with an assumed 20 days SRT is not consistent with a well-run MBR. With an efficiently run MBR the effluent BOD should be much lower than what is presented in the data. Now if the MBR is not fully aerated and the DO is run at very low concentrations there could be some BOD breakthrough. This type of operation could produce discrete fine solids that could pass through an MF membrane.

Now with the 100-400 mg/L effluent BOD, we would expect the effluent UVT to be low, in the 0-30% range. So the question is what is causing the low UVT? Is the low UVT because of the biodegradable COD (BOD) in the effluent or because of the non-biodegradable COD concentration? The total and soluble COD concentrations in the data are essentially the same which is what we would expect in an MBR effluent. The ratio of BOD to COD also indicates that there is a lot of effluent nonbiodegradable COD. It is possible that the nonbiodegradable COD is depressing the UVT. For this reason we are going to take a small volume of the MBR effluent , add MLSS and aerate overnight to see if that increases the UVT.

The report that PAC addition is too expensive must be questioned. If the PAC is taking out 100-400 mg/L BOD it would take a high dose to improve the UVT.

The reported high ozone and peroxide doses would also be significantly impacted by the high effluent BOD concentration.

Finally, the effluent nitrate, nitrite and ammonia data raises more questions as to how the MBR is being operated. First, nitrification should be complete unless there is an alkalinity/ pH issue. The high chloride concentration may be affecting nitrification and slowing the nitrification rate. It is not stopping nitrification because nitrate and nitrite are being formed. The nitrite in the effluent could be from under aeration in the activated sludge basin, but if the activated sludge basin is under aerated, denitrification should remove the nitrate and nitrite. SRT should not be a limiting factor. No temperature data was reported so we don't know if the high concentration of BOD being oxidized is causing an elevated temperature that may inhibit nitrification. Temperatures above 33 degrees C will slow to stop the rate of nitrification. BOD oxidation is exothermic and we have seen WW temperatures increase and with a high initial BOD concentration a temperature rise could explain incomplete nitrification but it does not explain the BOD breakthrough.

Based upon the above discussion, the effluent BOD concentration is the most surprising revelation. The BOD alone could be the cause of the low UVT. Simply put, better operation of the MBR to get more complete oxidation of BOD could significantly shift the UVT emphasis from advanced oxidation and it's high cost, to simply achieve better biological oxidation. If the high UVT is associated with the BOD technically it could be discharged to MO River and the UVT would increase with additional biological treatment. Additional testing is needed to determine if the low UVT is attributed to the BOD or nonbiodegradable COD. This could significantly alter the District's position on regulating discharge from the landfill MBR.

Ed

From: Ken Gambaro [mailto:kmgamb@stlmsd.com]
Sent: Monday, November 04, 2013 2:31 PM

To: Hunter, Gary L.; Kobylinski, Edmund A. (Ed); Ratzki, Tom J.
Subject: FW: Bridgeton Pilot Plant Data

Attached is the data we have on the landfill pilot treatment plant.

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Coldwater Creek WWTP
314-646-2431
Missouri River WWTP
314-646-2421

From: Ken Gambaro
Sent: Thursday, October 24, 2013 10:51 AM
To: Todd Heller; Jonathon Sprague; Bret A. Berthold
Subject: FW: Bridgeton Pilot Plant Data

fyi

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Coldwater Creek WWTP
314-646-2431
Missouri River WWTP
314-646-2421

From: John Lodderhose
Sent: Tuesday, October 22, 2013 7:49 AM
To: Doug Mendoza; Ken Gambaro
Subject: FW: Bridgeton Pilot Plant Data

Here is some of the Bridgeton pilot data. Let Ivan know if you have any questions or concerns.

Ken, let us know when you have had a chance to talk to Gary Hunter about a UVT allocation for Bridgeton.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Cooper, Ivan [mailto:icooper@cecinc.com]
Sent: Monday, October 21, 2013 4:48 PM
To: John Lodderhose
Cc: Bodnar, Randy; Kamp, Kevin; Walker, Tony (TWalker@republicservices.com)
Subject: Bridgeton Pilot Plant Data

John,

As you requested, attached is the Bridgeton pilot plant effluent data. The sample #4 is included in the attachment which is the pilot plant MBR effluent.

Please let us know if any of these constituents will impact the Missouri River Treatment Plant effluent.

Please see the data attached and let me know if there are other concerns if the color at 254 nm is removed to help meet the 65% UV Transmittance.

Additionally, we are awaiting your determination of the UV Transmittance allowed at various Bridgeton effluent flows at various Missouri River effluent flow, assuming we can pace the Bridgeton effluent to match the diurnal flow pattern at the Missouri River plant.

Thank you, and we await your information.

Thank you,
Ivan

Ivan A. Cooper, PE, BCEE / Principal
National Water/Wastewater Practice Leader
Civil & Environmental Consultants, Inc.
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Doug Mendoza

From: Darin Lewis
Sent: Monday, November 04, 2013 1:03 PM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Sara Kammerer; Steve Grace
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 10/27/2013 to 11/2/2013.
10/27 – 172,500 gallons
10/28 – 195,000 gallons
10/29 – 195,000 gallons
10/30 – 172,500 gallons
10/31 – 195,000 gallons
11/1 – 195,000 gallons
11/2 – 195,000 gallons
Total = 1,320,000 gallons

Doug Mendoza

From: Christina Large
Sent: Monday, November 04, 2013 11:42 AM
To: Doug Mendoza
Subject: FW: Bridgeton Landfill - discharge reporting and leachate chemistry data
Attachments: Bridgeton Landfill discharge data 1-1-2012 - 1-10-2013 for BOD, COD, TSS....xls; BRIDGETON LANDFILL LLC 1-10-2013 Order.pdf; BRIDGETON LANDFILL LLC permit.pdf

Fyi

From: Christina Large **On Behalf Of** Sunshine Requests
Sent: Monday, November 04, 2013 11:42 AM
To: 'Mike Pauli'
Cc: Sunshine Requests
Subject: RE: Bridgeton Landfill - discharge reporting and leachate chemistry data

Mr. Pauli,

Attached is a copy of Bridgeton Landfill's permit, and lab data that we have (for both Bridgeton Landfill and MSD sampling) from 1/1/2012 to 1/10/2013 for BOD, COD, and TSS. The Sunshine request asked for data that illustrates the exceedance(s) referenced in the cease and desist order (see attached, which was also included in the Sunshine request). The order cited high BOD, COD, and TSS discharge levels from 3/7/2012 to 1/10/2013, so that data is included. Sampling data from 1/1/2012 to 3/7/2012 includes a sample result from 2/2/2012, which fulfills the Sunshine request's request for data covering a period of compliance.

Thank you,

Christina Large
Treasury Associate
Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, MO 63103
314-768-2745
314-768-2701

From: Mike Pauli [mailto:mike.pauli@anteagroup.com]
Sent: Thursday, October 31, 2013 2:21 PM
To: Sunshine Requests
Subject: Bridgeton Landfill - discharge reporting and leachate chemistry data

In the attached letter from MSD to Bridgeton Landfill, it is referenced that

"These data show that, since at least March 7, 2012 and continuing until the present, Bridgeton Landfill has violated the terms of its wastewater discharge permit in the following manner: -
a. Bridgeton Landfill failed to notify MSD of Bridgeton Landfill's significant increase in the discharge of biochemical oxygen demand (BOD), chemical oxygen demand

(COD), and total suspended solids (TSS)."

I am interested in seeing any reports or laboratory data tables that summarize sampling data collected by either Republic and/or MSD personnel that illustrate the exceedance(s) referenced in the cease and desist order. Ideally I would like copies of records that illustrate a period of compliance with the permit – then records that show the beginnings of discharges that are in violation of the permit up to the time the order was issued. If there is a significant volume of records that would be responsive to this request I could provide further clarification to what I am looking for if I know what is available.

I would also like to obtain a copy of Republic's Wastewater Discharge Permit No. 0511559802.

Thank you.

Michael C. Pauli, PE | Senior Project Manager | USA
Antea®Group
Direct: 636.442.4773 | Mobile: 314.409.8545
150 St. Peters Centre Blvd., Suite C St. Peters, Missouri 63376
mike.pauli@anteagroup.com | www.anteagroup.com

anteagroup

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From: Christina Large [mailto:CLarge@stlmsd.com] **On Behalf Of** Sunshine Requests
Sent: Friday, October 25, 2013 12:16 PM
To: Mike Pauli
Cc: Sunshine Requests
Subject: RE: Letter from MSD to Republic Services - Bridgeton Landfill

Mr. Pauli,

As requested, attached is the Cease and Desist Order entered on January 10, 2013.

If you have any further questions or requests please submit them to sunshinerequests@stlmsd.com.

Thank you,

Christina Large
Treasury Associate
Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, MO 63103
314-768-2745
314-768-2701

From: Mike Pauli [mailto:mike.pauli@anteagroup.com]
Sent: Friday, October 25, 2013 9:01 AM
To: Sunshine Requests
Subject: Letter from MSD to Republic Services - Bridgeton Landfill

Good Morning.

I'm writing to request a copy of a letter sent by MSD to Republic Services – Bridgeton Landfill. I believe the letter may have been dated January 10th, 2013 – or somewhere around that timeframe. The letter was issued to Republic due to exceedances of various chemicals and/or water quality parameters from the landfill leachate that was discharged to the Missouri River Treatment Facility (MRTF). The context of the letter was to notify Republic that they could no longer discharge their leachate to MRTF until the parameters required by MSD were met.

If you need additional context for this request, please let me know. I can be reached via email or either of the phone numbers below.

Thank you.

Michael C. Pauli, PE | Senior Project Manager | USA
Antea®Group
Direct: 636.442.4773 | Mobile: 314.409.8545
150 St. Peters Centre Blvd., Suite C St. Peters, Missouri 63376
mike.pauli@anteagroup.com | www.anteagroup.com

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SP	Sample Point Description	Date	Pollutant	<	Result	Unit	Sampler
007	14" pipe into Westlink Pump Station Wetwell, on S side	02/02/12	Biochemical Oxygen Demand (5 Day)		636	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	02/02/12	Chemical Oxygen Demand		1670	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	02/02/12	Total Suspended Solids		192	mg/L	MSD
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	03/07/12	Biochemical Oxygen Demand (5 Day)		5500	mg/L	Industry
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	03/07/12	Chemical Oxygen Demand		8800	mg/L	Industry
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	03/07/12	Total Suspended Solids		170	mg/L	Industry
007	14" pipe into Westlink Pump Station Wetwell, on S side	05/03/12	Biochemical Oxygen Demand (5 Day)		5870	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	05/03/12	Chemical Oxygen Demand		10580	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	05/03/12	Total Suspended Solids		710	mg/L	MSD
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	05/15/12	Biochemical Oxygen Demand (5 Day)		7030	mg/L	Industry
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	05/15/12	Chemical Oxygen Demand		9500	mg/L	Industry
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	05/15/12	Total Suspended Solids		660	mg/L	Industry
007	14" pipe into Westlink Pump Station Wetwell, on S side	07/10/12	Biochemical Oxygen Demand (5 Day)		2140	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	07/10/12	Chemical Oxygen Demand		4550	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	07/10/12	Total Suspended Solids		198	mg/L	MSD
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	09/19/12	Biochemical Oxygen Demand (5 Day)		6800	mg/L	Industry
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	09/19/12	Chemical Oxygen Demand		15000	mg/L	Industry
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	09/19/12	Total Suspended Solids		1300	mg/L	Industry
007	14" pipe into Westlink Pump Station Wetwell, on S side	10/04/12	Biochemical Oxygen Demand (5 Day)		19000	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	10/04/12	Chemical Oxygen Demand		32800	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	10/04/12	Total Suspended Solids		616	mg/L	MSD
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	12/13/12	Biochemical Oxygen Demand (5 Day)		6400	mg/L	Industry
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	12/13/12	Chemical Oxygen Demand		20000	mg/L	Industry
008	1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST	12/13/12	Total Suspended Solids		340	mg/L	Industry

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
INDUSTRIAL WASTEWATER DISCHARGE PERMIT

PERMIT NO: 0511559802 - 2

EFFECTIVE DATE: December 01, 2010
EXPIRATION DATE: November 30, 2015

ISSUED TO: BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

SIC NUMBER(S): 4953

TOTAL NUMBER OF PERMITTED DISCHARGE POINTS: 2
SAMPLING PT. REF NUMBER(S): 007, 008

In accordance with the provisions of the Federal Pretreatment Regulations (40 CFR 403) and Metropolitan St. Louis Sewer District Ordinance No. 12559, the permittee is hereby authorized to discharge wastewater into the Metropolitan St. Louis Sewer District's sanitary or combined sewer system. All discharges so authorized shall be limited and controlled pursuant to the terms and conditions of this permit.

Noncompliance with any term or condition of this permit shall constitute an ordinance violation. If formal enforcement action is required to gain compliance, the permittee who is found guilty of a violation shall be subject to fine or imprisonment, or both such fine and imprisonment, for each violation. Each day in which any such violation shall continue shall be deemed a separate offense.

Compliance with the terms and conditions of this permit does not relieve the permittee of the obligation to comply with all other applicable pretreatment regulations, standards, or requirements under local, State and Federal laws, including any such regulation, standard, legal requirement, or law that may become effective during the life of this permit.

This permit only authorizes wastewater discharges identified herein. It does not apply to any other discharge.

METROPOLITAN ST. LOUIS SEWER DISTRICT

Mark A. Montague
Manager of Monitoring

Douglas M. Mendoza, P.E.
Mgr. of Industrial Pretreatment

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 007

SAMPLING POINT LOCATION: 14" pipe into Westlink Pump Station Wetwell, on S side

AVERAGE WASTEWATER FLOW (GPD): 216,255

WASTEWATER SOURCE AND CATEGORY: Laundry Waste(Same waste that flows through SP008) + Plant & Equipment Washdown(Transfer station)

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Ammonia (as N)	*****	Daily Avg	Once/3 mo
Arsenic (Total) [mg/L]	.4	Daily Avg	Once/year
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Cadmium (Total) [mg/L]	.7	Daily Avg	Once/year
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/year
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Gross Alpha	*****	Daily Avg	Once/3 mo
Gross Beta	*****	Daily Avg	Once/3 mo
Gross Gamma (as Cesium-137)	*****	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	.4	Daily Avg	Once/year
Mercury (Total) [mg/L]	.01	Daily Avg	Once/year
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Radium-226	*****	Daily Avg	Once/3 mo
Radium-228	*****	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
Uranium (Total)	*****	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** Monitoring Requirement Only

DISCHARGE LIMITATIONS

SAMPLING POINT REFERENCE NUMBER: 008

SAMPLING POINT LOCATION: 1/2" flexible sampling hose 5' above grade off of an 8" discharge pipe on N side of AST

AVERAGE WASTEWATER FLOW (GPD): 217,696

WASTEWATER SOURCE AND CATEGORY: Plant & Equipment Washdown(Transfer Station) + Laboratory Waste

DISCHARGE LIMITATIONS AND SELF-MONITORING REQUIREMENTS

Parameter	Limit *	Limit Type **	Sampling Frequency
Ammonia (as N)	*****	Daily Avg	Once/3 mo
Arsenic (Total) [mg/L]	.4	Daily Avg	Once/year
Biochemical Oxygen Demand (5 Day)	****	Daily Avg	Once/3 mo
Cadmium (Total) [mg/L]	.7	Daily Avg	Once/year
Chemical Oxygen Demand	****	Daily Avg	Once/3 mo
Chromium (Total) [mg/L]	5	Daily Avg	Once/year
Copper (Total) [mg/L]	2.7	Daily Avg	Once/3 mo
Flow [GPD]	***	Daily Avg	***
Gross Alpha	*****	Daily Avg	Once/3 mo
Gross Beta	*****	Daily Avg	Once/3 mo
Gross Gamma (as Cesium-137)	*****	Daily Avg	Once/3 mo
Lead (Total) [mg/L]	.4	Daily Avg	Once/year
Mercury (Total) [mg/L]	.01	Daily Avg	Once/year
Nickel (Total) [mg/L]	2.3	Daily Avg	Once/3 mo
Oil and Grease (Total) [mg/L]	200	Instant	Once/3 mo
Radium-226	*****	Daily Avg	Once/3 mo
Radium-228	*****	Daily Avg	Once/3 mo
Temperature [Deg C]	60	Instant	Once/3 mo
Total Suspended Solids	****	Daily Avg	Once/3 mo
Total Toxic Organics [mg/L]	5.844	Instant	Once/year
Uranium (Total)	*****	Daily Avg	Once/3 mo
Zinc (Total) [mg/L]	3	Daily Avg	Once/3 mo
pH [SU]	11.5	Instant	Once/3 mo
pH [SU]	5.5	Instant	Once/3 mo

* Limits are based on MSD Ordinance 12559 and applicable federal categorical standards. See Section II of the permit conditions for explanation of any adjustments to the published limits made pursuant to Article V, Section 2.B of the Ordinance.

** See Section I.A.2 of the permit conditions.

*** Report a measured or estimated average daily flow for at least one representative operating day per quarter. If additional flow measurements or estimates are made, all must be reported.

**** See Section I.A.11 of the permit conditions.

***** Monitoring Requirement Only

PERMIT CONDITIONS

SECTION I - GENERAL CONDITIONS:

A. MONITORING AND REPORTING REQUIREMENTS:

1. From the effective date of this permit, the permittee shall sample and analyze the discharge, at each of the identified sampling points. The pollutants to be monitored, the limitations, limitation types and minimum sampling frequencies are specified individually for each sampling point. The results of sample analyses and the results of all other self-monitoring activities specified in this permit shall be reported to the District as per paragraph A.9 below.

2. The limitation types, which may be specified in this permit, are defined as follows:

An **INSTANT** limitation is the maximum allowable concentration or mass of the pollutant in a grab sample for all pollutants except pH and temperature. For pH, the INSTANT limitations are the minimum and maximum allowable instantaneous pH values in standard units. For temperature, the INSTANT limitation is the maximum allowable instantaneous temperature in degrees Celsius (centigrade).

A **DAILY AVG** limitation is the maximum allowable concentration or mass of the pollutant in a composite sample collected within a 24-hour period.

A **DAILY MAX** limitation is the maximum allowable concentration or mass of the pollutant in any sample collected within a 24-hour period.

A **MONTHLY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in all daily samples collected within a calendar month.

A **4-DAY AVG** limitation is the maximum allowable average concentration or mass of the pollutant determined by calculating the arithmetic average of the concentrations or masses found in the daily samples collected on four consecutive sampling days. Sampling days are not necessarily consecutive calendar days.

Note: A daily sample is any sample collected within a 24-hour period.

3. Unless specified otherwise in Section II of these conditions all samples, collected to satisfy the monitoring and reporting requirements of this permit, shall be of the following types:

a. Temperature, pH and chlorine residual measurements, when required, shall be made on-site at the points of discharge and those measurements reported as grab sample results except, if continuous monitoring is employed for pH and/or temperature, reporting shall be as per paragraph A.7 below.

b. For oil and grease, total phenols, cyanide, sulfide and volatile organics, when required, samples shall be Grab Samples.

c. For all other pollutants, samples shall be **COMPOSITE SAMPLES** made up by combining a minimum of four individual grab samples within a 24-hour period. The individual grabs must be adequately flow or time proportioned to ensure a composite sample that is representative of that day's discharge.

4. When monitoring is required for Total Toxic Organics (TTO), the TTO result shall be determined by summing all quantifiable values greater than 0.01 mg/l for the applicable toxic organics.
   a. For a discharge subject to a categorical pretreatment standard, the applicable toxic organics are listed in the standard. The standards are contained in 40 CFR 405 through 40 CFR 471.
   b. For all other discharges the applicable toxic organics are all of those, from the list in 40 CFR 401.15, which are or may be present in the discharge.

In addition to reporting the summed TTO result, the permittee shall include, with the self-monitoring report, the analytical value obtained for each toxic organic analyzed.

5. Sampling of all discharges shall be conducted in such a manner as to ensure that the results of individual samples (whether grab or composite) are representative of normal operations and that the results of all samples during the reporting period are representative of the conditions during the reporting period.

6. All sampling and analyses performed to satisfy the monitoring and reporting requirements of this permit shall be performed in accordance with the techniques prescribed in 40 CFR 136 and amendments thereto unless other techniques are prescribed, within this permit, for specific parameters.

7. If the permittee employs continuous monitoring techniques for pH, temperature, and/or lower explosive limit at any sampling point identified in this permit, unintentional and temporary excursions outside the limitations are allowed subject to the provisions of Article X, Subsection Two-D of District Ordinance 12559. The permittee shall include, with each self-monitoring report, a summary of the continuous monitoring data. For each month, the summary shall show all excursions outside the permitted limitations, the elapsed time for each excursion, and the total time for all excursions for temperature, pH, and/or lower explosive limit.

8. If the permittee monitors any of the listed pollutants, using the methods specified in this permit, more often than required by this permit, the results of all such additional monitoring and any additional flow measurements shall be included in the self-monitoring reports.

9. A self-monitoring report (on forms supplied or approved by the District) shall be submitted to the District's Division of Environmental Compliance for each calendar quarter. Each report shall include:
   a. All facility and sample description information required on the District's reporting form.
   b. Analytical results, with dates and times, for all analyzed samples collected within the quarter.
   c. Daily flows, with dates, for all measurements or estimates made within the quarter.
   d. Any certification statements required pursuant to the Special Conditions in Section II.
   e. Any other data or attachments required pursuant to the Special Conditions in Section II.

Each self-monitoring report shall be certified and signed by an individual authorized in accordance with the provisions of Article X, Section Three of District Ordinance 12559. The reports shall be submitted to the District as soon as possible after all required data are available, but no later than 28 days after the end of each quarter.

For the calendar quarter of:	The report must be postmarked no later than:
January 1 through March 31	April 28
April 1 through June 30	July 28
July 1 through September 30	October 28
October 1 through December 31	January 28

A report must be submitted for each calendar quarter even if, for any reason, sampling was not required or was not performed during the quarter. **The first report under this permit is due by January 28, 2011. For non-quarterly self-monitoring requirements, the permit year commences on April 1.**

10. If any sampling performed by the permittee, using the methods specified in this permit, indicates a violation of any permit limitation, the permittee shall notify the District's Division of Environmental Compliance within one business day of becoming aware of the violation. The permittee shall resample the discharge and shall submit the results of the resampling within thirty (30) days of becoming aware of the violation.

11. Unless specified elsewhere in this permit, discharges of Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and Total Suspended Solids (TSS) are not limited under the terms of this permit. However, the monitoring values reported will be used by the District to assess the applicability of extra-strength surcharges under the provisions of the District's Wastewater User Charge Ordinances. Extra-strength surcharges may be applicable when measured values exceed 300 mg/l for BOD, 600 mg/l for COD and/or 300 mg/l for TSS. If the permittee is currently subject to extra-strength surcharge, the BOD, COD and TSS values used for billing, as of the permit effective date, are listed in Section II of the permit conditions. These values are updated periodically and may change during the life of this permit.

B. CHANGE IN DISCHARGE:

1. The permittee shall not significantly increase the average daily volume, or flow rate of discharge or add any significant new pollutants or significantly increase the discharge of existing pollutants set forth in this permit without first having secured an amendment to the permit unless the permit conditions authorize such increase or additions without an amendment.

2. The permittee shall notify the District's Division of Environmental Compliance of any proposed significant new or increased discharge. The permittee shall make the notification at least ten (10) business days prior to the date of the planned increase or addition.

3. As defined in Article II of District Ordinance 12559, significant new or increased discharge means:
   a. Any discharge from a new process or facility or a new source.
   b. Any increase in volume or rate of discharge from an existing process or facility when the new long term average daily volume or rate of discharge will exceed the previous long term average by 20% or more.
   c. Any addition of a priority pollutant or toxic pollutant not previously present or suspected present in the permittee's discharge.
   d. Any addition of a hazardous waste subject to, but not previously reported under the reporting requirements in Article VIII, Section Nine of District Ordinance 12559.
   e. Any increase in mass of an existing regulated pollutant when the new long term average daily mass discharge of that pollutant will exceed the previous long term average by 20% or more.
   f. Any addition of a new pollutant or any increase in mass of an existing pollutant when the discharge of such pollutant may cause or contribute to interference or pass-through as these terms are defined in Article II of District Ordinance 12559.
   g. Any new batch discharges when previous discharges from an existing source at the permitted facility occurred on a continuous basis.

C. PROBLEM DISCHARGE:

1. Problem discharge means any upset, slug discharge, bypass, spill or accident which does or may result in a discharge into the District's system of a prohibited substance; or of a regulated substance in excess of limitations established in this permit and which may: (a) cause interference or pass through; or (b) contribute to a violation of any requirement of the District's NPDES permit; or (c) cause violation of any State or Federal water quality standard.

2. In the event of any problem discharge into the District's system, the permittee shall immediately notify the District, by telephone, of the incident and shall provide such information as may be required at that time in order to assess the impact of the incident on the District's system or on water quality. Within five (5) business days following any such incident, the permittee shall submit to the District's Division of Environmental Compliance a detailed written report which contains a description of the incident and its cause, location within the permittee's facility, exact dates and times of the period of problem discharge and, if not yet corrected, the anticipated time the incident is expected to continue, and steps taken or planned to correct the current incident and to reduce, eliminate and prevent occurrences of future such incidents.

3. Slug discharge control: The permittee shall develop and implement procedures to control slug discharges, as required by the District, and shall notify the District immediately of any changes at the permittee's facilities, not already addressed in the permittee's slug control requirements, which may affect the potential for a slug discharge.

D. BYPASSING PROHIBITED:

The permittee may not bypass any portion of its pretreatment facilities except when necessary to perform essential maintenance and then only if the bypass will not result in a violation of applicable pretreatment standards or requirements. Any other pretreatment facility bypass is prohibited unless:
   a. The bypass is unavoidable to prevent loss of life, personal injury or severe property damage;
   b. There are no feasible alternatives to the bypass; and
   c. In the event of an anticipated bypass, advance notice is provided to the District's Division of Environmental Compliance.

E. PERMIT REVOCATION:

This permit may be revoked after thirty (30) days notice to the permittee for cause including, but not limited to, the following causes:
   a. A violation of any term or condition of this permit.
   b. A misrepresentation or failure to fully disclose all relevant facts in obtaining this permit.

F. PERMIT TERMINATION OR MODIFICATION:

1. This permit may be modified, after thirty (30) days notice to the permittee following promulgation of new State, Federal or local regulations to ensure compliance with the effective dates contained in any such new regulations.

2. Whenever any discharge covered by this permit is permanently eliminated, or when the circumstances upon which the permit was based pursuant to MSD Ordinance 12559, Article VI, Subsection 3.A, change, this permit will be terminated or modified upon verification of the changes by the District's Division of Environmental Compliance.

G. PERMIT RENEWAL:

The permittee shall apply for renewal of this permit at least one hundred eighty (180) days prior to the expiration date contained herein.

H. PERMIT TRANSFER:

This permit may not be transferred or reassigned. If the premise covered by this permit is sold or otherwise transferred to a new owner, the new owner shall apply for a new permit at least ten (10) days prior to the transfer and shall abide by all of the provisions of District Ordinance 12559 until the District issues a new permit or denies the application.

I. RIGHT OF ENTRY:

In order to ensure compliance with the provisions of this permit, District Ordinances and applicable State and Federal regulations, District representatives may inspect a permittee's treatment, pretreatment or discharge control facilities, or any process or any area of the permittee's premise which may be a source of any discharge or a source of any pollutants contained in any discharge into the District's wastewater system; conduct sampling of such facilities, processes or areas; and examine or copy any permittee's records related to such discharges. Any duly authorized representative of the District, upon presentation of proper credentials and after execution of appropriate confidentiality agreements, shall be permitted access to appropriate areas of the permittee's premises without prior notice for these purposes. A representative of the permittee shall, if appropriate, accompany the District representative while the work is being performed and shall assure that all applicable safety rules are being observed by the District's representative.

J. RECORDS RETENTION:

The permittee shall retain and preserve, for not less than five (5) years, all records, books, documents, memoranda, reports, sample analysis results, correspondence and any and all summaries thereof relating to the monitoring, sampling and chemical analyses of the permittee's discharge made by or on the permittee's behalf.

K. DEFINITIONS:

Unless the context specifically indicates otherwise, the meaning of terms used in this permit shall be as defined in Article II of District Ordinance 12559.

L. SEWER USE ORDINANCE:

Unless the context specifically indicates otherwise, the permittee is subject to all provisions of District Sewer Use Ordinance 12559.

M. NOTIFICATION AND REPORTING:

1. All notifications and reports required by this permit shall be directed to:

   Metropolitan St. Louis Sewer District
   Division of Environmental Compliance
   10 East Grand Avenue
   St. Louis, Missouri 63147-2913

2. Emergency notifications may be made 24-hours a day, 7 days a week by calling the District's dispatcher at

(314) 768-6260.

3. During normal business hours, notifications may be made by calling the District's Division of Environmental Compliance at (314) 436-8710.

SECTION II- SPECIAL CONDITIONS:

These Special Conditions may supplement and/or amend the standard terms of this permit or the General Conditions in Section I. Where there is any perceived conflict between a Special Condition and either the standard permit terms or the General Conditions of Section I, the Special Condition shall govern.

A. SPECIAL SAMPLING AND ANALYTICAL PROCEDURES

A.1. Non-Standard Special Sampling and Analytical Procedures

Due to accessibility problems at sampling point 008, samples may also be collected at sampling point 007 by the District and the permittee. Both sampling points convey the same discharge. Results from either sampling point are considered equivalent for compliance monitoring.

B. SPECIAL CERTIFICATION AND REPORTING REQUIREMENTS

B.1. NPDES Discharge Point

This permit does not regulate discharges at MSD sampling points 002, 003, and 004. These discharges are subject to State regulation under NPDES permit number MO-0112771. Should the permittee plan to reroute any portion of the flow currently discharged under the NPDES permit to District sewers, the permittee shall notify the District's Department of Environmental Compliance at least ten (10) days prior to the date of the planned change.

B.2. Radioactive Discharge Reporting Requirements

Permittee is authorized to discharge not more than the following amount of radioactive material per year to the District's sanitary sewers:

(1) For materials subject to licensing by the Nuclear Regulatory Commission:
5 curies Hydrogen-3
1 curie Carbon-14
1 curie for all other radioactive materials combined
(2) For all other materials:
1 curie for all radioactive materials combined

Excreta from individuals undergoing medical diagnosis or treatment with radiological materials shall be exempt from this prohibition. Any radioactive material discharged to the wastewater system must be readily soluble (or readily dispersible biological material) in water. This authorized level may be modified at any time should the District determine that permittee's discharge of radioactive materials, either alone or in conjunction with other user's discharges of radioactive materials, causes interference as defined in MSD Ordinance 12559.

The permittee shall include with each quarterly self-monitoring report, on forms supplied by the District, a radioactive materials discharge report. The report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The permittee shall also certify compliance with state and federal regulations for disposal of radioactive material by release into sanitary sewage.

C. SPECIAL BILLING REPORTING REQUIREMENTS

C.1. Reporting Non-Metered Water Consumption

For billing purposes, the permittee shall submit monthly reports of the volume of leachate discharged through sampling point(s) 007 and 008. These reports shall be sent to:

Toni McGarry
MSD Finance Department
2350 Market St.
St. Louis, MO 63103

The reports shall be sent within 15 days of the end of each month. Copies of the monthly volume reports shall also be included with the routine quarterly self-monitoring reports required pursuant to General Condition I.A.

C.2. Reporting Changes Which Might Impact Surcharge

Pursuant to District Wastewater User Charge Ordinances, the permittee is currently subject to extra-strength surcharge billing for Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD) and/or Total Suspended Solids (TSS). The permittee's current surcharge billing values are: 79 mg/l for BOD, 760 mg/l for COD and 50mg/l for TSS. These values will continue to be used until replaced by updated certified data in accordance with the procedures in the ordinance.

THIS IS THE LAST PAGE OF THIS PERMIT

Doug Mendoza

Bridgeton Landfill

From: Doug Mendoza
Sent: Monday, November 04, 2013 9:36 AM
To: Hunter King (hking@lbgkcmo.com)
Cc: Darin Lewis; Steve Grace; Sara Kammerer; Brian G. Gibson
Subject: FW: Bridgeton hauled waste update for Monday 11/4/13

Hunter,

I need to be copied on all such emails. I am the one who does the scheduling of manpower, tracking costs, etc.

Regarding the shorter delivery schedule, since this is being done without the required one week prior notice, MSD will be billing Bridgeton Landfill for the entire prior agreed delivery time of 3 pm to 6 pm. It looks like this is a one or two day situation. However, if you know that the shorter/smaller delivery will continue past this coming Sunday, you may wish to modify the schedule for next week.

Doug Mendoza
MSD Mgr of Industrial Pretreatment

From: Darin Lewis
Sent: Monday, November 04, 2013 9:28 AM
To: Doug Mendoza
Subject: FW: Bridgeton hauled waste update for Monday 11/4/13

From: Hunter King [mailto:hking@lbgkcmo.com]
Sent: Monday, November 04, 2013 8:55 AM
To: Darin Lewis; Brian G. Gibson; Sara Kammerer; Steve Grace
Cc: 'Dan Feezor'; bpower@republicservices.com; 'David Eastvold'; 'John Powell'; 'Paul Linscott'; Bill Abernathy
Subject: Bridgeton hauled waste update for Monday 11/4/13

Everyone, due to a shortage of material produced through last night we will only be able to haul out 23 loads to Bissell rather than the normal 26 loads. The last 3 loads will be need to be cut. This will shorten our hauling timeframe today from 5:30p to 4:00p and our total hauled volume out is estimated to be 172,500 gallons.
If you have any questions about today's planned hauling, give me a call/reply at your earliest convenience.

Hunter King
Environmental Engineer I
Leggette, Brashears, and Graham, Inc.
405 East 19th Avenue Suite A2
Kansas City, MO 64116
Office: (816) 421-7766 ext. 105
Direct: (816) 783-5855
Cell: (478) 718-9272
hking@lbgkcmo.com

Doug Mendoza

From: Christina Large
Sent: Friday, November 01, 2013 2:33 PM
To: Doug Mendoza
Subject: FW: Letter from MSD to Republic Services - Bridgeton Landfill
Attachments: BRIDGETON LANDFILL LLC 1-10-2013 Order.pdf

From: Christina Large **On Behalf Of** Sunshine Requests
Sent: Friday, October 25, 2013 12:16 PM
To: 'Mike Pauli'
Cc: Sunshine Requests
Subject: RE: Letter from MSD to Republic Services - Bridgeton Landfill

Mr. Pauli,

As requested, attached is the Cease and Desist Order entered on January 10, 2013.

If you have any further questions or requests please submit them to sunshinerequests@stlmsd.com.

Thank you,

Christina Large
Treasury Associate
Metropolitan St. Louis Sewer District
2350 Market Street
St. Louis, MO 63103
314-768-2745
314-768-2701

From: Mike Pauli [mailto:mike.pauli@anteagroup.com]
Sent: Friday, October 25, 2013 9:01 AM
To: Sunshine Requests
Subject: Letter from MSD to Republic Services - Bridgeton Landfill

Good Morning.

I'm writing to request a copy of a letter sent by MSD to Republic Services – Bridgeton Landfill. I believe the letter may have been dated January 10th, 2013 – or somewhere around that timeframe. The letter was issued to Republic due to exceedances of various chemicals and/or water quality parameters from the landfill leachate that was discharged to the Missouri River Treatment Facility (MRTF). The context of the letter was to notify Republic that they could no longer discharge their leachate to MRTF until the parameters required by MSD were met.

If you need additional context for this request, please let me know. I can be reached via email or either of the phone numbers below.

Thank you.

Michael C. Pauli, PE | Senior Project Manager | USA
Antea®Group
Direct: 636.442.4773 | Mobile: 314.409.8545
150 St. Peters Centre Blvd., Suite C St. Peters, Missouri 63376
mike.pauli@anteagroup.com | www.anteagroup.com

antea group

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MSD

THE METROPOLITAN ST. LOUIS SEWER DISTRICT

CEASE AND DESIST ORDER

IN THE MATTER OF

BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

LEGAL AUTHORITY

The following findings are made and order issued pursuant to the authority vested in the, Executive Director of the Metropolitan St. Louis Sewer District, under Article IX of MSD's Sewer Use Ordinance No. 12559. This order is based on findings of violations of the conditions of MSD's Sewer Use Ordinance No. 12559 and the Industrial Wastewater Discharge Permit No. 0511559802 issued under Article VI of the Ordinance.

FINDINGS

1. Bridgeton Landfill discharges wastewater into the sanitary sewer system of the Metropolitan St. Louis Sewer District.

2. Bridgeton Landfill is a "significant industrial user" as defined by 40 CFR 403.3(t).

3. Bridgeton Landfill is subject to the terms and limitations contained in MSD's Sewer Use Ordinance No. 12559.

4. Bridgeton Landfill is subject to the terms and limitations contained in Industrial Wastewater Discharge Permit No. 0511559802 which has been in full force and effect at all times during the periods referenced below.

5. Pursuant to the above-referenced ordinance and permit, data is routinely collected by or submitted to MSD on the compliance status of Bridgeton Landfill.

6. These data show that, since at least March 7, 2012 and continuing until the present, Bridgeton Landfill has violated the terms of its wastewater discharge permit in the following manner:

   a. Bridgeton Landfill failed to notify MSD of Bridgeton Landfill's significant increase in the discharge of biochemical oxygen demand (BOD), chemical oxygen demand (COD), and total suspended solids (TSS).

      This is in violation of General Condition B of Bridgeton Landfill's permit, and of MSD Ordinance 12559, Article VIII, Section Six.

   b. Bridgeton's violation by discharging increased BOD's into MSD's system has caused MSD's plant to exceed it discharge limit under MSD's Missouri State Operating Permit. This inhibits or disrupts the District's wastewater system.

      This is in violation of MSD Ordinance 12559, Article V, Section One, subsection A, as provided for in General Condition L of Bridgeton Landfill's permit.

ORDER

THEREFORE, BASED ON THE ABOVE FINDINGS, **BRIDGETON LANDFILL** IS HEREBY ORDERED TO:

1. Within 24 hours of receiving this order, cease the discharge of wastewater into MSD's sanitary sewer containing BOD levels above the average levels discharged by Bridgeton Landfill in the year 2011 and earlier. Bridgeton Landfill's surcharge level for BOD was listed at 79 mg/L in its permit, and last certified at 312 mg/L, per May 6, 2011 letter to Bridgeton Landfill.

2. Submit a letter indicating compliance to MSD's Division of Environmental Compliance not later than seven days following the cessation of discharge of Bridgeton Landfill into MSD's sanitary sewer.

All reports and notices required by this order shall be sent, in writing, to the following address:

Christopher J. Bulmahn
Environmental Engineer
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, MO 63147

This order does not constitute a waiver of Bridgeton Landfill's wastewater discharge permit or MSD's Sewer Use Ordinance, which remain in full force and effect. The Metropolitan St. Louis Sewer District reserves the right to seek any and all remedies, including recovery of fines assessed against MSD for violations of its Missouri State Operating Permit, available to it under Article IX of Sewer Use Ordinance No. 12559 for any violation, including those cited in this order.

Failure to comply with the requirements of this order may subject Bridgeton Landfill to having its connection to the sanitary sewer sealed by MSD, and assessed the costs therefor.

Failure to comply with the requirements of this order shall also constitute a further violation of MSD's Sewer Use Ordinance and may subject Bridgeton Landfill to civil or criminal penalties or such other appropriate enforcement response as may be appropriate.

This order, entered this 10th day of January, 2013, shall be effective upon receipt by Bridgeton Landfill.

THE METROPOLITAN ST. LOUIS SEWER DISTRICT

Approved at to Form:

Susan M Myers

Susan Myers, General Counsel

By Jonathan Sprague

Jonathan Sprague, Interim Executive Director
2350 Market St.
St. Louis, MO 63103
(314) 768-6200

Doug Mendoza

Bridgeton Landfill

From: John Lodderhose
Sent: Friday, November 01, 2013 9:53 AM
To: Cooper, Ivan
Cc: Kamp, Kevin; Amy Dill (adill@etenv.com); bpower@republicservices.com; Merrigan, Jessie (LG) (JMerrigan@LATHROPGAGE.COM); Doug Mendoza
Subject: RE: Update on Bridgeton

MSD has a meeting scheduled with Bridgeton Landfill next Thursday (11/7) to discuss the UVT issue. I will not have any additional information until after that meeting.

The only other parameters of concern are Arsenic which is close to the MSD Ordinance limit of 0.4 mg/L and possibly ammonia if we are required to remove ammonia at our wastewater treatment plant in the future. Ammonia may be a surcharge parameter in the future for concentrations greater than normal domestic wastewater which is about 20 mg/L of ammonia. It looks like most of the recent data is below that level.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Cooper, Ivan [mailto:icooper@cecinc.com]
Sent: Thursday, October 31, 2013 1:54 PM
To: John Lodderhose
Cc: Kamp, Kevin; Amy Dill (adill@etenv.com); bpower@republicservices.com; Merrigan, Jessie (LG) (JMerrigan@LATHROPGAGE.COM)
Subject: Update on Bridgeton

Hi John,
Any information available on the discharge percentage for the UV transmittance from the Bridgeton Landfill, especially ranges of discharge and surcharge, if any?

Did you confirm that there would be no additional discharge concerns with the constituent concentrations that we sent you from the pilot test data? Another cop is included for your reference.

Thanks,
Ivan

Ivan A. Cooper, PE, BCEE / Principal
National Water/Wastewater Practice Leader
Civil & Environmental Consultants, Inc.
1900 Center Park Drive, Suite A, Charlotte, NC 28217
Toll-Free: (855) 859-9932
Main: (980) 237-0373
Fax: (980)237-0372
Mobile: (704) 226-8074 · http://www.cecinc.com
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Doug Mendoza

Bridgeton Landfill

From: John Lodderhose
Sent: Friday, November 01, 2013 9:45 AM
To: Ken Gambaro; Doug Mendoza
Cc: Todd Heller
Subject: RE: Bridgeton Pilot Plant Data

Ken, I will tell them that ammonia may be a surcharge parameter in the future if it is over normal strength domestic waste (approximately 20 mg/L). I don't think the metals are a problem for land application but Arsenic will be close to the inhibition levels for anaerobic digestion. We have warned them about Arsenic several times.
Please let me know if you have any other concerns.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Ken Gambaro
Sent: Thursday, October 24, 2013 1:27 PM
To: John Lodderhose; Doug Mendoza
Subject: RE: Bridgeton Pilot Plant Data

Ammonia is a concern if it will push us into treating for ammonia in our effluent. Are there any other metals of concern that will be a problem with land application?

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Coldwater Creek WWTP
314-646-2431
Missouri River WWTP
314-646-2421

From: John Lodderhose
Sent: Thursday, October 24, 2013 12:29 PM
To: Doug Mendoza; Ken Gambaro
Subject: RE: Bridgeton Pilot Plant Data

Ken, I have told Ivan about the UVT limitation of 65%. He wanted to make sure that we did not have a problem with any other parameters. I told him that they were close to the Arsenic ordinance limitation but I need to know if you are concerned about anything else.
Let me know.
Thanks

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: John Lodderhose
Sent: Tuesday, October 22, 2013 7:49 AM
To: Doug Mendoza; Ken Gambaro
Subject: FW: Bridgeton Pilot Plant Data

OCTOBER 2013

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, October 31, 2013 8:27 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good morning,

Just to update you, the reciriculator pump has been installed and is operational. The team will run the pump today and plans to resume discharge to the Missouri River Treatment Facility tomorrow morning upon confirming compliant pH and benzene levels.

Please let us know if you have any questions or need any additional information.

Thank you,
Jessie

Any U.S. federal tax advice contained in this communication (including any attachments or enclosures) was not intended or written by the author to be used, and cannot be used, for the purpose of (1) avoiding penalties that may be imposed on a taxpayer or (2) promoting, marketing, or recommending to another party any transaction or other matter addressed herein.

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From: Merrigan, Jessie
Sent: Wednesday, October 30, 2013 11:00 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

Doug Mendoza

BRIDGETON LANDFILL

From: Joe Pavlich
Sent: Thursday, October 31, 2013 12:27 PM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: Meter reading

Doug; the meter reading on 10/31/13 at 10:00 A.M. was 1377238 with 0 gals. discharge.

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table			
Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, October 20, 2013	Batch 316-109	22,500	22,500
	Batch 316-110R	142,500	142,500
Monday, October 21, 2013	Batch 316-110R	22,500	22,500
	Batch 316-111	142,500	142,500
Tuesday, October 22, 2013	Batch 316-111	22,500	22,500
	Batch 316-112	150,000	150,000
Wednesday, October 23, 2013	Batch 316-112*	22,500	22,500
	Batch 316-113R	127,500	127,500
Thursday, October 24, 2013	Batch 316-113R	22,500	22,500
	Batch 316-114	150,000	150,000
Friday, October 25, 2013	Batch 316-114	22,500	22,500
	Batch 316-115R	142,500	142,500
Saturday, October 26, 2013	Batch 316-115R	22,500	22,500
	Batch 316-116	150,000	150,000

Starting Date	*10/20/2013 7:00*
Ending Date	*10/27/2013 7:00*

** Upon QC review, it was discovered that Load 2 was greater than the quantity stated on the waste receipt. However due to conservative rounding on Loads 1 and 3, the three-load total was still less than 22,500 gal.*

MSD - Missouri River Tracking Table								
Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, October 20, 2013	Batch 316-110R	-	10/20/2013 7:00	10/21/2013 7:00	24.0	840	0.0	8.04
Monday, October 21, 2013	Batch 316-111	-	10/21/2013 7:00	10/22/2013 7:00	24.0	840	0.0	7.73
Tuesday, October 22, 2013	NA	-	10/22/2013 7:00	10/23/2013 7:00	24.0	840	0.0	7.46
Wednesday, October 23, 2013	NA	-	10/23/2013 7:00	10/24/2013 7:00	24.0	840	0.0	6.57
Thursday, October 24, 2013	NA	-	10/24/2013 7:00	10/25/2013 7:00	24.0	840	0.0	7.04
Friday, October 25, 2013	NA	-	10/25/2013 7:00	10/26/2013 7:00	24.0	840	0.0	NA
Saturday, October 26, 2013	NA	-	10/26/2013 7:00	10/27/2013 7:00	24.0	840	0.0	6.43

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] Title: Environmental Specialist Date: 10/30/13

Weekly Volume Summary - Week 27 (10-20-13 through 10-26-13).xlsx

10-31-13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/21/2013 7:00:00 AM	10/20/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/21/13

MSD Daily Flow Reading, ending 10-21-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/22/2013 7:00:00 AM	10/21/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/22/13

MSD Daily Flow Reading, ending 10-22-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/23/2013 7:00:00 AM	10/22/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment	
Reading Adjustment:	0
Flow During Adjustment:	0

Comments

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Jan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/23/13

MSD Daily Flow Reading, ending 10-23-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/24/2013 7:00:00 AM	10/23/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/24/13

MSD Daily Flow Reading, ending 10-24-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/25/2013 7:00:00 AM	10/24/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 10/25/13

MSD Daily Flow Reading, ending 10-25-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/26/2013 7:00:00 AM	10/25/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/26/13

MSD Daily Flow Reading, ending 10-26-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/27/2013 7:00:00 AM	10/26/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 10/27/13

12
10-22-13

OB-316-109 Bridgeton Landfill

Fill Data

Fill Start Date	10/18/2013
Fill Start Time	18:20
Fill Stop Date	10/19/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	10/18/2013
Process Start Time	20:48
Process Stop Date	10/19/2013
Process Stop Time	05:36

Approval Data

Approval Details	NAL 13026-732
Test Results	Benzene = 54 ppb
Reprocessed Batch	

Notes

MEK = 26,000 ppb

Saturday, October 26, 2013

OB-316-110R

Bridgeton Landfill

Fill Data

Fill Start Date	10/19/2013
Fill Start Time	17:40
Fill Stop Date	10/19/2013
Fill Stop Time	23:46
Process Battery	316 AST

Processing Data

Process Start Date	10/19/2013
Process Start Time	20:00
Process Stop Date	10/20/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL 13026-735
Test Results	Benzene = 67 ppb
Reprocessed Batch	1st benzene = 110 ppb

Notes

MEK = 26,000 ppb.

Saturday, October 26, 2013

OB-316-111 *Bridgeton Landfill*

Fill Data

Fill Start Date	10/20/2013
Fill Start Time	18:18
Fill Stop Date	10/21/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	10/20/2013
Process Start Time	20:00
Process Stop Date	10/21/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL 13026-737
Test Results	Benzene = 62 ppb
Reprocessed Batch	

Notes

MEK = 28,000 ppb

Saturday, October 26, 2013

OB-316-112 Bridgeton Landfill

Fill Data

Fill Start Date	10/21/2013
Fill Start Time	18:15
Fill Stop Date	10/21/2013
Fill Stop Time	23:58
Process Battery	316 AST

Processing Data

Process Start Date	10/21/2013
Process Start Time	21:27
Process Stop Date	10/22/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL13026-739
Test Results	Benzene 52 ppb
Reprocessed Batch	

Notes

MEK = 22,000 ppb. Processing started at 10 ft level.

Saturday, October 26, 2013

OB-316-113R

Bridgeton Landfill

Fill Data

Fill Start Date	10/22/2013
Fill Start Time	18:14
Fill Stop Date	10/22/2013
Fill Stop Time	23:58
Process Battery	316 AST

Processing Data

Process Start Date	10/22/2013
Process Start Time	21:32
Process Stop Date	10/23/2013
Process Stop Time	09:00

Approval Data

Approval Details	NAL13026-742
Test Results	Benzene 100 ppb
Reprocessed Batch	1st benzene = 150 ppb

Notes

MEK = 53,000 ppb. 1 blower started on 10/22/13 at 9:32p, 2nd blower started on 10/23/13 at 6:35a. Amps reduction on both blowers started on 10/23/13 at 9:00a.

Saturday, October 26, 2013

OB-316-114 *Bridgeton Landfill*

Fill Data

Fill Start Date	10/23/2013
Fill Start Time	18:20
Fill Stop Date	10/23/2013
Fill Stop Time	22:06
Process Battery	316 AST

Processing Data

Process Start Date	10/23/2013
Process Start Time	19:10
Process Stop Date	10/24/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL13026-746
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

MEK = 27,000 ppb. Processing started at 9.5 ft level.

Saturday, October 26, 2013

OB-316-115R

Bridgeton Landfill

Fill Data

Fill Start Date	10/24/2013
Fill Start Time	18:20
Fill Stop Date	10/24/2013
Fill Stop Time	23:10
Process Battery	316 AST

Processing Data

Process Start Date	10/24/2013
Process Start Time	20:00
Process Stop Date	10/25/2013
Process Stop Time	06:20

Approval Data

Approval Details	NAL13026-749
Test Results	Benzene 80 ppb
Reprocessed Batch	1st benzene = 110 ppb

Notes

MEK = 29,000 ppb. 2nd blower turned on 10/25/13 at 5:30a.

Saturday, October 26, 2013

OB-316-116 *Bridgeton Landfill*

Fill Data

Fill Start Date	10/25/2013
Fill Start Time	18:10
Fill Stop Date	10/25/2013
Fill Stop Time	22:35
Process Battery	316 AST

Processing Data

Process Start Date	10/25/2013
Process Start Time	20:00
Process Stop Date	10/26/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-750
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

MEK = 28,000 ppb. Both blowers operated all night.

Saturday, October 26, 2013

Table 1
VOCs and SVOCs
July 2013 - October 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-110R	10/20/2013	Pace	Validated	60155876	ND
316-109	10/19/2013	Pace	Validated	60155875	ND
316-108	10/18/2013	Pace	Validated	60155819	ND
316-107	10/17/2013	Pace	Validated	60155721	ND
316-106	10/16/2013	Pace	Validated	60155621	ND
316-105	10/15/2013	Pace	Validated	60155501	ND
316-104	10/14/2013	Pace	Validated	60155410	ND

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	pH, field	Solids, total suspended	Aluminum
					NA	NA	NA	NA	NA	NA	NA	NA	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	pH units	mg/l	mg/l
316-110R	10/20/2013	Pace	Validated	60155876	23400	93100 *	697	639	ND	5.4	5.73	3940	7
316-109	10/19/2013	Pace	Validated	60155875	30500	73200	709	657	ND	5.4	6.01	3800	6.69
316-108	10/18/2013	Pace	Validated	60155819	32400	71200	752 *	442	ND	5.4	5.38	5260	5.91
316-107	10/17/2013	Pace	Validated	60155721	38000	81900 *	750	522	ND	5.4	5.76	4960	8
316-106	10/16/2013	Pace	Validated	60155621	23200 *	75600 *	695	594	ND	5.5	5.72	4380	7.53
316-105	10/15/2013	Pace	Validated	60155501	34300	66800	707 *	342	ND	5.5	5.82	4560	9.4
316-104	10/14/2013	Pace	Validated	60155410	31200	70500	724	420	5.8	5.5	5.68	3660	5.78

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron	Lead
					Total	Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-110R	10/20/2013	Pace	Validated	60155876	ND	1.02	ND	ND	0.356	0.0560	ND	1120	0.188
316-109	10/19/2013	Pace	Validated	60155875	ND	0.937	ND	ND	0.348	0.0530	ND	1080	0.189
316-108	10/18/2013	Pace	Validated	60155819	ND	0.921	ND	ND	0.368	0.0527	ND	1130	0.184
316-107	10/17/2013	Pace	Validated	60155721	ND	0.934	ND	ND	0.36	0.0517	ND	1130	0.193
316-106	10/16/2013	Pace	Validated	60155621	ND	0.903	ND	ND	0.349	0.0508	ND	1010	0.179
316-105	10/15/2013	Pace	Validated	60155501	ND	0.775	ND	ND	0.316	0.0494	ND	1050	0.183
316-104	10/14/2013	Pace	Validated	60155410	ND	0.84	ND	ND	0.298	0.0475	ND	1080	0.137

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Mercury	Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-110R	10/20/2013	Pace	Validated	60155876	ND	0.122	ND	ND	ND	15.5
316-109	10/19/2013	Pace	Validated	60155875	0.00069	0.114	ND	ND	ND	16
316-108	10/18/2013	Pace	Validated	60155819	0.0046	0.111	ND	ND	ND	17.1
316-107	10/17/2013	Pace	Validated	60155721	0.00080	0.112	ND	0.0201	ND	15.2
316-106	10/16/2013	Pace	Validated	60155621	0.00074	0.119	ND	ND	ND	14.9
316-105	10/15/2013	Pace	Validated	60155501	0.0084	0.107	ND	ND	ND	13.5
316-104	10/14/2013	Pace	Validated	60155410	0.00044	0.105	ND	ND	ND	13.8

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, October 30, 2013 11:00 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. The facility is continuing to work on upgrading the recirculator pump. We will keep you updated on the progress of that work and the anticipated schedule to resume discharge to the Missouri River Treatment Facility.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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Doug Mendoza

BRIDGETON LANDFILL

From: Ken Gambaro
Sent: Wednesday, October 30, 2013 9:30 AM
To: Hunter, Gary L.
Cc: Todd Heller; John Lodderhose; Doug Mendoza
Subject: RE: UV Treatment with added lamps

Our current worst case design is 55% UVT, so with the added bulbs we can achieve the same level of treatment at 52% UVT. When we talked Monday, we discussed that normal average design is 65% UVT. Does this mean that we can allow the landfill to drop our UVT 3% overall, to 62%?

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Missouri River WWTP
314-646-2421
Coldwater Creek WWTP
314-646-2431

From: Hunter, Gary L. [mailto:HunterGL@bv.com]
Sent: Wednesday, October 30, 2013 9:18 AM
To: Ken Gambaro
Cc: Todd Heller; John Lodderhose; Doug Mendoza
Subject: RE: UV Treatment with added lamps

Yes ..design numbers. I added the lamps in .kept the design flow at 80 mgd then adjusted the transmittance to match the existing design dose.

From: Ken Gambaro [mailto:kmgamb@stlmsd.com]
Sent: Wednesday, October 30, 2013 8:10 AM
To: Hunter, Gary L.
Cc: Todd Heller; John Lodderhose; Doug Mendoza
Subject: UV Treatment with added lamps

Gary –

You stated that the additional lamps will allow treatment of 80 MGD at 52% UVT. Is this based on the current design treating 80 MGD at 55% UVT?

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Coldwater Creek WWTP
314-646-2431
Missouri River WWTP
314-646-2421

I checked on the UV system. Each channels can be expanded by 64 lamps (32 lamps per bank or 4 additional modules per bank) for a total of an additional 196 lamps. With these additional lamp the system can treat 80 mgd to around 52 percent transmittance. Based on the length of the channels we do not have any additional room for addition banks in each channel. So that is about the maximum we can get out of the existing system/configuration.

I have also projected operation and maintenance costs from 52 percent (based on the additional lamps) transmittance to 65 percent transmittance. I have also provided an equation that given for a given transmittance to predict annual operating costs. These cost are only related to the UV system and do not reflect any additional operating costs at the plant. So to determine the total cost these numbers would probably need to be adjusted by a factor or 1.3. to 1.6. If we use the equation..it would predict around $3.2 million per year at a 20 percent transmittance.

Look forward to visiting at 11 am. Was there something else I needed to prepare for our meeting?
Gary

-response to NOV for sample taken 9/25/13

Bridgeton Landfill, LLC

1003803000

October 28, 2013

Mr. Tom Boehm
Environmental Engineering Associate
Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Notice of Violations - Wastewater Discharge Permit No. 0511559802-2
For Premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Mr. Boehm:

Bridgeton Landfill, LLC, is providing information in response to the referenced correspondence dated September 26, 2013 and forwarded to the facility. The Notice of Violation (NOV) was issued as a result of an apparent violation of the facility's wastewater discharge limitation for pH as measured by Metropolitan St. Louis Sewer District (MSD) on September 25, 2013.

The September 26, 2013 NOV requires specific actions to be taken by Bridgeton Landfill, LLC in response to its issuance. The actionable requests are restated below, followed by Bridgeton Landfill, LLC's responses:

1. **MSD Required Action** – *"..., we understand that Bridgeton Landfill representatives do not perform calibration, but simply check their meter against a pH 4 Standard. We suggest using a meter that is readily calibrated in the field using either 4 and 7 Standards ... or 7 and 10 Standards."*

   Response - Subsequent to field issuance of the NOV to Bridgeton Landfill, LLC, a grab sample of the discharge was obtained by MSD. Readings of pH of the sample were measured concurrently by MSD and FEI personnel, with MSD's instrument indicating a pH value of 5.41 su (standard units) and Bridgeton Landfill, LLC's instrument indicating a pH value of 5.73 su.

   The September 26, 2013 NOV acknowledged that there were conflicting results of the independent pH measurements of the grab sample, but the Required Action does not accurately describe the pH calibration protocol used for the Bridgeton Landfill instrument. A beginning-of-day calibration check is performed every morning (prior to sampling) using a pH 4.00 Standard in accordance with the manufacturer's instructions. If the check indicates any value other than 4.00, the instrument is calibrated and rechecked against the Standard. The calibration is

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repeated as necessary. An end-of-day calibration check is also performed every day once the day's sampling has been completed.

Since issuance of the field NOV, Bridgeton Landfill, LLC has revised its pH calibration protocol to include the use of pH 4.00 and pH 7.00 Standards, in accordance with the manufacturer's instructions, as suggested by MSD.

2. **MSD Required Action** – *"Submit a report of corrective actions ... In the report indicate which corrective actions are initiated and which are still to come, and include plans for additional sampling to verify a return to compliance."*

   Response – Corrective actions to minimize the potential for future violations of the facility's wastewater pH discharge limitation, initiated since issuance of the September 25, 2013 field NOV, include:

   - A change in calibration protocol for Bridgeton Landfill, LLC's multi-parameter instrument. Both pH 4.00 and pH 7.00 Standards are now used to check/calibrate the pH sensor of the instrument. The facility will continue to check/calibrate the instrument in accordance with the manufacturer's instructions prior to measuring pH of (and collecting samples from) the 96k AST; discharge from the AST will be resumed upon receipt of a compliant pH reading and a compliant benzene result from on-site lab analysis, unless there are facility operational issues or MSD lift station tasks being performed at the time that would prevent such.
   - A change in the pH adjustment process for material designated for direct discharge to MSD. Previously, a 25% NaOH solution was used to adjust the pH of the material, introduced into the facility's 316k AST during the aeration process. This pH-adjusted material was both hauled off-site from the 316k AST and transferred over to the 96k AST for eventual direct discharge. Application of the solution has been reconfigured such that it is introduced only into the material being transferred to the 96k AST, allowing for more efficient use of the caustic solution. Mixing/reaction between the caustic and the treated leachate occurs both in the transfer line and by using a recirculating pump/piping system at the 96k AST. This continuous mixing/recirculating maximizes the representativeness of the pH values (and benzene concentrations) measured in the 96k AST.

3. **MSD Required Action** – *"Submit all additional sampling results to MSD..."*

   Response – Bridgeton Landfill, LLC tracks pH data on a daily basis for the material contained within both the 316k AST and the 96k AST. A PDF of the tracking spreadsheet for the 96k AST is attached. Readings of pH associated with the 96k AST are obtained from grab samples collected at Sample Point SP008 under normal operating conditions. Measurements are made immediately upon

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filling a sample container by immersing the multi-parameter instrument in the container. Parameters are allowed to stabilize then the pH value is recorded.

We trust the information provided in this response meets MSD's requirements at this time. If you have any questions or comments regarding this correspondence, please contact me at 314-744-8165 at your convenience.

Sincerely,

Brian J. Power

Brian Power
Environmental Manager

Attachment: *Bridgeton pH Values – 96k*

Cc: Dan Feezor
Jessie Merrigan
Ed Galbraith
Bill Abernathy

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Batch ID	Date	pH	pH Compliant?
96-001-D	08/09/13	7.66	Yes
96-002	08/10/13	6.36	Yes
96-003	08/11/13	7.53	Yes
96-004	08/12/13	6.55	Yes
96-005	08/13/13	5.98	Yes
96-006	08/14/13	5.72	Yes
96-007	08/15/13	5.98	Yes
96-008	08/16/13	6.50	Yes
96-009	08/17/13	5.74	Yes
96-010	08/18/13	5.80	Yes
96-011	08/19/13	5.70	Yes
96-012	08/20/13	5.80	Yes
96-013	08/21/13	5.72	Yes
96-014	08/22/13	5.75	Yes
96-015	08/23/13	5.80	Yes
96-016	08/24/13	5.83	Yes
96-017	08/25/13	5.88	Yes
96-018	08/26/13	5.96	Yes
96-019	08/27/13	5.90	Yes
96-020	08/28/13	5.84	Yes
96-021	08/29/13	5.89	Yes
96-022	08/30/13	5.97	Yes
96-023	08/31/13	5.80	Yes
96-024	09/01/13	5.78	Yes
96-025	09/02/13	5.82	Yes
96-026	09/03/13	5.70	Yes
96-027	09/04/13	5.92	Yes
96-028	09/05/13	5.70	Yes
96-029	09/06/13	5.85	Yes
96-030	09/07/13	5.86	Yes
96-031	09/08/13	6.11	Yes
96-032	09/09/13	5.79	Yes
96-033	09/10/13	5.74	Yes
96-034	09/11/13	5.74	Yes
96-035	09/12/13	5.83	Yes
96-036	09/13/13	5.81	Yes
96-037	09/14/13	5.79	Yes
96-038	09/15/13	5.64	Yes
96-039	09/16/13	5.66	Yes
96-040	09/17/13	6.69	Yes
96-041	09/18/13	6.53	Yes
96-042	09/19/13	7.02	Yes
96-043	09/20/13	6.53	Yes

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96-044	09/21/13	6.85	Yes
96-045	09/22/13	5.74	Yes
96-046	09/23/13	5.68	Yes
96-047	09/24/13	6.30	Yes
96-048	09/25/13	6.30	Yes
96-049	09/26/13	5.43	No
96-050	09/27/13	5.45	No
96-051	09/28/13	5.58	Yes
96-052	09/29/13	5.46	No
96-053	09/30/13	5.69	Yes
96-054	10/01/13	6.09	Yes
96-055	10/02/13	5.82	Yes
96-056	10/03/13	5.83	Yes
96-057	10/04/13	5.71	Yes
96-058	10/05/13	5.72	Yes
96-059	10/06/13	5.77	Yes
96-060	10/07/13	5.75	Yes
96-061	10/08/13	5.73	Yes
96-062	10/09/13	5.79	Yes
96-063	10/13/13	6.13	Yes
96-064	10/14/13	6.07	Yes
96-065	10/15/13	6.16	Yes
96-066	10/16/13	6.10	Yes
96-067	10/17/13	6.41	Yes
96-068	10/18/13	5.70	Yes
96-069	10/19/13	7.21	Yes
96-070	10/20/13	8.04	Yes
96-071	10/21/13	7.73	Yes
96-072	10/22/13	7.46	Yes
96-073	10/23/13	6.57	Yes
96-074	10/24/13	7.04	Yes

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11-26

Mr. Chris Bulmahn
Associate Engineer
Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

October 25, 2013

Dear Mr. Bulmahn:

Third Quarter 2013 Self-Monitoring Report,
Bridgeton Landfill, LLC. Discharge Permit No. 0511559802-2

1003803000

Bridgeton Landfill, LLC. is submitting the Third Quarter 2013 leachate sampling and analysis report for the Bridgeton Landfill. On September 12, 2013 and September 13, 2013, Herst & Associates, Inc. personnel collected samples of the leachate discharge as required by the Bridgeton Landfill Metropolitan St. Louis Sewer District (MSD) Wastewater Discharge Permit No. 0511559802-2 (Permit). The samples were collected from leachate sampling point 008 as an instant grab, or composite sample, dependent on constituent type, and in accordance with the permit. Samples collected for analysis of radioactive constituents were analyzed by Eberline Services located in Oak Ridge, Tennessee. Samples collected for analysis of other constituents were analyzed by Pace Analytical Services, Inc., of Indianapolis, Indiana.

The results indicate that the analyzed parameters for sampling point 008 are within permitted limits. The analyzed parameters for sampling point 008 are also within the limits specified in a variance granted May 29, 2013 for zinc.

The MSD Self-Monitoring Report Forms are provided as Attachment 1. Attachment 2 presents methodology used to calculate the amount of radionuclide activity discharged during the Third Quarter 2013 reporting period.

Attachment 3 presents methodology used to calculate the maximum mass of zinc discharged during the Third Quarter 2013 reporting period. The reported mass loading presented in Attachment 3, was performed based upon quarterly sampling results per permit obligations. However, mass loading for conditional approval requirements will continue to be based upon average MSD verification data.

Attachment 4 presents analytical results for constituents analyzed by Pace Analytical Services, Inc.. Attachment 5 provides analytical results for constituents analyzed by Eberline Services. Attachment 6 presents monthly leachate volume records for the Bridgeton Landfill for July, August, and September 2013.

Bridgeton Landfill is following up on higher than normal detected levels of alpha, beta, and gamma and will provide MSD with an update of its findings in the near future. As noted in the attached laboratory analytical report by Eberline Services, the results were calculated on Potassium-40, which was the only

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4631 North St. Peters Parkway
St. Charles, Missouri 63304

Telephone (636) 980-9111

positive gamma emitting radionuclide. Radium 226 and 228 were consistent with prior results. As was discussed between Bridgeton Landfill and MSD earlier this year, Potassium-40 is a relatively benign naturally occurring radionuclide. As indicated earlier this year, it is suspected that high total solids content has affected the level of accuracy with which alpha and beta can be reported. Further updates from the laboratory will be provided to MSD.

Please contact Bryan Sehie, Environmental Specialist at 314-744-8190 if you have any questions or comments.

Sincerely,

HERST & ASSOCIATES, INC.

For Matt Stewart
Project Geologist

Ward E. Herst
Managing Partner

cc: *Bryan Sehie, Republic Services, Inc.*
John Haasis, St. Louis County Department of Health

Attachments:
Attachment 1 – MSD Industrial User Self-Monitoring Reports
Attachment 2 – Calculation of Discharged Activity
Attachment 3 – Calculation of Discharged Mass
Attachment 4 – Pace Analytical Services, Inc., Analytical Report
Attachment 5 – Eberline Services Analytical Report
Attachment 6 – Monthly Leachate Discharge Volume Records at Bridgeton Landfill

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER SELF MONITORING REPORT

PART I: IDENTIFYING INFORMATION

Company Name: BRIDGETON LANDFILL LLC 1003803000

Permit No: 0511559802-2 Effective Date: 12/1/2010 Expiration Date: 11/30/2015

Premise Address: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Monitoring Period: ☐ (JAN-MAR) ☐ (APR-JUNE) ☑ (JULY-SEPT) ☐ (OCT-DEC)

Samples Collected By: **Matt Stewart, Herst & Associates, Inc.**

Analyses Performed By: **Pace Analytical Services, Inc. and Eberline Services**

PART II: ANALYTICAL RESULTS OF SELF MONITORING

MSD SAMPLE POINT REFERENCE NUMBERS ⇨		008						
DATES ON WHICH SAMPLES WERE COLLECTED ⇨		9/12/2013 and 9/13/2013						
TIMES AT WHICH SAMPLES WERE COLLECTED ⇨		1307, 1712, 0814, 1257						
PARAMETER	LIMIT	RECORD SAMPLE TYPES (G, C, M OR E) AND RESULTS BELOW (G=grab, C=composite, M=measured flow, E=estimated flow)						UNITS
FLOW	***	E	18793					GPD
Biochemical Oxygen Demand	***	C	42000					mg/L
Chemical Oxygen Demand	***	C	66000					mg/L
Oil and Grease	200	G	21.1					mg/L
pH Acidic (<7)	5.5	G	5.55					SU
pH Basic (≥7)	11.5	G						SU
Temperature	60	G	36.0					°C
Total Suspended Solids	***	C	14000					mg/L
Ammonia (as N)	***	C	770					mg/L
Arsenic (Total)		C	NR					mg/L
Cadmium (Total)	0.7	C	NR					mg/L
Chromium (Total)	5.0	C	NR					mg/L
Copper (Total)	2.7	C	0.170					mg/L
Lead (Total)	0.4	C	NR					mg/L
Mercury (Total)		C	NR					mg/L
Nickel (Total)	2.3	C	0.260					mg/L
Zinc (Total)	32.5 cB	C	18.0					mg/L
Total Toxic Organics	5.844	G	NR					mg/L
Gross Alpha	***	C	216 ± 106					pCi/L
Gross Beta	***	C	819 ± 169					pCi/L
Gross Gamma (as Cesium-137)	***	C	589 ± 79.2					pCi/L
Radium – 226	***	C	0.142 ± 0.240					pCi/L
Radium – 228	***	C	2.09 ± 1.33					pCi/L
Uranium (Total)	***	C	7.80					µg/L

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Notes:
BDL = Below Detection Limit
U = Result is less than sample detection limit
NR = Not required during this monitoring event

PART III: SPECIAL CERTIFICATION STATEMENTS

Based on the special conditions contained in your discharge permit you may be required to certify the following. Please review your permit and **PLACE YOUR INITIALS ON THE LINES NEXT TO THE CERTIFICATIONS.**

NONE

PART IV: GENERAL CERTIFICATION STATEMENTS

B	DISCHARGE MONITORING REPORT CERTIFICATION
	All permittees must sign and complete the information below:
	I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
	Print or type name of signing official: Bryan Sehie
	Title: Area Environmental Specialist Telephone: 314-744-8190
	Signature: Bryan Sehie Date: 10/24/13

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METROPOLITAN ST. LOUIS SEWER DISTRICT
INDUSTRIAL USER RADIOACTIVE MATERIALS DISCHARGE REPORT

Part I: Identifying Information

Company Name: Bridgeton Landfill, LLC

Permit No.: 0511559802-2

Premise Address: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Monitoring Period: ☐ (Jan-Mar) ☐ (Apr-Jun) ☒ (July-Sept) ☐ (Oct-Dec)

Part II: Record of Disposal of Radioactive Materials to the Sewer System

Radionuclide	Activity Discharged (Picocuries)
Gross Alpha	7.38×10^{8}
Gross Beta	2.80×10^{9}
Gross Gamma (as Cesium -137)	2.01×10^{9}
Radium - 226	4.85×10^{5}
Radium - 228	7.14×10^{6}
Total Activity Discharged :	5.56×10^{9}

Part III: Certification Statements

Place your initials in the box under item A.
Everyone must complete the information under items A & B and sign this report.

A. Certification of Compliance with Federal regulations

☒ BJS I certify that to the best of my knowledge & belief, all requirements of 10 CFR Part 20, Appendix B, Table 3 governing disposal by release into sanitary sewage for material regulated by the Nuclear Regulatory Commission have been met for the period covered by this report.

B. Radioactive Materials Discharge Report Certification

I certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information submitted is , to the best of my knowledge and belief, true c, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print or type name of signing official: Bryan Sehie

Title: Environmental Specialist Telephone: 314-744-8190

Signature: Bryan Sehie Date: 10/24/13

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Attachment 2

Calculation of Discharged Activity

In accordance with Special Condition II.B.2 of the Bridgeton Landfill MSD Permit (Permit 0511559802-2), each quarterly discharge report shall specify the activity discharged to the sewer system by radionuclide during the reporting period. The following methodology was used to calculate the activity discharged from the Bridgeton Landfill during the Third Quarter 2013 monitoring period.

To determine the activity discharged for each radionuclide, the activity concentration for the reporting period is multiplied by the total volume discharged during the reporting period:

$$\text{Discharged Activity} = \text{Activity Concentration} \times \text{Discharged Volume}$$

As provided in Attachment 4, the following radionuclide activity concentrations were reported from samples collected from Outfall 008 during the Third Quarter 2013 monitoring period.

Constituent	Result	Units
Gross Alpha	216 ± 106	pCi/L
Gross Beta	819 ± 169	pCi/L
Gross Gamma (as Cesium -137)	589 ± 79.2	pCi/L
Radium – 226	0.142 ± 0.240	pCi/L
Radium – 228	2.09 ± 1.33	pCi/L

Notes:
1 pCi = 1×10^{-12} Ci

As provided in Attachment 5, the following monthly volumes were discharged through leachate sampling point 008 during the Third Quarter 2013 monitoring period:

- July 2013: 35,004 gallons
- August 2013: 408,574 gallons
- September 2013: 459,186 gallons

Summation of the monthly volumes provides the total volume discharged during the Third Quarter 2013 period:

$$35{,}004\ gal + 408{,}574\ gal + 459{,}186\ gal = 902{,}764\ gal$$

Because activity concentration results are presented in pCi/L, the discharged volume is converted from units of gallons to liters prior to calculation of discharged activity:

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$$902{,}764\ gal \times \frac{3.785\ L}{gal} = 3{,}416{,}962\ \text{L}$$

Therefore, to determine the discharged activity attributable to Gross Alpha, multiply the activity concentration by the discharged volume:

$$\frac{216\ pCi}{L} \times 3{,}416{,}962\ L = 7.38 \times 10^{8}\ pCi$$

Similarly, for Gross Beta:

$$\frac{819\ pCi}{L} \times 3{,}416{,}962\ L = 2.80 \times 10^{9}\ pCi$$

Similarly, for Gross Gamma (as Cesium-137):

$$\frac{589\ pCi}{L} \times 3{,}416{,}962\ L = 2.01 \times 10^{9}\ pCi$$

Similarly, for Radium 226:

$$\frac{0.142\ pCi}{L} \times 3{,}416{,}962\ L = 4.85 \times 10^{5}\ pCi$$

Similarly, for Radium 228:

$$\frac{2.09\ pCi}{L} \times 3{,}416{,}962\ L = 7.14 \times 10^{6}\ pCi$$

Summation of the five (5) results yields the total discharged activity for the Third Quarter 2013 reporting period:

$$7.38 \times 10^{8}\ pCi + 2.80 \times 10^{9}\ pCi + 2.01 \times 10^{9} + 4.85 \times 10^{5} + 7.14 \times 10^{6} = 5.56 \times 10^{9}\ pCi$$

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Attachment 3

Calculation of Discharged Mass

In accordance to a granted variance dated May 29, 2013 for the Bridgeton Landfill MSD Permit (Permit 0511559802-2), limits for total metal zinc will be set on a mass basis per day. The reported mass loading presented below was performed based upon quarterly sampling results per permit obligations. However, mass loading for conditional approval requirements will continue to be based upon average MSD verification data.

The following methodology was used to calculate the mass discharged from the Bridgeton Landfill during the Third Quarter 2013 monitoring period.

To determine the mass discharged for each constituent, the concentration for the reporting period is multiplied by the maximum allowed volume discharged per day during the reporting period:

Discharged Mass = Third Quarter 2013 Concentration x Maximum Allowed Discharge per Day

As provided in Attachment 5, the following metals concentrations were reported from samples collected from Outfall 008 during the Third Quarter 2013 monitoring period.

Constituent	Result	Units
Zinc	18.0	mg/L

During the Third Quarter 2013 period, the maximum daily discharge was limited to 20,000 gallons per day.

Because metals concentration results are presented in mg/L, the maximum discharged volume is converted from units of gallons to liters prior to calculation of maximum discharged mass:

$$\frac{20{,}000 gal}{day} \times \frac{3.785\ L}{gal} = 75{,}700\ \text{L}$$

To determine the maximum discharged mass of Zinc, multiply the concentration by the maximum discharged volume:

$$\frac{18.0\ mg}{L} \times 75{,}700\ L = 1{,}362{,}600\ mg$$

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Because discharge limitations for Zinc are in pounds per day, the maximum discharged mass is converted from units of milligrams to pounds:

$$\frac{2.20\times10^{-6}\ mg}{lb}\times 1{,}362{,}600\ mg = 3.00\ lb$$

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Pace Analytical
Pace Analytical Services, Inc.

CERTIFICATE OF ANALYSIS

Service Location	Received	Lab ID
PACE ANALYTICAL SERVICES, INC. 7901 W. MORRIS ST. INDIANAPOLIS, IN 46231 (317)243-8304	14-SEP-13	A994955
	Completed 03-OCT-13	PO Number 3526681 BRIDGETON
	Printed 03-OCT-13	Sampled 13-SEP-13 12:57

Report To	Bill To
MATT STEWART HERST AND ASSOCIATES 4630 SOUTH HIGHWAY 94 NORTH OUTER ROAD ST. CHARLES, MO 63304	DAVE VASBINDER ALLIED WASTE SYSTEMS 13570 ST. CHARLES ROCK ROAD BRIDGETON, MO 63044

Sample Description

CLIENT ID: OUTFALL 008
MATRIX TYPE: NON-SPECIFIC WATER
SUBMITTER: 8945 - MO-ALLIED-BRIDGETON LANDFILL
PROJECT NAME: LEACHATE - BRIDGETON LANDFILL
DATA PACKAGE #: 65229
LOCATION: BRIDGETON LANDFILL
DESCRIPTION: QUARTERLY LEACHATE
PERMIT: 830871

BIOCHEMICAL OXYGEN DEMAND, 5-DAY SM 5210B-2001 NELAC:Y

Analyst: D. DICKERSON Analysis Date: 20-SEP-13 17:05 Test: G801.4.0

Parameter	Result	Det. Limit	Units
BIOCHEMICAL OXYGEN DEMAND	42000	2000	mg/L

1:1000 Dilution.

Initial pH =5.64

Adjusted sample pH to 7 before analysis.

BOD reanalyzed outside of holding time due to concentrations beyond dilution range.

CHEMICAL OXYGEN DEMAND (COLORIMETRIC) EPA 410.4, REV. 2.0 (1993) NELAC:Y

Analyst: D. DICKERSON Analysis Date: 01-OCT-13 11:45 Test: G301.1.0

Parameter	Result	Det. Limit	Units
CHEMICAL OXYGEN DEMAND	66000	1000	mg/L

1:100 Dilution.

TOTAL SUSPENDED SOLIDS DRIED AT 103-105 DEGREES C SM 2540 D, 19TH ED. NELAC:Y

Analyst: A. CORNWELL Analysis Date: 17-SEP-13 14:50 Test: G403.8.0

Parameter	Result	Det. Limit	Units
SUSPENDED SOLIDS	14000		mg/L

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Sample ID: A994955 OUTFALL 008

Filtered less sample due to sample matrix.

AMMONIA DISTILLATION SM4500-NH3 B - 1997

Analyst: T. DRIGGERS | Analysis Date: 23-SEP-13 08:05 | Instrument: PREP | Test: P203.7.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	50		mL
FINAL VOLUME	250		mL

The prep analyst decreased the initial weight/volume due to the matrix of the sample and/or a strong odor.

AMMONIA BY AUTOMATED PHENATE SM4500-NH3 G - 1997 NELAC:Y

Analyst: T. DRIGGERS | Analysis Date: 25-SEP-13 17:26 | Instrument: AUTO-ANALYZER | Test: G204.6.0

Prep: AMMONIA DISTILLATION SM4500-NH3 B - 1997 P203.7.0

Parameter	Result	Det. Limit	Units
NITROGEN, AMMONIA	770	50	mg/L

1:100 Dilution.

HEXANE OIL AND GREASE - TOTAL (SOLID PHASE EXTRACTION) EPA 1664A NELAC:Y

Analyst: C. ANYANWUTAKU | Analysis Date: 20-SEP-13 11:39 | Test: G166.0.0

Parameter	Result	Det. Limit	Units
HEXANE EXTRACTABLE MATERIAL (OIL AND GREASE)	21.1	5.0	mg/L

FAA OR ICP ACID DIGESTION EPA 200.0

Analyst: K. KAMARA | Analysis Date: 19-SEP-13 09:00 | Instrument: PREP | Test: P129.2.0

Parameter	Result	Det. Limit	Units
INITIAL WEIGHT OR VOLUME	10		mL
FINAL VOLUME	50		mL

COPPER ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. KRAMER | Analysis Date: 20-SEP-13 08:05 | Instrument: ICP | Test: M412.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
COPPER	170	100	ug/L

NICKEL ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. KRAMER | Analysis Date: 20-SEP-13 08:05 | Instrument: ICP | Test: M422.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
NICKEL	260	25	ug/L

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Sample ID: A994955 OUTFALL 008

ZINC ICP EPA 200.7 REV. 4.4 NELAC:Y

Analyst: J. KRAMER Analysis Date: 20-SEP-13 08:05 Instrument: ICP Test: M439.3.0

Prep: FAA OR ICP ACID DIGESTION EPA 200.0 P129.2.0

Parameter	Result	Det. Limit	Units
ZINC	18000	100	ug/L

FIELD PH, ELECTROMETRIC (AQUEOUS) SM4500-H+ B - 2000 NELAC:Y

Analysis Date: 13-SEP-13 Instrument: FIELD Test: G607.2.0

Parameter	Result	Det. Limit	Units
PH	5.55	0.1	Std. Units

FIELD TEMPERATURE SM 2550 B-2000 NELAC:N

Analysis Date: 13-SEP-13 Instrument: FIELD Test: G603.1.0

Parameter	Result	Det. Limit	Units
TEMPERATURE	36.0		Degrees C

FIELD SPECIFIC CONDUCTANCE EPA 120.1 NELAC:Y

Analysis Date: 13-SEP-13 Instrument: FIELD Test: G604.1.0

Parameter	Result	Det. Limit	Units
CONDUCTIVITY	NA	1.0	umHOS/cm

Sample Comments

NA Not Applicable

Sample was received on ice at temperature .1 C.
Sample chain of custody number 15144.

This Certificate shall not be reproduced, except in full, without the written approval of the lab. The sample results relate only to the analytes of interest tested or to the sample as received by the lab. Pace Analytical Services, INC. certifies that the test results indicated as NELAP (National Environmental Laboratory Accreditation Program) accredited (Yes for NELAP) meet all requirements of NELAP and Kansas (KDHE) unless otherwise explained or justified as to the the exact nature of the deviations.
KS ELAP / NELAP Accreditation # E-10177 Indiana SDWA C-49-01

Approved by: CHRISTINE SARKAN 03-OCT-13

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COMMERCIAL LABORATORY OPERATIONS

7901 W Morris St Indianapolis, IN 46231
www.heritage-enviro.com (800)827-4374 Fax:(317)486-5095

15144

Submitter Name: MO-ALLIED-BRIDGETON LANDFILL (8945)
Project Name: LEACHATE - BRIDGETON LANDFILL (5586)
Z Quote No: Z139877
PO No: 4337-12001-9 (2012)
Heritage Contact CHRISTOPHER BOYLE (317)390-3128

Sample Turn Around Time
Standard: X Rush Date ___/___/___ (Mo Day Yr)
Accelerated TAT subject to Additional Charge.
Date must be Accepted and Approved by Lab.

Sampled By: Matt Stewart, Herst & Associates, Inc.

Analyses Requested (Note special detection limits or methods)

Comments:

Date Sampled	Time Sampled	Comp	Grab	Sample ID and/or Location where your sample was taken	Sample Type (Matrix): Water, Soil, Oil, Sludge, Swipe, Other	Number of Containers	HEM(O&G)	COD, NH3	BOD, TSS	Cu, Ni, Zn	Remarks:	Lab use only Sample No.
9/12-13/13	1307 0809 AM / 1112 1257 PM	X		Outfall 008	LCH	6	X	X	X	X	LCH = Leachate	A994955
	AM / PM										* SHORT HOLD	
	AM / PM										BOD	
	AM / PM											
	AM / PM											
	AM / PM											
	AM / PM											
	AM / PM											
	AM / PM											
	AM / PM											

Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Matt Stewart	9/13/13 / 1830	Fed Ex #8033 7937 0730
Relinquished by: (Signature)	Date/Time	Received by: (Signature)
Relinquished by: (Signature)	Date/Time	Received by: (Signature)

Received for Lab by: (Signature) [signature]
Date: 9-14-13
Time: 0820
Temperature: (0.2)0.1 °C
Received On Ice: Yes / No

Laboratory use only	Yes	No	NA
Custody seals intact on cooler?	✓		
C. seals intact on containers?			✓
Broken containers?		✓	
COC agree with sample labels?	✓		
Correct containers for testing?	✓		
Headspace issues acceptable?	✓		
Holding time(s) acceptable?	✓		
Preservative pH's acceptable?			
Was pH left unadjusted?			

Send Report To:
Co: HERST AND ASSOCIATES
Addr: 4630 SOUTH HIGHWAY 94
ST. CHARLES, MO 63304
Attn: MATT STEWART
Phone: (636)939-9111
Fax: (636)939-9757
email: mstewart@herstassociates.com

SECTION III

CASE NARRATIVE

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EBERLINE SERVICES

EBERLINE ANALYTICAL CORPORATION
601 SCARBORO ROAD
OAK RIDGE, TENNESSEE 37830
PHONE (865) 481-0683
FAX (865) 483-4621

EBS-OR-36238

October 16, 2013

Matt Stewart
Herst & Associates, Inc.
4631 N St. Peters Parkway
St. Charles, MO 63304

CASE NARRATIVE
Work Order # 13-09091-OR

SAMPLE RECEIPT

This work order contains one water sample received 09/17/2013. This sample was analyzed for Isotopic Uranium, Radium-226/228, Gross Alpha/Beta and by Gamma Spectroscopy.

CLIENT ID	LAB ID
OUTFALL 008	13-09091-04

ANALYTICAL METHODS

Isotopic Uranium was analyzed using Method EML U-02 Modified. Radium-226 was analyzed using EPA Method 903.0 Modified. Radium-228 was analyzed using EPA Method 904.0 Modified. Gross Alpha/Beta was performed using EPA Method 900.0 Modified. Gamma Spectroscopy was performed using EPA Method 901.1 Modified.

ANALYTICAL RESULTS

Combined Standard Uncertainty is reported at 2-sigma value.

ISOTOPIC URANIUM

Sample was prepared by removing a representative aliquot followed by mixed acid digestions as appropriate. Uranium was selectively extracted by ion exchange. Uranium was eluted, micro-precipitated and mounted on micro-porous filter media. Sample activities were then determined by alpha spectroscopy using energy specific regions of interest for Uranium-234, Uranium-235 and Uranium-238. Chemical recovery was determined by the use of a Uranium-232 tracer. Activity of the Uranium-232 tracer was determined by alpha spectroscopy using an energy specific region of interest.

2nd Analytical Attempt

Due to low chemical recoveries, sample was reanalyzed. Sample demonstrated acceptable results for all Uranium analyses. Chemical recovery was acceptable for all samples. The Uranium-234, Uranium-235 and Uranium-238 method blank demonstrated acceptable results. Results for the Uranium-234 duplicate demonstrated a high relative percent difference; however, normalized difference is within acceptable

ANALYTICAL RESULTS CONTINUED

ISOTOPIC URANIUM CONTINUED

limits for the analytical technique. Results for the Uranium-235 and Uranium-238 duplicate demonstrated an acceptable relative percent difference and normalized difference. Results for the Uranium-234 and Uranium-238 laboratory control sample demonstrated an acceptable percent recovery.

RADIUM-226

Sample was prepared by removing a representative aliquot followed by mixed acid digestions as appropriate. This was followed by precipitations of Radium/Barium Sulfate. Precipitates were dissolved in alkaline EDTA. Radium was selectively precipitated and then mounted on micro-porous filter media. Sample was counted by alpha spectroscopy using an energy specific region of interest for Radium-226. Inherent self-absorption from elemental Barium was corrected for in the final result. Chemical recovery was calculated by the use of a Barium-133 tracer, which was determined by HPGe gamma spectroscopy.

Sample demonstrated acceptable results for all Radium-226 analyses. Chemical recovery was acceptable for all samples. The Radium-226 method blank demonstrated acceptable results. Results for the Radium-226 duplicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Radium-226 laboratory control sample demonstrated an acceptable percent recovery.

RADIUM-228

Following alpha spectroscopy analysis of Radium-226, Barium/Radium Sulfate precipitates were redissolved and allowed for sufficient ingrowth of the Actinium-228 daughter. After ingrowth, Actinium-228 was selectively precipitated. Precipitates were filtered and beta emissions for Actinium-228 were then counted on a gas proportional counter. Chemical recovery was determined by the use of a Barium-133 tracer, the activity of which was determined by HPGe gamma spectroscopy and an elemental Yttrium carrier by gravimetric measurements. The product of these two recoveries was used to calculate chemical yield.

Sample demonstrated acceptable results for all Radium-228 analyses. Sample results demonstrated slightly high detection limits. Chemical recovery was acceptable for all samples. The Radium-228 method blank demonstrated acceptable results. Results for the Radium-228 duplicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Radium-228 laboratory control sample demonstrated an acceptable percent recovery.

GROSS ALPHA & BETA

Sample was prepared by evaporation of a representative volumetric aliquot acidified with HNO_3. Reduced sample was then transferred to a steel planchet for final evaporation to dryness and flaming. Sample was then counted on a gas proportional counter. Results were corrected as required for inherent self-absorption based on residual mass present.

Sample demonstrated acceptable results for all Gross Alpha and Beta analyses. Due to high total solids, sample results demonstrated slightly high detection limits. The Gross Alpha and Beta method blank demonstrated acceptable results. Results for the Gross Alpha duplicate demonstrated a high relative

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ANALYTICAL RESULTS CONTINUED

GROSS ALPHA & BETA CONTINUED

percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Gross Beta duplicate demonstrated an acceptable relative percent difference and normalized difference. Results for the Gross Alpha and Beta laboratory control sample demonstrated an acceptable percent recovery.

GAMMA SPECTROSCOPY

Sample for Gamma Spectroscopy analysis was prepared by transferring a known aliquot of sample to a standard geometry container. Sample was counted on a High Purity Germanium (HPGe) gamma ray detector.

Sample demonstrated acceptable results for all gamma-emitting radionuclides as reported. Gross Gamma results were calculated based on Potassium-40 which was the only positive gamma emitting radionuclide in this sample. The method blank demonstrated acceptable results for all radionuclides as reported. Results for the Actinium-228 and Bismuth-214 replicate demonstrated a high relative percent difference; however, normalized difference is within acceptable limits for the analytical technique. Results for the Potassium-40 replicate demonstrated an acceptable relative percent difference and normalized difference. Results for the Cobalt-60 and Cesium-137 laboratory control sample demonstrated an acceptable percent recovery.

CERTIFICATION OF ACCURACY

I certify that this data report is in compliance with the terms and conditions of the Purchase Order, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the cognizant project manager or his/her designee to be accurate as verified by the following signature.

M.R. McDougall
Laboratory Manager

Date: 10/16/2013

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SECTION IV

ANALYTICAL RESULTS SUMMARY

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Eberline Analytical
Final Report of Analysis

Report To:
Matt Stewart
Herst & Associates, Inc.
4631 N St Peters Pkwy
St Charles, MO 63304

Work Order Details:
SDG: 13-09091
Project: Bridgeton 3Q13 Leachate
Analysis Category: ENVIRONMENTAL
Sample Matrix: WA

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
13-09091-01	LCS	KNOWN	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Cobalt-60	EPA 901.1 Modified	1.95E+05	7.82E+03			pCi/l
13-09091-01	LCS	KNOWN	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Cesium-137	EPA 901.1 Modified	1.24E+05	4.97E+03			pCi/l
13-09091-01	LCS	SPIKE	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Cobalt-60	EPA 901.1 Modified	2.05E+05	1.34E+04	1.70E+04	6.44E+02	pCi/l
13-09091-01	LCS	SPIKE	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Cesium-137	EPA 901.1 Modified	1.30E+05	1.34E+04	1.50E+04	4.77E+02	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Actinium-228	EPA 901.1 Modified	7.26E+00	8.40E+00	8.41E+00	1.15E+01	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Bismuth-214	EPA 901.1 Modified	-3.89E+00	3.59E+00	3.59E+00	5.55E+00	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Gross Gamma	EPA 901.1 Modified	-8.70E+00	1.93E+01	1.93E+01	3.41E+01	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Lead-212	EPA 901.1 Modified	-3.20E+00	2.38E+00	2.38E+00	3.87E+00	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Lead-214	EPA 901.1 Modified	-4.55E+00	3.38E+00	3.39E+00	5.00E+00	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Radium-226	EPA 901.1 Modified	-3.89E+00	3.59E+00	3.59E+00	5.55E+00	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Radium-228	EPA 901.1 Modified	7.26E+00	8.40E+00	8.41E+00	1.15E+01	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Thorium-234	EPA 901.1 Modified	9.27E+00	2.55E+01	2.55E+01	4.48E+01	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Thallium-208	EPA 901.1 Modified	-2.25E-01	4.78E+00	4.78E+00	8.73E+00	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Actinium-228	EPA 901.1 Modified	9.44E+00	9.15E+00	9.16E+00	1.31E+01	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Bismuth-214	EPA 901.1 Modified	7.10E+00	6.28E+00	6.29E+00	6.92E+00	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Gross Gamma	EPA 901.1 Modified	6.34E+02	8.48E+01	9.08E+01	2.54E+01	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Potassium-40	EPA 901.1 Modified	6.34E+02	8.48E+01	9.08E+01	2.54E+01	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Lead-212	EPA 901.1 Modified	1.57E+00	2.82E+00	2.82E+00	4.80E+00	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Lead-214	EPA 901.1 Modified	2.41E+00	3.65E+00	3.65E+00	6.04E+00	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Radium-226	EPA 901.1 Modified	7.10E+00	6.28E+00	6.29E+00	6.92E+00	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Radium-228	EPA 901.1 Modified	9.44E+00	9.15E+00	9.16E+00	1.31E+01	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Thorium-234	EPA 901.1 Modified	4.82E+01	4.88E+01	4.88E+01	3.48E+01	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Thallium-208	EPA 901.1 Modified	9.02E+00	5.66E+00	5.68E+00	6.26E+00	pCi/l

CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original

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601 SCARBORO ROAD OAK RIDGE, TN 37830 865/481-0683 FAX 865/483-4621

Eberline Analytical
Final Report of Analysis

Report To:	
Matt Stewart	
Herst & Associates, Inc.	
4631 N St Peters Pkwy	
St Charles, MO 63304	

Work Order Details:	
SDG:	13-09091
Project:	Bridgeton 3Q13 Leachate
Analysis Category:	ENVIRONMENTAL
Sample Matrix:	WA

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Actinium-228	EPA 901.1 Modified	1.34E+01	8.30E+00	8.33E+00	9.59E+00	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Bismuth-214	EPA 901.1 Modified	1.38E+00	4.04E+00	4.04E+00	6.99E+00	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Gross Gamma	EPA 901.1 Modified	5.89E+02	7.92E+01	8.47E+01	2.54E+01	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Potassium-40	EPA 901.1 Modified	5.89E+02	7.92E+01	8.47E+01	2.54E+01	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Lead-212	EPA 901.1 Modified	4.06E+00	2.78E+00	2.79E+00	3.39E+00	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Lead-214	EPA 901.1 Modified	5.57E+00	3.80E+00	3.81E+00	6.46E+00	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Radium-226	EPA 901.1 Modified	1.38E+00	4.04E+00	4.04E+00	6.99E+00	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Radium-228	EPA 901.1 Modified	1.34E+01	8.30E+00	8.33E+00	9.59E+00	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Thorium-234	EPA 901.1 Modified	6.67E+01	4.89E+01	4.91E+01	3.32E+01	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Thallium-208	EPA 901.1 Modified	3.99E+00	5.27E+00	5.27E+00	9.04E+00	pCi/l
13-09091-01	LCS	KNOWN	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Gross Alpha	EPA 900.0 Modified	3.24E+02	1.39E+01			pCi/l
13-09091-01	LCS	SPIKE	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Gross Alpha	EPA 900.0 Modified	2.43E+02	6.99E+00	2.74E+01	4.15E-01	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Gross Alpha	EPA 900.0 Modified	-2.66E-02	3.69E-02	3.70E-02	1.47E-01	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Gross Alpha	EPA 900.0 Modified	8.71E+01	1.21E+02	1.21E+02	2.46E+02	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Gross Alpha	EPA 900.0 Modified	2.16E+02	1.06E+02	1.09E+02	4.05E+01	pCi/l
13-09091-01	LCS	KNOWN	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Gross Beta	EPA 900.0 Modified	2.26E+02	6.79E+00			pCi/l
13-09091-01	LCS	SPIKE	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Gross Beta	EPA 900.0 Modified	2.43E+02	5.86E+00	3.41E+01	9.17E-01	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/7/2013	13-09091	Gross Beta	EPA 900.0 Modified	7.68E-02	2.51E-01	2.51E-01	5.30E-01	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Gross Beta	EPA 900.0 Modified	8.79E+02	1.82E+02	2.19E+02	2.93E+02	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/7/2013	13-09091	Gross Beta	EPA 900.0 Modified	8.19E+02	1.69E+02	2.04E+02	2.68E+02	pCi/l
13-09091-01	LCS	KNOWN	09/17/13 00:00	9/17/2013	10/2/2013	13-09091	Radium-226	EPA 903.0 Modified	1.02E+01	4.71E-01			pCi/l
13-09091-01	LCS	SPIKE	09/17/13 00:00	9/17/2013	10/2/2013	13-09091	Radium-226	EPA 903.0 Modified	1.07E+01	1.22E+00	2.56E+00	1.97E-01	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/2/2013	13-09091	Radium-226	EPA 903.0 Modified	-5.77E-03	6.75E-02	6.75E-02	1.42E-01	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/2/2013	13-09091	Radium-226	EPA 903.0 Modified	6.34E-01	4.96E-01	5.14E-01	4.55E-01	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/2/2013	13-09091	Radium-226	EPA 903.0 Modified	1.42E-01	2.40E-01	2.42E-01	4.08E-01	pCi/l

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CU=Counting Uncertainty;CSU=Combined Standard Uncertainty (2-sigma);MDA=Minimal Detected Activity;LCS=Laboratory Control Sample; MBL=Blank; DUP=Duplicate; TRG=Normal Sample; DO=Duplicate Original

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Eberline Analytical
Final Report of Analysis

Report To:	
Matt Stewart	
Herst & Associates, Inc.	
4631 N St Peters Pkwy	
St Charles, MO 63304	

Work Order Details:	
SDG:	13-09091
Project:	Bridgeton 3Q13 Leachate
Analysis Category:	ENVIRONMENTAL
Sample Matrix:	WA

Lab ID	Sample Type	Client ID	Sample Date	Receipt Date	Analysis Date	Batch ID	Analyte	Method	Result	CU	CSU	MDA	Report Units
13-09091-01	LCS	KNOWN	09/17/13 00:00	9/17/2013	10/8/2013	13-09091	Radium-228	EPA 904.0 Modified	8.54E+00	4.36E-01			pCi/l
13-09091-01	LCS	SPIKE	09/17/13 00:00	9/17/2013	10/8/2013	13-09091	Radium-228	EPA 904.0 Modified	7.23E+00	8.46E-01	1.84E+00	1.13E+00	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/8/2013	13-09091	Radium-228	EPA 904.0 Modified	6.79E-01	5.29E-01	5.50E-01	1.05E+00	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Radium-228	EPA 904.0 Modified	9.87E-01	1.25E+00	1.27E+00	2.57E+00	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Radium-228	EPA 904.0 Modified	2.09E+00	1.33E+00	1.41E+00	2.59E+00	pCi/l
13-09091-01	LCS	KNOWN	09/17/13 00:00	9/17/2013	10/8/2013	13-09091	Uranium-234	EML U-02 Modified	8.18E+00	2.95E-01			pCi/l
13-09091-01	LCS	SPIKE	09/17/13 00:00	9/17/2013	10/8/2013	13-09091	Uranium-234	EML U-02 Modified	7.26E+00	9.11E-01	1.05E+00	5.69E-02	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/8/2013	13-09091	Uranium-234	EML U-02 Modified	7.87E-02	6.19E-02	6.21E-02	7.07E-02	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Uranium-234	EML U-02 Modified	3.10E+00	1.38E+00	1.40E+00	6.21E-01	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Uranium-234	EML U-02 Modified	1.82E+00	9.90E-01	9.99E-01	7.19E-01	pCi/l
13-09091-01	LCS	SPIKE	09/17/13 00:00	9/17/2013	10/8/2013	13-09091	Uranium-235	EML U-02 Modified	4.63E-01	1.62E-01	1.65E-01	6.39E-02	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/8/2013	13-09091	Uranium-235	EML U-02 Modified	1.89E-02	3.60E-02	3.61E-02	6.67E-02	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Uranium-235	EML U-02 Modified	7.35E-01	8.09E-01	8.11E-01	1.10E+00	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Uranium-235	EML U-02 Modified	9.43E-01	8.21E-01	8.24E-01	9.43E-01	pCi/l
13-09091-01	LCS	KNOWN	09/17/13 00:00	9/17/2013	10/8/2013	13-09091	Uranium-238	EML U-02 Modified	7.98E+00	2.87E-01			pCi/l
13-09091-01	LCS	SPIKE	09/17/13 00:00	9/17/2013	10/8/2013	13-09091	Uranium-238	EML U-02 Modified	7.34E+00	9.18E-01	1.06E+00	5.66E-02	pCi/l
13-09091-02	MBL	BLANK	09/17/13 00:00	9/17/2013	10/8/2013	13-09091	Uranium-238	EML U-02 Modified	1.53E-02	2.91E-02	2.91E-02	5.38E-02	pCi/l
13-09091-03	DUP	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Uranium-238	EML U-02 Modified	2.20E+00	1.15E+00	1.16E+00	6.19E-01	pCi/l
13-09091-04	DO	OUTFALL 008	09/13/13 12:57	9/17/2013	10/8/2013	13-09091	Uranium-238	EML U-02 Modified	2.47E+00	1.15E+00	1.16E+00	6.66E-01	pCi/l

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2022

CB
10-28

2013

Bridgeton Landfill LLC
Monthly Leachate Outfall Report

10/23/2013 Filed in 15.4

Month	Net Meter Reading	Precipitation Inches	Date of Reading	Gallons	Average Daily Discharge (Gal)	Equivalent Cubic Feet	Equivalent 100 Cubic Feet
January	6,297,239	3.12	2/1/2013	3,498,515	112,855	467,715.91	4,677.16
February	6,905,982	3.25	3/1/2013	608,743	21,740	81,382.75	813.83
March	6,906,109*	4.95	4/1/2013	0*	0*	0*	0*
April	6,915,104	5.67	5/1/2103	8,604**	8,604**	1,150.27	11.50
May	81,827	7.13	6/1/2013	373,684***	12,054	49,957.75	499.58
June	284,978	5.86	7/1/2013	203,151	6,771	27,159.22	271.59
July	319,982	3.35	8/1/2013	35,004	1,129	4,679.68	46.80
August	728,556	1.19	9/1/2013	408,574	13,180	54,622.19	546.22
September	1,187,742	2.74	10/1/2013	459,186	15,306	61,388.50	613.89
October							
November							
December							

Note:

*Flow represented is due to flow meter error. No discharge to MSD has occurred between 2/7/2013 and 4/30/2013.

** Discharge to MSD was resumed on 4/30/2013 (Net meter reading 6,906,500)

***New flow meter installed and set to 0, meter was also reset twice during May, see daily logs.

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ENVIRONMENTAL COMPLIANCE

Doug Mendoza BRIDGETON LANDFILL

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Monday, October 28, 2013 10:24 PM
To: Doug Mendoza; John Lodderhose; Ken Goins
Cc: Power, Brian (BPower@republicservices.com); Bill Abernathy (babernathy@feezorengineering.com); Dan Feezor; Ed Galbraith (EGalbraith@barr.com)
Subject: Response to MSD NOV
Attachments: Response to 9-25-13 MSD NOV.pdf

Good evening,

I am forwarding an electronic copy of Bridgeton Landfill's response to MSD's September 25, 2013, NOV. A hard copy was sent out today.

Please let us know if you have any questions.
Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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Bridgeton Landfill, LLC

October 28, 2013

Mr. Tom Boehm
Environmental Engineering Associate
Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913

RE: Notice of Violations - Wastewater Discharge Permit No. 0511559802-2
For Premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Mr. Boehm:

Bridgeton Landfill, LLC, is providing information in response to the referenced correspondence dated September 26, 2013 and forwarded to the facility. The Notice of Violation (NOV) was issued as a result of an apparent violation of the facility's wastewater discharge limitation for pH as measured by Metropolitan St. Louis Sewer District (MSD) on September 25, 2013.

The September 26, 2013 NOV requires specific actions to be taken by Bridgeton Landfill, LLC in response to its issuance. The actionable requests are restated below, followed by Bridgeton Landfill, LLC's responses:

1. **MSD Required Action** – *"..., we understand that Bridgeton Landfill representatives do not perform calibration, but simply check their meter against a pH 4 Standard. We suggest using a meter that is readily calibrated in the field using either 4 and 7 Standards ... or 7 and 10 Standards."*

   Response - Subsequent to field issuance of the NOV to Bridgeton Landfill, LLC, a grab sample of the discharge was obtained by MSD. Readings of pH of the sample were measured concurrently by MSD and FEI personnel, with MSD's instrument indicating a pH value of 5.41 su (standard units) and Bridgeton Landfill, LLC's instrument indicating a pH value of 5.73 su.

   The September 26, 2013 NOV acknowledged that there were conflicting results of the independent pH measurements of the grab sample, but the Required Action does not accurately describe the pH calibration protocol used for the Bridgeton Landfill instrument. A beginning-of-day calibration check is performed every morning (prior to sampling) using a pH 4.00 Standard in accordance with the manufacturer's instructions. If the check indicates any value other than 4.00, the instrument is calibrated and rechecked against the Standard. The calibration is

repeated as necessary. An end-of-day calibration check is also performed every day once the day's sampling has been completed.

Since issuance of the field NOV, Bridgeton Landfill, LLC has revised its pH calibration protocol to include the use of pH 4.00 and pH 7.00 Standards, in accordance with the manufacturer's instructions, as suggested by MSD.

2. **MSD Required Action** – *"Submit a report of corrective actions ... In the report indicate which corrective actions are initiated and which are still to come, and include plans for additional sampling to verify a return to compliance."*

   Response – Corrective actions to minimize the potential for future violations of the facility's wastewater pH discharge limitation, initiated since issuance of the September 25, 2013 field NOV, include:

   - A change in calibration protocol for Bridgeton Landfill, LLC's multi-parameter instrument. Both pH 4.00 and pH 7.00 Standards are now used to check/calibrate the pH sensor of the instrument. The facility will continue to check/calibrate the instrument in accordance with the manufacturer's instructions prior to measuring pH of (and collecting samples from) the 96k AST; discharge from the AST will be resumed upon receipt of a compliant pH reading and a compliant benzene result from on-site lab analysis, unless there are facility operational issues or MSD lift station tasks being performed at the time that would prevent such.
   - A change in the pH adjustment process for material designated for direct discharge to MSD. Previously, a 25% NaOH solution was used to adjust the pH of the material, introduced into the facility's 316k AST during the aeration process. This pH-adjusted material was both hauled off-site from the 316k AST and transferred over to the 96k AST for eventual direct discharge. Application of the solution has been reconfigured such that it is introduced only into the material being transferred to the 96k AST, allowing for more efficient use of the caustic solution. Mixing/reaction between the caustic and the treated leachate occurs both in the transfer line and by using a recirculating pump/piping system at the 96k AST. This continuous mixing/recirculating maximizes the representativeness of the pH values (and benzene concentrations) measured in the 96k AST.

3. **MSD Required Action** – *"Submit all additional sampling results to MSD..."*

   Response – Bridgeton Landfill, LLC tracks pH data on a daily basis for the material contained within both the 316k AST and the 96k AST. A PDF of the tracking spreadsheet for the 96k AST is attached. Readings of pH associated with the 96k AST are obtained from grab samples collected at Sample Point SP008 under normal operating conditions. Measurements are made immediately upon

filling a sample container by immersing the multi-parameter instrument in the container. Parameters are allowed to stabilize then the pH value is recorded.

We trust the information provided in this response meets MSD's requirements at this time. If you have any questions or comments regarding this correspondence, please contact me at 314-744-8165 at your convenience.

Sincerely,

Brian J. Power

Brian Power
Environmental Manager

Attachment: *Bridgeton pH Values – 96k*

Cc: Dan Feezor
Jessie Merrigan
Ed Galbraith
Bill Abernathy

Batch ID	Date	pH	pH Compliant?
96-001-D	08/09/13	7.66	Yes
96-002	08/10/13	6.36	Yes
96-003	08/11/13	7.53	Yes
96-004	08/12/13	6.55	Yes
96-005	08/13/13	5.98	Yes
96-006	08/14/13	5.72	Yes
96-007	08/15/13	5.98	Yes
96-008	08/16/13	6.50	Yes
96-009	08/17/13	5.74	Yes
96-010	08/18/13	5.80	Yes
96-011	08/19/13	5.70	Yes
96-012	08/20/13	5.80	Yes
96-013	08/21/13	5.72	Yes
96-014	08/22/13	5.75	Yes
96-015	08/23/13	5.80	Yes
96-016	08/24/13	5.83	Yes
96-017	08/25/13	5.88	Yes
96-018	08/26/13	5.96	Yes
96-019	08/27/13	5.90	Yes
96-020	08/28/13	5.84	Yes
96-021	08/29/13	5.89	Yes
96-022	08/30/13	5.97	Yes
96-023	08/31/13	5.80	Yes
96-024	09/01/13	5.78	Yes
96-025	09/02/13	5.82	Yes
96-026	09/03/13	5.70	Yes
96-027	09/04/13	5.92	Yes
96-028	09/05/13	5.70	Yes
96-029	09/06/13	5.85	Yes
96-030	09/07/13	5.86	Yes
96-031	09/08/13	6.11	Yes
96-032	09/09/13	5.79	Yes
96-033	09/10/13	5.74	Yes
96-034	09/11/13	5.74	Yes
96-035	09/12/13	5.83	Yes
96-036	09/13/13	5.81	Yes
96-037	09/14/13	5.79	Yes
96-038	09/15/13	5.64	Yes
96-039	09/16/13	5.66	Yes
96-040	09/17/13	6.69	Yes
96-041	09/18/13	6.53	Yes
96-042	09/19/13	7.02	Yes
96-043	09/20/13	6.53	Yes

96-044	09/21/13	6.85	Yes
96-045	09/22/13	5.74	Yes
96-046	09/23/13	5.68	Yes
96-047	09/24/13	6.30	Yes
96-048	09/25/13	6.30	Yes
96-049	09/26/13	5.43	No
96-050	09/27/13	5.45	No
96-051	09/28/13	5.58	Yes
96-052	09/29/13	5.46	No
96-053	09/30/13	5.69	Yes
96-054	10/01/13	6.09	Yes
96-055	10/02/13	5.82	Yes
96-056	10/03/13	5.83	Yes
96-057	10/04/13	5.71	Yes
96-058	10/05/13	5.72	Yes
96-059	10/06/13	5.77	Yes
96-060	10/07/13	5.75	Yes
96-061	10/08/13	5.73	Yes
96-062	10/09/13	5.79	Yes
96-063	10/13/13	6.13	Yes
96-064	10/14/13	6.07	Yes
96-065	10/15/13	6.16	Yes
96-066	10/16/13	6.10	Yes
96-067	10/17/13	6.41	Yes
96-068	10/18/13	5.70	Yes
96-069	10/19/13	7.21	Yes
96-070	10/20/13	8.04	Yes
96-071	10/21/13	7.73	Yes
96-072	10/22/13	7.46	Yes
96-073	10/23/13	6.57	Yes
96-074	10/24/13	7.04	Yes

Doug Mendoza

From: Darin Lewis
Sent: Monday, October 28, 2013 8:44 AM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Sara Kammerer; Steve Grace
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 10/20/2013 to 10/26/2013.
10/20 – 165,000 gallons
10/21 – 165,000 gallons
10/22 – 172,500 gallons
10/23 – 150,000 gallons
10/24 – 172,500 gallons
10/25 – 165,000 gallons
10/26 – 172,500 gallons
Total = 1,162,500 gallons

Doug Mendoza Projected Landfill

From: Hunter, Gary L. <HunterGL@bv.com>
Sent: Monday, October 28, 2013 8:21 AM
To: Ken Gambaro; John Lodderhose; Doug Mendoza; Todd Heller
Subject: RE: Landfill Leachate

I used the 55 percent as the design (one might consider that the worst case condition)...If Missouri River would respond like Coldwater..then I would expect averages more in the 60 to 65 percent range.

From a surcharge standpoint ...need to run a few numbers..give me a few minutes
Gary

From: Ken Gambaro [mailto:kmgamb@stlmsd.com]
Sent: Monday, October 28, 2013 7:57 AM
To: Hunter, Gary L.; John Lodderhose; Doug Mendoza; Todd Heller
Subject: RE: Landfill Leachate

Gary –

Is 55% design for worst case conditions or average conditions?

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Coldwater Creek WWTP
314-646-2431
Missouri River WWTP
314-646-2421

From: Hunter, Gary L. [mailto:HunterGL@bv.com]
Sent: Monday, October 28, 2013 12:19 AM
To: Ken Gambaro; John Lodderhose; Doug Mendoza; Todd Heller
Subject: RE: Landfill Leachate

I do not have John Sprague's email address. I am sending via another email a call in number for 8:30 am in the morning. I hope 8:30 am still works for everyone.

I have been examining the data that we have collected. It has been a bit more challenging than I thought but here is my best estimates on the items that I have looked at.

1) We rechecked the design transmittance for the Missouri River plant..it is actually 55 percent. While I would love to go to 65 percent..we are probably limited to the design at 55.
2) If the Landfill does not add any additional treatment for oxidation of color the best dilution ration I would be willing to go is about a 500 part WWTP influent to 1 part landfill. This results in an landfill flow limit of about 49,500 gpd (which would have to be matched with the flow to the Missouri river plant). Typical landfill operating flow range would be around 20,000 to 80,000 gpd. Based on the data we have that would maintain the design transmittance of 55 percent.
3) If the landfill adds ozone for treatment of color then I had to make some estimates on what may occur since we really do not have any test data for this condition. Based on this estimate a dilution factor of 150 parts of WWTP influent to 1 part landfill would maintain the design transmittance of 55 percent. This results in a landfill flow

limit of about 164,000 gpd (which would have to be matched with flow from the Missouri River plant). Typical landfill daily operating flow range might be 70,000 gpd to 250,000 gpd

4) Please note that none of these options actually allows the landfill to discharge their desired flow rate of average 200,0000 gpd 24/365.
5) The two best options from the Corolla paper were Ozone and Membranes..with really high doses of ozone (150 mg/L) based on the information in the paper..please note that we have a different treatment process at our landfill so may not require as much ozone to achieve the color removal.
6) I believe the other options that have been discussed 1) continuing it haul to Bissell Point, 2) dedicated line to Bissell Point, 3) Dedicated line to Coldwater creek, 4) split flow to coldwater and Missouri River are all viable options.
7) From a surcharge standpoint..This was a little bit challenging as well as water quality is a bit dynamic. The presumption here is that due to the biological treatment by the MBR that Missouri River would not be providing any additional treatment that would result in an increase in transmittance across the Missouri River plant. Surcharge would have to take into account using more facilities / increased annual replacement of the equipment. With the assumption that the system is not going to be modified to provide more UV, My best estimate would be that it would require an additional $600,000/year in operating costs (power, lamp replacement, ballast replacement, and some labor) assuming a default transmittance of 55 percent starting at a landfill transmittance of zero. If that number is closer to 40 percent ..might be $300,000/yr. These costs are only for the UV part and may not reflect all the costs that would be incurred by MSD ..(for exampling more cleaning of other facilities at the plant, any additional impacts to biological system, additional monitoring), The challenge here is that when the transmittance goes down does it impact the dose response curve. I really do not have a way to estimate that factor without some additional testing.
8) Did MDNR put any winter/summer bacteria requirements in the permit or limit only for the recreational season..so disinfection system does not operate during the winter months?

Look forward to discussing things with you in the morning
Gary

GARY HUNTER, PE* | Senior Wastewater Process Engineer, Water Americas
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*Licensed in Kansas

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From: Ken Gambaro [mailto:kmgamb@stlmsd.com]
Sent: Thursday, October 24, 2013 11:51 AM
To: Hunter, Gary L.; John Lodderhose; Doug Mendoza
Subject: FW: Landfill Leachate Paper

fyi

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Coldwater Creek WWTP
314-646-2431
Missouri River WWTP
314-646-2421

From: Ken Gambaro
Sent: Thursday, October 24, 2013 9:32 AM
To: Todd Heller
Subject: Landfill Leachate Paper

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Coldwater Creek WWTP
314-646-2431
Missouri River WWTP
314-646-2421

Doug Mendoza BRIDGETON LANDFILL

From:	John Lodderhose
Sent:	Thursday, October 24, 2013 3:12 PM
To:	Cooper, Ivan (icooper@cecinc.com)
Cc:	Doug Mendoza
Subject:	FW: MO River Plant Flows - June - September 2013
Attachments:	MoRiver Plnt Flows (6-7-13 - 9-30-13).xls

Ivan, here is the MSD Missouri River WWTP flow data.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Ken Gambaro
Sent: Thursday, October 24, 2013 2:58 PM
To: Hunter, Gary L. (HunterGL@bv.com); John Lodderhose
Cc: Todd Heller; Doug Mendoza
Subject: MO River Plant Flows - June - September 2013

Attached is a spreadsheet with effluent and influent flows for the period June 7 to September 30, 2013. It is in 30 minute flow increments, and includes min, average and max for each 30-minute period. Let me know if you have any questions.

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Coldwater Creek WWTP
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Missouri River WWTP
314-646-2421

Doug Mendoza

Bridgeton Landfill

From: Ken Gambaro
Sent: Thursday, October 24, 2013 1:27 PM
To: John Lodderhose; Doug Mendoza
Subject: RE: Bridgeton Pilot Plant Data

Ammonia is a concern if it will push us into treating for ammonia in our effluent. Are there any other metals of concern that will be a problem with land application?

Kenneth M. Gambaro, P.E.
Treatment Plant Manager
Metropolitan St. Louis Sewer District
Coldwater Creek WWTP
314-646-2431
Missouri River WWTP
314-646-2421

From: John Lodderhose
Sent: Thursday, October 24, 2013 12:29 PM
To: Doug Mendoza; Ken Gambaro
Subject: RE: Bridgeton Pilot Plant Data

Ken, I have told Ivan about the UVT limitation of 65%. He wanted to make sure that we did not have a problem with any other parameters. I told him that they were close to the Arsenic ordinance limitation but I need to know if you are concerned about anything else.
Let me know.
Thanks

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: John Lodderhose
Sent: Tuesday, October 22, 2013 7:49 AM
To: Doug Mendoza; Ken Gambaro
Subject: FW: Bridgeton Pilot Plant Data

Here is some of the Bridgeton pilot data. Let Ivan know if you have any questions or concerns.

Ken, let us know when you have had a chance to talk to Gary Hunter about a UVT allocation for Bridgeton.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Cooper, Ivan [mailto:icooper@cecinc.com]
Sent: Monday, October 21, 2013 4:48 PM
To: John Lodderhose
Cc: Bodnar, Randy; Kamp, Kevin; Walker, Tony (TWalker@republicservices.com)
Subject: Bridgeton Pilot Plant Data

John,

As you requested, attached is the Bridgeton pilot plant effluent data. The sample #4 is included in the attachment which is the pilot plant MBR effluent.

Please let us know if any of these constituents will impact the Missouri River Treatment Plant effluent.

Please see the data attached and let me know if there are other concerns if the color at 254 nm is removed to help meet the 65% UV Transmittance.

Additionally, we are awaiting your determination of the UV Transmittance allowed at various Bridgeton effluent flows at various Missouri River effluent flow, assuming we can pace the Bridgeton effluent to match the diurnal flow pattern at the Missouri River plant.

Thank you, and we await your information.

Thank you,
Ivan

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National Water/Wastewater Practice Leader
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DL

Doug Mendoza

Bridgeton Landfill

From: Ken Gambaro
Sent: Thursday, October 24, 2013 11:51 AM
To: Hunter, Gary L. (HunterGL@bv.com); John Lodderhose; Doug Mendoza
Subject: FW: Landfill Leachate Paper
Attachments: Paper - Landfill Leachate and UVT.pdf

fyi

Kenneth M. Gambaro, P.E.
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Metropolitan St. Louis Sewer District
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From: Ken Gambaro
Sent: Thursday, October 24, 2013 9:32 AM
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UV Disinfection and Landfill Leachate- a Troublesome Combination

PNCWA Conference 2012
October 24, 2012
Session 22A

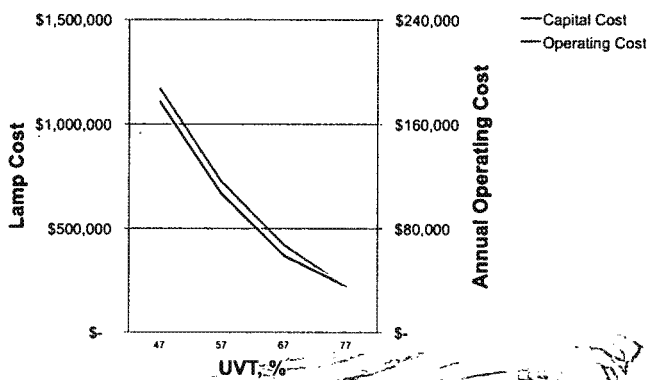
Pierce County
Andrew Perez, Amanda Summers, River Wan, and Robert Lowe

Carollo Engineers
Andrew Salveson, Brian Matson, Karl Hadler, Nitin Goel, Alena Bennett, and Morayo Noibi

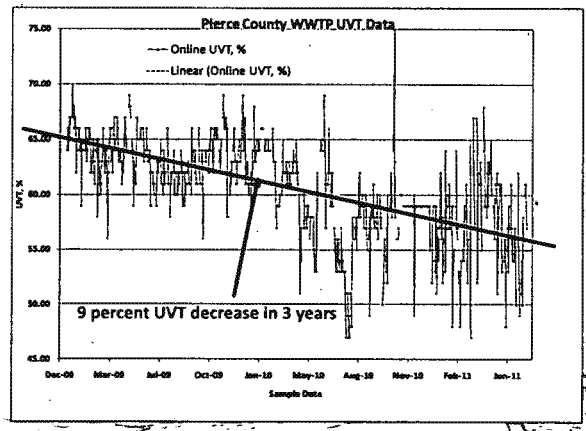
Project Background

- Chambers Creek WWTP undergoing UV disinfection improvements
- New UV System: 57 mgd
- Design UVT: 56%

Why is UVT Important?



Secondary Effluent UVT Trend at the WWTP



What is the suspected culprit of this downward trend?

Leachate Treatment at the WWTP

	Flow
Average Leachate Flow to WWTP	30,000 gpd (treated at landfill)
Permitted Leachate Flow to WWTP	60,000 gpd
Bypass Leachate Flow to WWTP	Up to 100,000 gpd (mostly untreated)

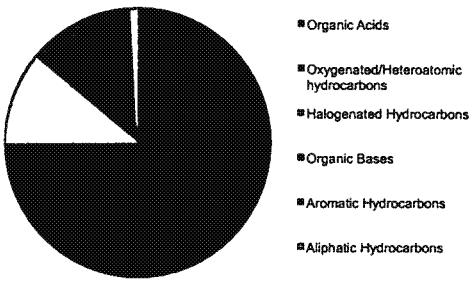
- Carollo was hired to evaluate leachate properties and alternate treatment methods to reduce UVT impacts and secondary effluent

What is the effect of Leachate on Operating and Capital Costs at the WWTP?

	Current Operational Conditions	Conditions without Leachate
Design Conditions		
Ultraviolet Transmission (%)	56	65
Number of Operating Channels	6	6
Number of Operating Banks per Channel	2	2
Total Number of Operating Lamps	768	480
Lamp Cost	**$1,777,200**	**$1,110,700**
Operating Conditions		
Ultraviolet Transmission (%)	59	68
Total Power Consumed (kW)	134	92
Number of Lamp Changes/year	187	140
Annual Energy Cost (@ $0.055/kW-hr)	$58,800	$40,500
Annual Cost of Lamp Changes (@$250 per lamp)	$46,700	$35,000
Total Annual Energy and Lamp Maintenance Cost	**$105,500**	**$75,500**

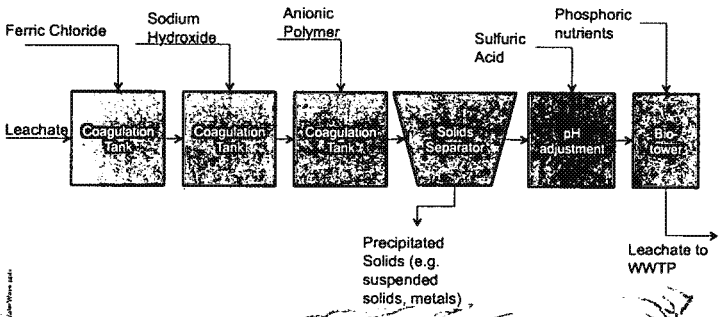
Literature Review

What Constitutes Leachate?

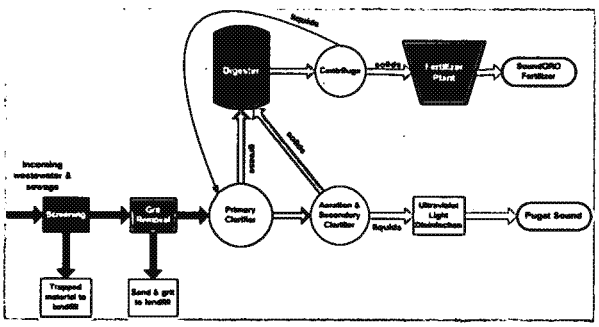


- Leachate organic component: Up to 75% Humic Acids
- Humic Acids are pigmented polymers that absorb light

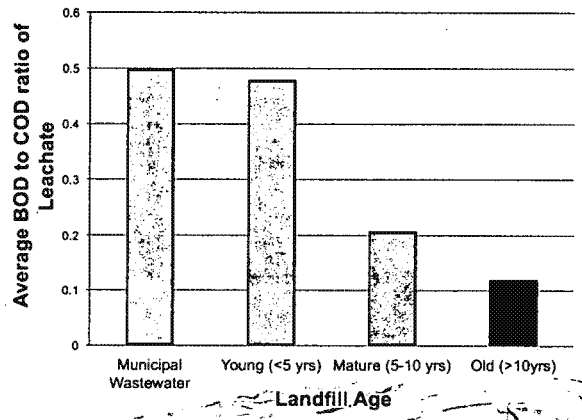
Why aren't the Humic Acids removed at the Landfill's Treatment Plant?



Why aren't the Humic Acids removed at the WWTP?

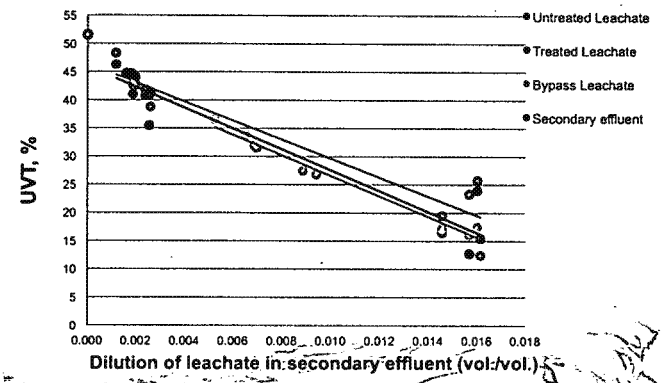


Landfill Leachate Biodegradability

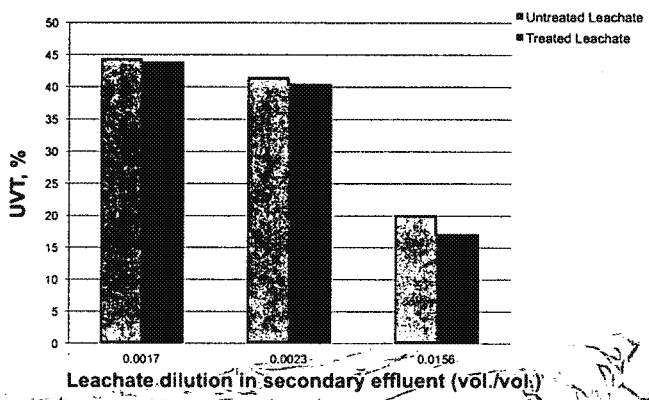


Leachate Impact Assessment

How does Leachate Affect the WWTP UVT?



How does Leachate Treatment at the Landfill Affect WWTP UVT?



Literature Review- Alternate Leachate Treatment Methods

Landfill Leachate Treatment Methods

Advanced Oxidation Processes

- Ozonation
- TiO_2 Photo-Catalytic Oxidation
- H_2O_2-O_3 Treatment
- Ferrate

Physical Treatment Processes

- Powdered Activated Carbon
- Reverse Osmosis
- Nano-Filtration

How do the Treatment Methods Compare?

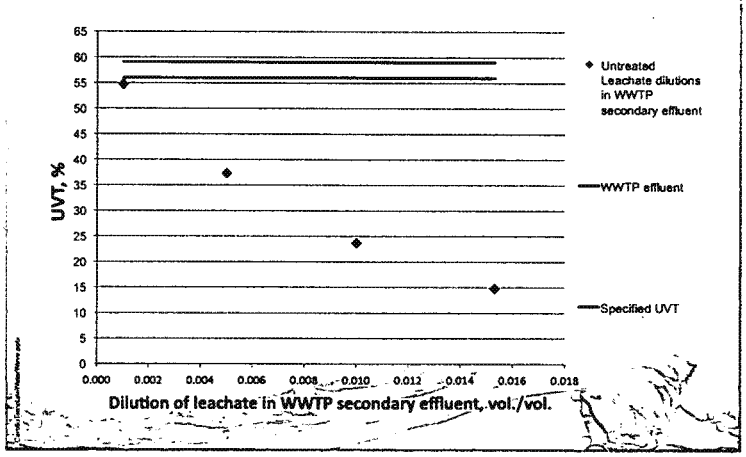
Technology/ Application	Ozone	TiO_2- Photo-catalysis	Peroxide	Ferrate	PACT® Adsorption	Membranes
Full-scale applications	Yes	No	No	No	Yes	Yes
Dose	0.2g /gCOD	6g /gCOD	0.7g H_2O_2/gCOD and 0.05g Fe^{+2}/ gCOD	0.7g Fe^{+6}/ gCOD	NA	120 Bar
Change in Biodegradability	400% increase	57% increase	63% increase	200% increase	ND- Final values are non-detects	72% increase
Color Removal	90%	90%	ND	ND	Observed visually	Observed visually
UVT Increase	30% (Dose: 0.6g/gCOD)	ND	ND	ND	ND	89% increase
COD Removal	60%	70% (Dose: 7g/gCOD)	Up to 50%	70% (Dose: 0.7g/gCOD)	97%	99%
Byproducts/Residue	No	No	No	Yes	Yes	Yes, recycled to Landfill, or incinerated.

How do the Treatment Methods Compare?

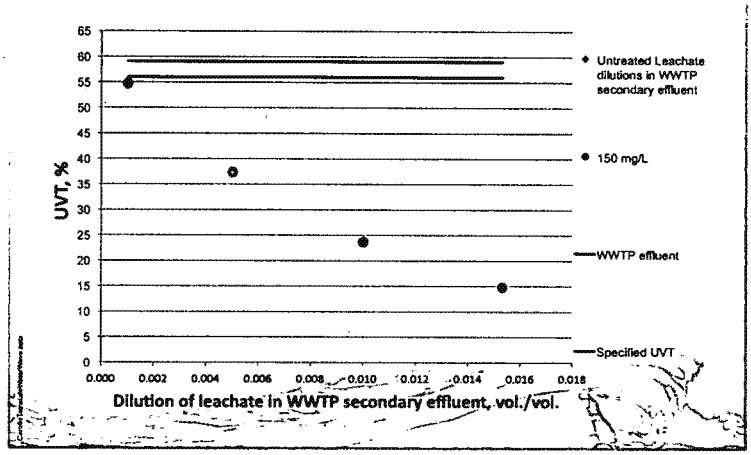
Technology/ Application	Ozone	TiO_2- Photo-catalysis	Peroxide	Ferrate	PACT® Adsorption	Membranes
Full-scale applications	Yes	No	No	No	Yes	Yes
Dose	0.2g /gCOD	6g /gCOD	0.7g H_2O_2/gCOD and 0.05g Fe^{+2}/ gCOD	0.7g Fe^{+6}/ gCOD	NA	120 Bar
Change in Biodegradability	400% increase	57% increase	63% increase	200% increase	ND- Final values are non-detects	72% increase
Color Removal	90%	90%	ND	ND	Observed visually	Observed visually
UVT Increase	30% (Dose: 0.6g/gCOD)	ND	ND	ND	ND	89% increase
COD Removal	60%	70% (Dose: 7g/gCOD)	Up to 50%	70% (Dose: 0.7g/gCOD)	97%	99%
Byproducts/Residue	No	No	No	Yes	Yes	Yes, recycled to Landfill, or incinerated.

Results of Benchtop Tests

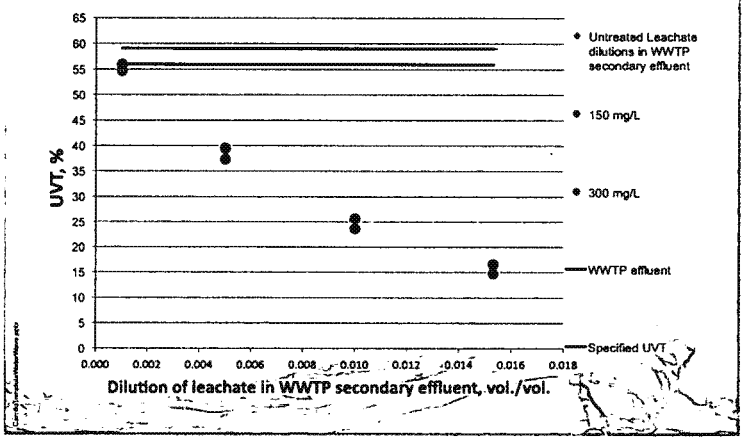
Ozone Benchtop Test Results



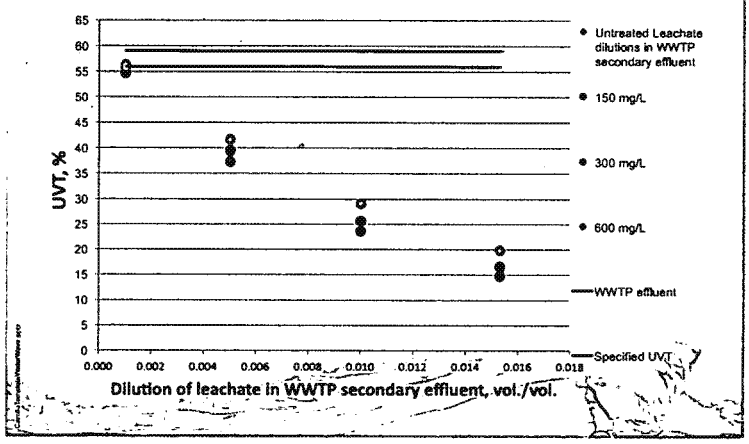
Ozone Benchtop Test Results



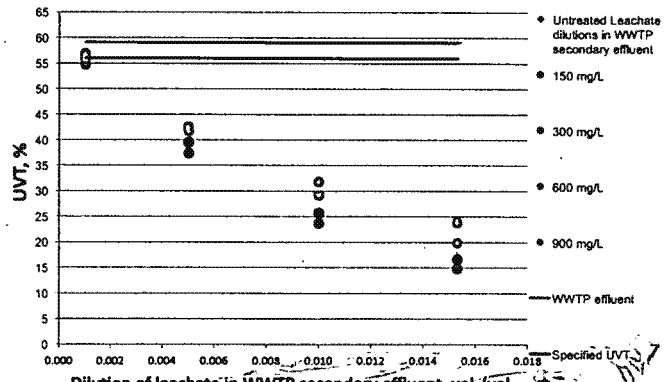
Ozone Benchtop Test Results



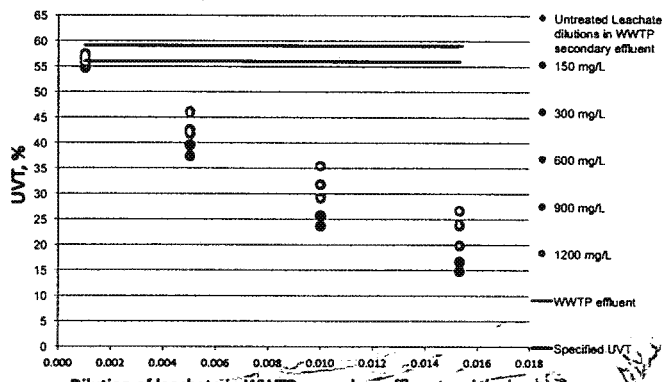
Ozone Benchtop Test Results



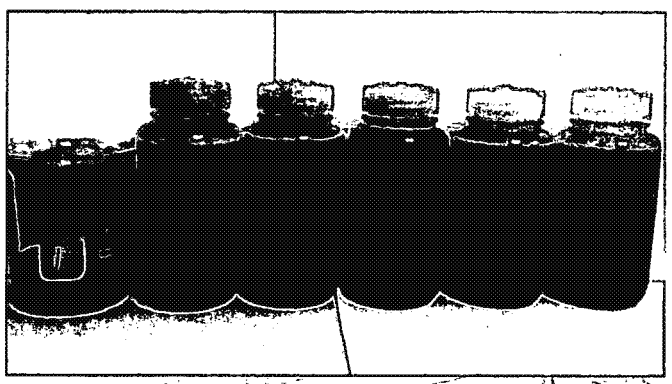
Ozone Benchtop Test Results



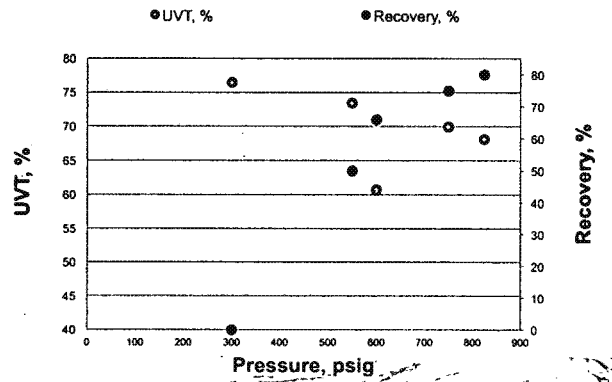
Ozone Benchtop Test Results



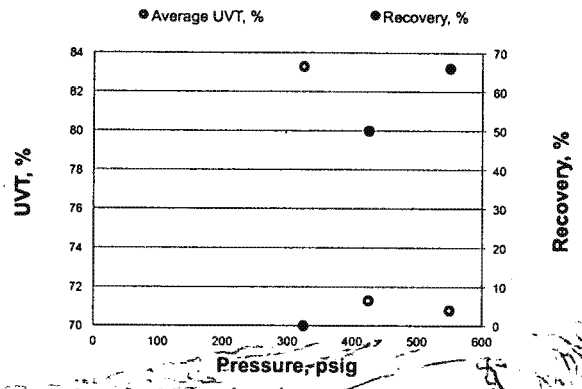
Ozone Benchtop Test Samples



Membrane Benchtop Test Results- Reverse Osmosis



Membrane Benchtop Test Results- Nanofiltration



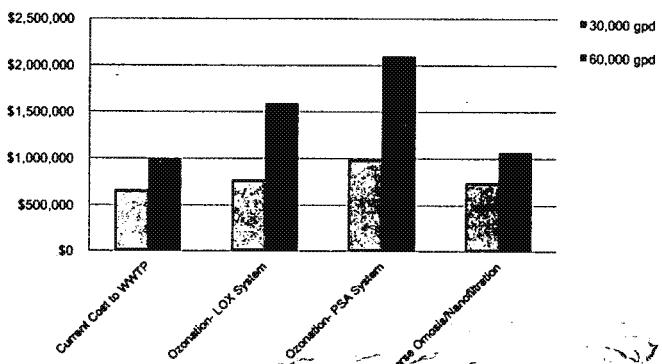
Membrane Benchtop Test Samples

Secondary effluent and untreated leachate

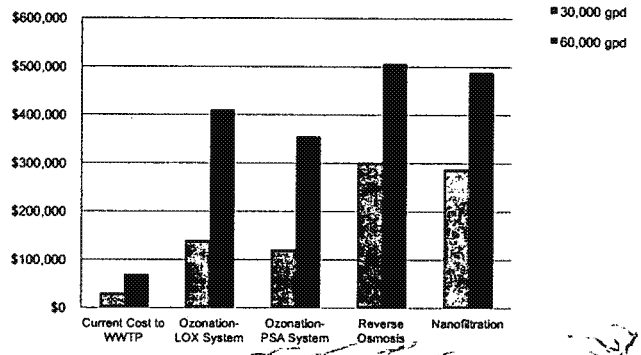
Secondary effluent and treated leachate

Planning Level Cost Analysis

Equipment Costs of Tested Technologies



Annual Operating Costs of Tested Technologies



Summary and Conclusion

Conclusions

- Leachate discharge reduces the WWTP UVT by up to 9%, regardless of landfill treatment
- Lower UVT results in approximately:
  - $666,000 of additional UV equipment cost;
  - $30,000/yr of additional energy and lamp maintenance cost
- Current treatment at the landfill is not effective in removing or reducing humic acids- the low UVT and non-biodegradable component of leachate

Conclusions

- Benchtop testing of Ozone, RO and NF technologies have shown that these technologies can substantially increase leachate UVT
- Leachate pre-treatment cost via Ozone, RO and NF >> NPV of treatment at current conditions
- If low (<56%) plant UVT levels continue, the newly installed UV equipment will not provide a sufficient dose to achieve disinfection
- Providing leachate pre-treatment may be required for WWTP to meet NPDES permit requirements

Next Steps

- Set up of pretreatment regulation based on cost impacts of reduced UVT
- Carollo and Pierce County worked together to model reduction in UVT impact, based on volume of leachate received

Questions?

Contact:

Morayo Noibi

mnoibi@carollo.com

References

- Landfill Leachate photo retrieved online, 10/18/12 http://mikedavidsonent.com/newsite/?p=226
- U.S.EPA, 1995. *Manual: Groundwater and Leachate Treatment Systems.* Office of Research and Development, Washington, DC, 20460.
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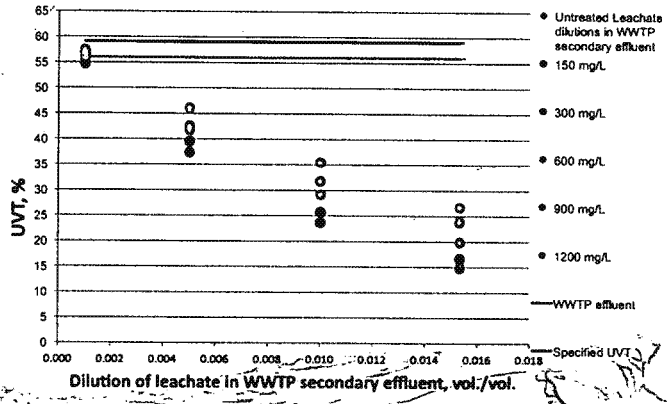
Acknowledgements

- Pierce County
- Rochem
- APTWater

Ozone bench-top test



Doug Mendoza

From: Joe Pavlich
Sent: Thursday, October 24, 2013 7:17 AM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: Bridgeton Landfill

Doug, here is the reading for Bridgeton Landfill on 10/23/13 at 11:15; 1377238.

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, October 23, 2013 10:18 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. As noted last week, the facility is working on upgrading the recirculator pump and hopes to have that completed and resume discharge to the Missouri River Treatment Facility on Friday. We will keep you updated on that.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table			
Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, October 13, 2013	Batch 316-102	22,500	22,500
	Batch 316-103	150,000	150,000
Monday, October 14, 2013	Batch 316-103	22,500	22,500
	Batch 316-104	150,000	150,000
Tuesday, October 15, 2013	Batch 316-104	22,500	22,500
	Batch 316-105	150,000	150,000
Wednesday, October 16, 2013	Batch 316-105	22,500	22,500
	Batch 316-106	150,000	150,000
Thursday, October 17, 2013	Batch 316-106	22,500	22,500
	Batch 316-107	150,000	150,000
Friday, October 18, 2013	Batch 316-107	22,500	22,500
	Batch 316-108	150,000	150,000
Saturday, October 19, 2013	Batch 316-108	22,500	22,500
	Batch 316-109	142,500	142,500

Starting Date	*10/13/2013 7:00*
Ending Date	*10/20/2013 7:00*

MSD - Missouri River Tracking Table								
Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, October 13, 2013	Batch 316-103	16,861	10/13/2013 7:00	10/14/2013 7:00	24.0	857	702.5	6.13
Monday, October 14, 2013	Batch 316-104	19,615	10/14/2013 7:00	10/15/2013 7:00	24.0	853	817.3	6.07
Tuesday, October 15, 2013	Batch 316-105	19,502	10/15/2013 7:00	10/16/2013 7:00	24.0	840	812.6	6.16
Wednesday, October 16, 2013	Accumulated	7,470	10/16/2013 7:00	10/17/2013 7:00	24.0	840	311.3	6.10
Thursday, October 17, 2013	Accumulated	524	10/17/2013 7:00	10/18/2013 7:00	24.0	840	21.8	6.41
Friday, October 18, 2013	Batch 316-108	-	10/18/2013 7:00	10/19/2013 7:00	24.0	840	0.0	5.70
Saturday, October 19, 2013	Batch 316-109	-	10/19/2013 7:00	10/20/2013 7:00	24.0	840	0.0	7.21

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] Title: Environmental Specialist Date: 10/22/13

10-23-13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/14/2013 7:00:00 AM	10/13/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,330,127	1,313,266	16,861

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 16,861 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* ~~10/22/13~~ (BKS) 10/14/13

MSD Daily Flow Reading, ending 10-14-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/15/2013 7:00:00 AM	10/14/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,349,742	1,330,127	19,615

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,615 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/15/13

MSD Daily Flow Reading, ending 10-15-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/16/2013 7:00:00 AM	10/15/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,369,244	1,349,742	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/16/13

MSD Daily Flow Reading, ending 10-16-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/17/2013 7:00:00 AM	10/16/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,376,714	1,369,244	7,470

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 7,470 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 10/17/13

MSD Daily Flow Reading, ending 10-17-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/18/2013 7:00:00 AM	10/17/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,376,714	524

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 524 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/18/13

MSD Daily Flow Reading, ending 10-18-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/19/2013 7:00:00 AM	10/18/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/19/13

MSD Daily Flow Reading, ending 10-19-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/20/2013 7:00:00 AM	10/19/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,377,238	1,377,238	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/20/13

MSD Daily Flow Reading, ending 10-20-2013

DM
10-23-13

OB-316-102 Bridgeton Landfill

Fill Data

Fill Start Date	10/11/2013
Fill Start Time	18:05
Fill Stop Date	10/11/2013
Fill Stop Time	23:05
Process Battery	316 AST

Processing Data

Process Start Date	10/11/2013
Process Start Time	22:00
Process Stop Date	10/12/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-719
Test Results	Benzene = 60 ppb
Reprocessed Batch	

Notes

MEK = 25,000 ppb

Tuesday, October 22, 2013

OB-316-103 Bridgeton Landfill

Fill Data

Fill Start Date	10/12/2013
Fill Start Time	18:45
Fill Stop Date	10/13/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	10/12/2013
Process Start Time	22:20
Process Stop Date	10/13/2013
Process Stop Time	05:00

Approval Data

Approval Details	NAL 13026-720
Test Results	Benzene = 63 ppb
Reprocessed Batch	

Notes

MEK = 25,000 ppb

Tuesday, October 22, 2013

OB-316-104 Bridgeton Landfill

Fill Data

Fill Start Date	10/13/2013
Fill Start Time	18:10
Fill Stop Date	10/13/2013
Fill Stop Time	23:57
Process Battery	316 AST

Processing Data

Process Start Date	10/13/2013
Process Start Time	21:05
Process Stop Date	10/14/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL 13026-722
Test Results	Benzene = 46 ppb
Reprocessed Batch	

Notes

MEK = 25,000 ppb

Tuesday, October 22, 2013

OB-316-105 Bridgeton Landfill

Fill Data

Fill Start Date	10/14/2013
Fill Start Time	18:25
Fill Stop Date	10/15/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	10/14/2013
Process Start Time	21:10
Process Stop Date	10/15/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL 13026-724
Test Results	Benzene = 61 ppb
Reprocessed Batch	

Notes

MEK = 26,000 ppb

Tuesday, October 22, 2013

OB-316-106 Bridgeton Landfill

Fill Data

Fill Start Date	10/15/2013
Fill Start Time	18:20
Fill Stop Date	10/15/2013
Fill Stop Time	23:58
Process Battery	316 AST

Processing Data

Process Start Date	10/15/2013
Process Start Time	21:40
Process Stop Date	10/16/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL 13026-726
Test Results	Benzene = 71 ppb
Reprocessed Batch	

Notes

MEK = 29,000 ppb

Tuesday, October 22, 2013

OB-316-107

Bridgeton Landfill

Fill Data

Fill Start Date	10/16/2013
Fill Start Time	18:15
Fill Stop Date	10/16/2013
Fill Stop Time	23:59
Process Battery	316 AST

Processing Data

Process Start Date	10/16/2013
Process Start Time	19:45
Process Stop Date	10/17/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL 13026-728
Test Results	Benzene = 46 ppb
Reprocessed Batch	

Notes

MEK = 29,000 ppb

Tuesday, October 22, 2013

OB-316-108

Bridgeton Landfill

Fill Data

Fill Start Date	10/17/2013
Fill Start Time	18:10
Fill Stop Date	10/17/2013
Fill Stop Time	23:52
Process Battery	316 AST

Processing Data

Process Start Date	10/17/2013
Process Start Time	20:00
Process Stop Date	10/18/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL 13026-730
Test Results	benzene = 52 ppb
Reprocessed Batch	

Notes

MEK = 27,000 ppb

Tuesday, October 22, 2013

OB-316-109 Bridgeton Landfill

Fill Data

Fill Start Date	10/18/2013
Fill Start Time	18:20
Fill Stop Date	10/19/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	10/18/2013
Process Start Time	20:48
Process Stop Date	10/19/2013
Process Stop Time	05:36

Approval Data

Approval Details	NAL 13026-732
Test Results	Benzene = 54 ppb
Reprocessed Batch	

Notes

MEK = 26,000 ppb

Tuesday, October 22, 2013

Table 1
VOCs and SVOCs
July 2013 - October 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-103	10/13/2013	Pace	Validated	60155409	ND
316-102	10/12/2013	Pace	Validated	60155408	ND
316-101	10/11/2013	Pace	Validated	60155346	ND
316-100	10/10/2013	Pace	QC Pending	60155222	ND
316-099	10/9/2013	Pace	Validated	60155141	ND
316-098	10/8/2013	Pace	Validated	60155023	ND

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	pH, field	Solids, total suspended
					NA	NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	pH units	mg/l
316-103	10/13/2013	Pace	Validated	60155409	30700	62600	731	404	5.7	5.7	5.80	2980
316-102	10/12/2013	Pace	Validated	60155408	31900	65400	774 *	516	ND	6.2	5.55	2540
316-101	10/11/2013	Pace	Validated	60155346	29300	78300	712	706	ND	5.5	5.47	3820
316-100	10/10/2013	Pace	QC Pending	60155222	32200	98000	755	318	ND	5.5	5.50	2860
316-099	10/9/2013	Pace	Validated	60155141	30500	80000	728	420	ND	5.5	5.41	4220
316-098	10/8/2013	Pace	Validated	60155023	29700	70100	761 *	452	ND	5.5	5.40	1640

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron
					Total	Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-103	10/13/2013	Pace	Validated	60155409	5.1	ND	0.798	ND	ND	0.278	0.0475	ND	886
316-102	10/12/2013	Pace	Validated	60155408	5.32	ND	0.83	ND	ND	0.296	0.0477	ND	983
316-101	10/11/2013	Pace	Validated	60155346	7.07	ND	0.859	ND	ND	0.294	0.0520	ND	1020
316-100	10/10/2013	Pace	QC Pending	60155222	12.3	ND	0.904	ND	ND	0.312	0.0586	0.0384	1130
316-099	10/9/2013	Pace	Validated	60155141	10.4 *	0.0747	0.857	ND	ND	0.319	0.0542	ND	973
316-098	10/8/2013	Pace	Validated	60155023	9.88	0.0542	0.798	ND	ND	0.302	0.0512	ND	978

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-103	10/13/2013	Pace	Validated	60155409	0.109	0.00026	0.103	ND	ND	ND	12.7
316-102	10/12/2013	Pace	Validated	60155408	0.118	0.00037 *	0.105	ND	ND	ND	14.6
316-101	10/11/2013	Pace	Validated	60155346	0.138	0.00061	0.107	ND	ND	ND	13.2
316-100	10/10/2013	Pace	QC Pending	60155222	0.187	0.0042	0.119	ND	ND	ND	13.8
316-099	10/9/2013	Pace	Validated	60155141	0.176	0.00031 *	0.118	ND	ND	ND	14.3
316-098	10/8/2013	Pace	Validated	60155023	0.173	0.00066 *	0.13	ND	0.0173 *	ND	15.2

To: BRIDGETON LANDFILL LLC [1003803000]

From: Doug Mendoza

Date: October 21, 2013

Re: Notes from 10/18/13 Technical Issues Meeting

From John Lodderhose:

- Bridgeton Landfill had a pump fail due to corrosion, and is looking at chloride and sulfate levels to see if they are a concern.
- The landfill asked if they could be billed on BOD, instead of COD, because they do not think that its higher COD (vs. BOD) results in more treatment costs. The COD is soluble and refracted in the wastewater.
- Several options are being investigated to improve the landfill leachate's transmittance.
    - Ozone + H2O2 gives a transmittance of 25-30%
    - Ozone alone gives a transmittance of 15-20%
    - Nanofiltration also is being investigated (but they do not want to go to reverse osmosis)
    - As is electrocoagulation
- Bridgeton Landfill stated that it really needs a firm transmittance number from MSD, in order to develop their treatment process.
- Hauled leachate volume to the MSD Bissell Point hauled waste station will increase to 195,000 GPD starting October 28, and will stay at that level unless MSD is informed otherwise.

MSD AND BRIDGETON LANDFILL TECHNICAL ISSUES MEETING

October 18, 2013

AGENDA

1. Updates
    a. Discharges to Bissell Point and MO River Plants
    b. Pretreatment design and testing
    c. Transmittance
    d. Carbon monoxide
2. Increase to 200,000 gpd –clarification on hours and notification
3. Other issues

DL

Doug Mendoza

From: Darin Lewis
Sent: Monday, October 21, 2013 12:46 PM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Steve Grace; Sara Kammerer
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 10/13/2013 to 10/19/2013.
10/13 – 172,500 gallons
10/14 – 172,500 gallons
10/15 – 172,500 gallons
10/16 – 172,500 gallons
10/17 – 172,500 gallons
10/18 – 172,500 gallons
10/19 – 165,000 gallons
Total = 1,200,000 gallons

BRIDGETON LANDFILL LLC

Christopher J. Bulmahn

10038030 00

From:	Sehie, Bryan <BSehie@republicservices.com>
Sent:	Monday, October 21, 2013 10:12 AM
To:	Christopher J. Bulmahn
Cc:	Power, Brian
Subject:	Bridgeton Landfill Monthly Leachate Outfall Total - Sept. 2013
Attachments:	Bridgeton Landfill LLC 2013 Outfall report.pdf

Hello Chris,

Attached please find, for billing purposes, the monthly leachate outfall totals for the Bridgeton Landfill for the month of September 2013. Please let me know if you have any questions.

Thanks,

Bryan

Bryan Sehie | Environmental Specialist | Republic Services, Inc.

13570 St. Charles Rock Rd. | Bridgeton, MO 63044

☎ 314.744.8190 314.443.0179

2013

Bridgeton Landfill LLC
Monthly Leachate Outfall Report

10/21/2013 Filed in 15.4

Month	Net Meter Reading	Precipitation Inches	Date of Reading	Gallons	Average Daily Discharge (Gal)	Equivalent Cubic Feet	Equivalent 100 Cubic Feet
January	6,297,239	3.12	2/1/2013	3,498,515	112,855	467,715.91	4,677.16
February	6,905,982	3.25	3/1/2013	608,743	21,740	81,382.75	813.83
March	6,906,109*	4.95	4/1/2013	0*	0*	0*	0*
April	6,915,104	5.67	5/1/2103	8,604**	8,604**	1,150.27	11.50
May	81,827	7.13	6/1/2013	373,684***	12,054	49,957.75	499.58
June	284,978	5.86	7/1/2013	203,151	6,771	27,159.22	271.59
July	319,982	3.35	8/1/2013	35,004	1,129	4,679.68	46.80
August	728,556	1.19	9/1/2013	408,574	13,180	54,622.19	546.22
September	1,187,742	2.74	10/1/2013	459,186	15,306	61,388.50	613.89
October							
November							
December							

CB
10-22

Note:

*Flow represented is due to flow meter error. No discharge to MSD has occurred between 2/7/2013 and 4/30/2013.

** Discharge to MSD was resumed on 4/30/2013 (Net meter reading 6,906,500)

***New flow meter intalled and set to 0, meter was also reset twice during May, see daily logs.

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October 13, 2013

Mr. Chris Bulmahn
Environmental Engineer
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, MO 63147-2913

Re: Metropolitan St. Louis Sewer District – Administrative Compliance Order
Action Items #5 and #6
Bridgeton Landfill, LLC.
Discharge Permit No. 0511559802-2

Dear Mr. Bulmahn:

On behalf of the Bridgeton Landfill, in accordance with the Metropolitan St. Louis Sewer District (MSD) Administrative Compliance Order (AO), which was signed by legal representatives of MSD and the Bridgeton Landfill, LLC and entered effect on October 29, 2012, respectfully submits this progress report as outlined in the AO, Action Items' #5 and #6.

As required per Action Items #5 and #6, the Bridgeton Landfill shall submit a schedule, for MSD approval, of actions for the design, installation, and operation of the procedures and pretreatment options identified in AO Finding #8 which states that the Bridgeton Landfill is in the process of investigation for the implementation of the following pretreatment options in which to eliminate the occurrence of future prohibited discharges at Leachate Outfall 008:

a.) Installation and operation of a supplemental "enclosed" flare, as well as a supplemental "candlestick" utility flare within the landfill's gas collection and control system;

b.) Design and operation of air monitoring/moving engineering controls at the landfill's outfall to the MSD sewer system within the Westlake Pump Station, and;

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c.) Installation and operation of a foam suppressing agent. The following table outlines current progress and planned actions to be taken at the Bridgeton Landfill in regard to the aforementioned items.

Finding No.	Proposed Option	Complete (Yes/No)	Completion Date
8a(1)	Installation and Operation of Additional Enclosed Flare	Yes	2-Oct-12
8a(2)	Installation and Operation of Supplemental Candlestick Flare	Yes	18-Jul-12
8b	Design and Operation of Air Monitoring/Moving Engineering Controls within Westlake Pump Station	Yes	6-Jun-13
8c	Installation and Operation of a Foam Suppression Agent	No	Installation Suspended

The Bridgeton Landfill completed the construction and testing phases of the supplemental candlestick flare on July 18, 2012 (Finding 8a(2)). This flare was subsequently replaced with a larger 3,500 scfm candlestick flare that became operational in January 2013. The supplement candlestick flare has been brought back on-line in June 2013.

The two existing 3,500 scfm enclosed flares were replaced with two 4,000 scfm candlestick flares in September 2013. The combined flow of the four candlestick flares is 14, 000 scfm which will further allow the ability to improve landfill gas collection and odors at the facility and the surrounding environment. Below is the list of the operating candlestick flares on-site:

Emission Unit Description	Operational Date
2500 SCFM LFG Specialties Flare	7/10/2012
4000 SCFM John Zinc Flare #1	9/24/2013
3500 SCFM John Zinc Flare #2	01/13
4000 SCFM John Zinc Flare #3	9/20/2013

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All candlestick flares are operated and maintained under a site-specific program which is designed to enable landfill personnel to minimize downtime and provide peak system performance efficiency.

In a letter from MSD dated December 4, 2012, it was declared that the Bridgeton Landfill was no longer required to construct and operate a foam suppression system at the facility unless future foaming incidents occur. The Bridgeton Landfill will continue to monitor the Westlake Pump Station as well as the Leachate Tank System for indicators of foaming.

The design and development of the air quality engineering controls to be constructed and operated at the Westlake Pump Station (Finding 8b), were completed on December 20, 2012. Prior to finalization of the system design, meetings regarding the development of a plan of action for the preparation and construction of these air quality engineering controls were held at the MSD office on August 21, 2012, and September 24, 2012 between; MSD Environmental Compliance and Operations representatives and Bridgeton Landfill personnel. Additionally, series of on-site meetings were held at the Westlake Pump Station, involving the aforementioned parties, to determine the design of the system and to secure an incoming power supply.

On June 6, 2013 the air monitoring/moving engineering controls within the Westlake pump station became fully operational. Between the dates of June 6-16, 2013 a baseline evaluation of the 4-gas levels within the pump station wet well was conducted using the newly installed monitor. The purpose of this evaluation was to monitor the in-well conditions during discharge operations from the landfill. On June 17, 2013, following the baseline evaluation, the system's drum scrubber was activated. Bryan Sehie of Bridgeton Landfill coordinated this effort with Vince Stollhans of MSD, and both have reviewed MSD 4-gas monitoing data recorded by the system. Since operation of the drum scrubber the 4-gas meter levels within the pump station have decreased as confirmed by the MSD data maintained by Vince Stollhans.

Leachate discharge of up to 20,000 gallons per day was continued throughout the month of September 2013 with a flow rate of approximately 19,500 gallons per day. During discharge the 4-gas meter levels have continued to show a reduced level during drum scrubber operation than was reported during the baseline study, demonstrating the overall effectiveness of the air moving system. Elevated levels of hydrogen sulfide of approximately 10 ppm continue to be observed, however these levels were present at the outfall location without discharge from the

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landfill, as observed in the baseline study. Carbon monoxide levels have decreased, with average concentrations of 200 ppm. The drum scrubber system has lowered the concentrations on average from 500 ppm observed when not in operation to around 100 ppm when fully operational. Additionally, the Bridgeton Landfill continues to coordinate with MSD Operations personnel to cease leachate discharge prior to all pump station maintenance events, routine or otherwise, to lower carbon monoxide concentrations to near non-detect levels for the duration of these events.

The facility has submitted the Leachate Pre-Treatment System Plan on August 30, 2013 and received comments from MSD on September 9, 2013. It is anticipated with the installation and operation of the pre-treatment system will further reduce the carbon monoxide levels observed at Outfall 008.

We will continue to provide ongoing updates on leachate and the pretreatment system to comply with the AO agreement as well as MSD ordinances. If there are any questions please contact Bryan Sehie with Bridgeton Landfill at 314-744-8190 or myself at 573-289-3379.

Sincerely,
Weaver Boos Consultants

Michele A Clark

Michele Clark
Senior Project Director

Cc: Bryan Sehie, Bridgeton Landfill, LLC.

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Doug Mendoza BRIDGETON LANDFILL

From: John Lodderhose
Sent: Friday, October 18, 2013 4:02 PM
To: Rob G Daly
Cc: Doug Mendoza; Mark Bright
Subject: RE: Westlakes PS-Status Update

Rob, the air sampling will probably be conducted in February 2014. Once when the completed pretreatment plant begins to discharge and once when the plant is fully operational and in full compliance with MSD requirements.

John R. Lodderhose, P.E.
Metropolitan St. Louis Sewer District
Assistant Director of Engineering
Environmental Compliance
314-436-8714

From: Rob G Daly
Sent: Friday, October 18, 2013 7:37 AM
To: John Lodderhose
Cc: Doug Mendoza; Mark Bright
Subject: Westlakes PS-Status Update

John/Doug

Neither myself or Mark Bright will be attending today due to a training session we have scheduled so wanted to see if I could please secure your assistance in covering down on the few items still on our list of concerns- and was wondering if I could possibly secure an email response from you or Doug after the meeting on the items since we will be unable to attend and I do not believe we are generating any minutes for distribution.

My only topics of interest right now are:

1) Could you ask for more clarification on what events- and when the best estimate is right now date wise for those events- will trigger those summa canister air sampling events for benzene? I am still unclear on what events are triggering that and we (or me) never received any information on what events will trigger that summa canister grab event. Not expecting dates just yet-since I expect their project schedule to be pretty fluid- but I have no idea of how to know if and when those events (summa canister grabs) are supposed to occur. I realize I do not truly 'need' to know (meaning they will happen all the same whether I know or not and I know we will receive the results)- but please forgive my curiosity-just trying to keep the picture in my head so I can respond to staff inquiries and do staff updates.
2) Best estimate at this time of pre-treatment system start up and commissioning date. Strictly curiosity. The higher than usual 4 gas levels we are experiencing are almost certainly a result of the low volume of flow creating septic conditions- and this is resulting in us starting a series of in house 'experiments' to adjust stations set points, cycle times, etc. to attempt to address high 4 gas levels while we are in this reduced flow situation. No big deal compared to VOC (and occupational health issues) faced previously and is a more 'normal' deal for us- but is why we continue to remain interested in ultimate date we go back to a higher rate of flow regime.

Many thanks for all DEC collaboration to date on this one- it has been greatly appreciated and we have been trying to do our best to do what I said we wanted to do, i.e. step away slowly from the project as it progresses forward (appropriately so).Any info appreciated.

Rob

Doug Mendoza

From: Joe Pavlich
Sent: Friday, October 18, 2013 3:24 PM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: Readings at Bridgeton Landfill

Doug, the reading at Bridgeton Landfill for 10/18/13 was 1377238, the reading was taken at 9:53 A.M.

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	pH, field	Solids, total suspended
					NA	NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	pH units	mg/l
316-097	10/7/2013	Pace	Validated	60154868	27600	58500	736	340	ND	5.8	5.59	2840
316-096	10/6/2013	Pace	Validated	60154867	25600	54900	716	514	ND	5.9	5.72	1860
316-095	10/5/2013	Pace	Validated	60154861	31100	75200	688	541	ND	7.5	5.60	1780
316-094	10/4/2013	Pace	Validated	60154802	29600	65900	643	510	ND	5.6	5.71	1580
316-093	10/3/2013	Pace	Validated	60154684	30900	63700	714	445	5.1	5.7	5.71	2560
316-092	10/2/2013	Pace	Validated	60154559	30500	64300	703	515	ND	5.6	5.72	1600
316-091	10/1/2013	Pace	Validated	60154439	34300	79500	696	401	ND	5.6	5.65	1660

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-097	10/7/2013	Pace	Validated	60154868	14.3	ND	0.723	ND	ND	0.292	0.0485	ND
316-096	10/6/2013	Pace	Validated	60154867	9.66	ND	0.682	ND	ND	0.281	0.0471	ND
316-095	10/5/2013	Pace	Validated	60154861	7.43	ND	0.61	ND	ND	0.271	0.0430	ND
316-094	10/4/2013	Pace	Validated	60154802	12.8	0.0523	0.663	ND	ND	0.314	0.0517	ND
316-093	10/3/2013	Pace	Validated	60154684	10.7 *	0.0464	0.725	ND	0.0167	0.318	0.0522	ND
316-092	10/2/2013	Pace	Validated	60154559	11.2	0.0529	0.736	ND	0.0172	0.329	0.0514	ND
316-091	10/1/2013	Pace	Validated	60154439	7.34	0.0497	0.808	ND	0.0141	0.306	0.0462	ND

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Iron	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-097	10/7/2013	Pace	Validated	60154868	890	0.201	0.0123 *	0.127	ND	0.0155	ND	12.9
316-096	10/6/2013	Pace	Validated	60154867	872	0.169	0.00069	0.123	ND	0.0141	ND	14.7
316-095	10/5/2013	Pace	Validated	60154861	829	0.136	0.0010	0.113	ND	0.0148 *	ND	14.7
316-094	10/4/2013	Pace	Validated	60154802	942	0.191	0.00056	0.131	ND	ND	ND	15.4
316-093	10/3/2013	Pace	Validated	60154684	1010	0.203	0.0018	0.12	ND	ND	ND	15
316-092	10/2/2013	Pace	Validated	60154559	925	0.201	0.0099	0.117	ND	ND	ND	15
316-091	10/1/2013	Pace	Validated	60154439	775	0.156	0.0061	0.107	ND	ND	ND	14.4

Table 1
VOCs and SVOCs
July 2013 - October 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-097	10/7/2013	Pace	Validated	60154868	ND
316-096	10/6/2013	Pace	Validated	60154867	ND
316-095	10/5/2013	Pace	Validated	60154861	ND
316-094	10/4/2013	Pace	Validated	60154802	ND
316-093	10/3/2013	Pace	Validated	60154684	ND
316-092	10/2/2013	Pace	Validated	60154559	ND
316-091	10/1/2013	Pace	Validated	60154439	ND

PL
10-17-13

OB-316-095 Bridgeton Landfill

Fill Data

Fill Start Date	10/4/2013
Fill Start Time	18:20
Fill Stop Date	10/4/2013
Fill Stop Time	23:35
Process Battery	316 AST

Processing Data

Process Start Date	10/4/2013
Process Start Time	21:20
Process Stop Date	10/5/2013
Process Stop Time	05:00

Approval Data

Approval Details	NAL13026-707
Test Results	Benzene 84 ppb
Reprocessed Batch	

Notes

MEK = 29,000 ppb.

Monday, October 14, 2013

OB-316-096 Bridgeton Landfill

Fill Data

Fill Start Date	10/5/2013
Fill Start Time	18:10
Fill Stop Date	10/6/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	10/5/2013
Process Start Time	21:23
Process Stop Date	10/6/2013
Process Stop Time	05:00

Approval Data

Approval Details	NAL13026-709
Test Results	Benzene 59 ppb
Reprocessed Batch	

Notes

MEK = 30,000 ppb. Fill height 17.2 feet by midnight.

Monday, October 14, 2013

OB-316-097 Bridgeton Landfill

Fill Data

Fill Start Date	10/6/2013
Fill Start Time	18:05
Fill Stop Date	10/7/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	10/6/2013
Process Start Time	20:45
Process Stop Date	10/7/2013
Process Stop Time	06:00

Approval Data

Approval Details	NAL13026-711
Test Results	Benzene 43 ppb
Reprocessed Batch	

Notes

MEK = 41,000 ppb.

Monday, October 14, 2013

OB-316-098 Bridgeton Landfill

Fill Data

Fill Start Date	10/7/2013
Fill Start Time	18:25
Fill Stop Date	10/8/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	10/7/2013
Process Start Time	21:05
Process Stop Date	10/8/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-713
Test Results	Benzene 57 ppb
Reprocessed Batch	

Notes

MEK = 22,000 ppb.

Monday, October 14, 2013

OB-316-099

Bridgeton Landfill

Fill Data

Fill Start Date	10/8/2013
Fill Start Time	18:28
Fill Stop Date	10/8/2013
Fill Stop Time	23:23
Process Battery	316 AST

Processing Data

Process Start Date	10/8/2013
Process Start Time	22:54
Process Stop Date	10/9/2013
Process Stop Time	06:50

Approval Data

Approval Details	NAL 13026-715
Test Results	Benzene = 54 ppb
Reprocessed Batch	

Notes

MEK = 24,000 ppb

Monday, October 14, 2013

OB-316-100 Bridgeton Landfill

Fill Data

Fill Start Date	10/9/2013
Fill Start Time	18:13
Fill Stop Date	10/9/2013
Fill Stop Time	23:37
Process Battery	316 AST

Processing Data

Process Start Date	10/9/2013
Process Start Time	20:25
Process Stop Date	10/10/2013
Process Stop Time	06:00

Approval Data

Approval Details	NAL 13026-717
Test Results	Benzene = 34 ppb
Reprocessed Batch	

Notes

MEK=27,000 ppb

Monday, October 14, 2013

OB-316-101 Bridgeton Landfill

Fill Data

Fill Start Date	10/10/2013
Fill Start Time	18:23
Fill Stop Date	10/10/2013
Fill Stop Time	23:38
Process Battery	316 AST

Processing Data

Process Start Date	10/10/2013
Process Start Time	21:43
Process Stop Date	10/11/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL 13026-718
Test Results	Benzene = 40 ppb
Reprocessed Batch	

Notes

MEK = 24,000 ppb

Monday, October 14, 2013

OB-316-102 Bridgeton Landfill

Fill Data

Fill Start Date	10/11/2013
Fill Start Time	18:05
Fill Stop Date	10/11/2013
Fill Stop Time	23:05
Process Battery	316 AST

Processing Data

Process Start Date	10/11/2013
Process Start Time	22:00
Process Stop Date	10/12/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-719
Test Results	Benzene = 60 ppb
Reprocessed Batch	

Notes

MEK = 25,000 ppb

Monday, October 14, 2013

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table			
Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, October 06, 2013	Batch 316-095	22,500	22,500
	Batch 316-096	150,000	150,000
Monday, October 07, 2013	Batch 316-096	22,500	22,500
	Batch 316-097	150,000	150,000
Tuesday, October 08, 2013	Batch 316-097	22,500	22,500
	Batch 316-098	150,000	150,000
Wednesday, October 09, 2013	Batch 316-098	22,500	22,500
	Batch 316-099	150,000	150,000
Thursday, October 10, 2013	Batch 316-099	22,500	22,500
	Batch 316-100	150,000	150,000
Friday, October 11, 2013	Batch 316-100	22,500	22,500
	Batch 316-101	150,000	150,000
Saturday, October 12, 2013	Batch 316-101	22,500	22,500
	Batch 316-102	150,000	150,000

Starting Date	*10/6/2013 7:00*
Ending Date	*10/13/2013 7:00*

MSD - Missouri River Tracking Table								
Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, October 06, 2013	Accumulated	19,502	10/6/2013 7:00	10/7/2013 7:00	24.0	840	812.6	5.77
Monday, October 07, 2013	Accumulated	18,726	10/7/2013 7:00	10/8/2013 7:00	24.0	840	780.3	5.75
Tuesday, October 08, 2013	Accumulated	10,552	10/8/2013 7:00	10/9/2013 7:00	24.0	840	439.7	5.73
Wednesday, October 09, 2013	NA	-	10/9/2013 7:00	10/10/2013 7:00	24.0	840	0.0	5.79
Thursday, October 10, 2013	NA	-	10/10/2013 7:00	10/11/2013 7:00	24.0	840	0.0	NA
Friday, October 11, 2013	NA	-	10/11/2013 7:00	10/12/2013 7:00	24.0	840	0.0	NA
Saturday, October 12, 2013	Batch 316-102	-	10/12/2013 7:00	10/13/2013 7:00	24.0	840	0.0	NA

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [illegible] Title: Environmental Specialist Date: 10/14/13

10-17-13

Weekly Volume Summary - Week 25 (10-06-13 through 10-12-13).xlsx

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/7/2013 7:00:00 AM	10/6/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,283,987	1,264,485	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/7/13.

MSD Daily Flow Reading, ending 10-07-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/8/2013 7:00:00 AM	10/7/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,302,713	1,283,987	18,726

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 18,726 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/8/13

MSD Daily Flow Reading, ending 10-08-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/9/2013 7:00:00 AM	10/8/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,313,266	1,302,713	10,552

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 10,552 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/9/13

MSD Daily Flow Reading, ending 10-09-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/10/2013 7:00:00 AM	10/9/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,313,266	1,313,266	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 10/10/13

MSD Daily Flow Reading, ending 10-10-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/11/2013 7:00:00 AM	10/10/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,313,266	1,313,266	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 10/11/13

MSD Daily Flow Reading, ending 10-11-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/12/2013 7:00:00 AM	10/11/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,313,266	1,313,266	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 10/12/13

MSD Daily Flow Reading, ending 10-12-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/13/2013 7:00:00 AM	10/12/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,313,266	1,313,266	0

Flow Meter Adjustment		Comments
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Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 10/13/13

MSD Daily Flow Reading, ending 10-13-2013

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, October 17, 2013 9:42 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that the facility team has decided to upgrade the recirculator pump in the 96,000 tank to install a stainless steel pump. That work should be completed next Friday (October 25th). The facility has ceased direct discharge and will not direct discharge to the Missouri River Treatment Facility between now and then. We wanted to update you on that change in discharge, and advise of the extended down time in case that would be useful to you in service planning for that lift station.

We will update you when the repairs are completed, and please let us know if you have questions or need additional information.

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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From: Merrigan, Jessie
Sent: Wednesday, October 16, 2013 10:37 AM

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, October 16, 2013 10:37 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. Please let us know if you have any questions. As noted last week, the data table includes the previous 12 weeks of data only. This change was made because the volume of data made the table cumbersome to compile and manage. The older data will remain on the site and we can always provide custom data reports if needed at MSD's request. Please let us know if you have any questions on that change.

Our team looks forward to meeting with the MSD team on Friday.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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CB

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October 13, 2013

BRIDGETON LANDFILL

10038030 00

Mr. Chris Bulmahn
Environmental Engineer
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, MO 63147-2913

Re: Metropolitan St. Louis Sewer District – Administrative Compliance Order
Action Items #5 and #6
Bridgeton Landfill, LLC.
Discharge Permit No. 0511559802-2

Dear Mr. Bulmahn:

On behalf of the Bridgeton Landfill, in accordance with the Metropolitan St. Louis Sewer District (MSD) Administrative Compliance Order (AO), which was signed by legal representatives of MSD and the Bridgeton Landfill, LLC and entered effect on October 29, 2012, respectfully submits this progress report as outlined in the AO, Action Items' #5 and #6.

As required per Action Items #5 and #6, the Bridgeton Landfill shall submit a schedule, for MSD approval, of actions for the design, installation, and operation of the procedures and pretreatment options identified in AO Finding #8 which states that the Bridgeton Landfill is in the process of investigation for the implementation of the following pretreatment options in which to eliminate the occurrence of future prohibited discharges at Leachate Outfall 008:

a.) Installation and operation of a supplemental "enclosed" flare, as well as a supplemental "candlestick" utility flare within the landfill's gas collection and control system;

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b.) Design and operation of air monitoring/moving engineering controls at the landfill's outfall to the MSD sewer system within the Westlake Pump Station, and;

c.) Installation and operation of a foam suppressing agent. The following table outlines current progress and planned actions to be taken at the Bridgeton Landfill in regard to the aforementioned items.

Finding No.	Proposed Option	Complete (Yes/No)	Completion Date
8a(1)	Installation and Operation of Additional Enclosed Flare	Yes	2-Oct-12
8a(2)	Installation and Operation of Supplemental Candlestick Flare	Yes	18-Jul-12
8b	Design and Operation of Air Monitoring/Moving Engineering Controls within Westlake Pump Station	Yes	6-Jun-13
8c	Installation and Operation of a Foam Suppression Agent	No	Installation Suspended

The Bridgeton Landfill completed the construction and testing phases of the supplemental candlestick flare on July 18, 2012 (Finding 8a(2)). This flare was subsequently replaced with a larger 3,500 scfm candlestick flare that became operational in January 2013. The supplement candlestick flare has been brought back on-line in June 2013.

The two existing 3,500 scfm enclosed flares were replaced with two 4,000 scfm candlestick flares in September 2013. The combined flow of the four candlestick flares is 14, 000 scfm which will further allow the ability to improve landfill gas collection and odors at the facility and the surrounding environment. Below is the list of the operating candlestick flares on-site:

Emission Unit Description	Operational Date
2500 SCFM LFG Specialties Flare	7/10/2012

4000 SCFM John Zinc Flare #1	9/24/2013
3500 SCFM John Zinc Flare #2	01/13
4000 SCFM John Zinc Flare #3	9/20/2013

All candlestick flares are operated and maintained under a site-specific program which is designed to enable landfill personnel to minimize downtime and provide peak system performance efficiency.

In a letter from MSD dated December 4, 2012, it was declared that the Bridgeton Landfill was no longer required to construct and operate a foam suppression system at the facility unless future foaming incidents occur. The Bridgeton Landfill will continue to monitor the Westlake Pump Station as well as the Leachate Tank System for indicators of foaming.

The design and development of the air quality engineering controls to be constructed and operated at the Westlake Pump Station (Finding 8b), were completed on December 20, 2012. Prior to finalization of the system design, meetings regarding the development of a plan of action for the preparation and construction of these air quality engineering controls were held at the MSD office on August 21, 2012, and September 24, 2012 between; MSD Environmental Compliance and Operations representatives and Bridgeton Landfill personnel. Additionally, series of on-site meetings were held at the Westlake Pump Station, involving the aforementioned parties, to determine the design of the system and to secure an incoming power supply.

On June 6, 2013 the air monitoring/moving engineering controls within the Westlake pump station became fully operational. Between the dates of June 6-16, 2013 a baseline evaluation of the 4-gas levels within the pump station wet well was conducted using the newly installed monitor. The purpose of this evaluation was to monitor the in-well conditions during discharge operations from the landfill. On June 17, 2013, following the baseline evaluation, the system's drum scrubber was activated. Bryan Sehie of Bridgeton Landfill coordinated this effort with Vince Stollhans of MSD, and both have reviewed MSD 4-gas monitoing data recorded by the system. Since operation of the drum scrubber the 4-gas meter levels within the pump station have decreased as confirmed by the MSD data maintained by Vince Stollhans.

Leachate discharge of up to– 20,000 gallons per day was continued throughout the month of September _2013 with a flow rate of approximately 19,500 gallons per day. During discharge

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the 4-gas meter levels have continued to show a reduced level during drum scrubber operation than ~~that~~ was reported during the baseline study, demonstrating the overall effectiveness of the air moving system. Elevated levels of hydrogen sulfide of approximately 10 ppm continue to be observed, however these levels were present at the outfall location without discharge from the landfill, as observed in the baseline study. Carbon monoxide levels have decreased, with average concentrations of 200 ppm. The drum scrubber system has lowered the concentrations on average from 500 ppm observed when not in operation to around –100 ppm when fully operational. Additionally, the Bridgeton Landfill continues to coordinate with MSD Operations personnel to cease leachate discharge prior to all pump station maintenance events, routine or otherwise, to lower carbon monoxide concentrations to near non-detect levels for the duration of these events.

The facility has submitted the Leachate Pre-Treatment System Plan on August 30, 2013 and received comments from MSD on September 9, 2013. It is anticipated with the installation and operation of the pre-treatment system will further reduce the carbon monoxide levels observed at Outfall 008.

We will continue to provide ongoing updates on leachate and the pretreatment system to comply with the AO agreement as well as MSD ordinances. If there are any questions please contact Bryan Sehie with Bridgeton Landfill at 314-744-8190 or myself at 573-289-3379.

Sincerely,
Weaver Boos Consultants

Michele A Clark

Michele Clark
Senior Project Director

Cc: Bryan Sehie, Bridgeton Landfill, LLC.

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Doug Mendoza BRIDGETON LANDFILL

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Monday, October 14, 2013 10:12 AM
To: Doug Mendoza
Subject: Re: Request to Increase to 200K gpd

Thank you!! (Really I did read the email this time). We will follow up to confirm the date of increase and sincerely appreciate your continued assistance.

On Oct 14, 2013, at 9:05 AM, "Doug Mendoza" <DMENDOZA@stlmsd.com> wrote:

Ms. Merrigan et al,

MSD has reviewed the data and operations for the Bissell Point treatment plant since Bridgeton Landfill increased its hauled volume to 172,500 GPD. We have determined that we can grant your request to allow Bridgeton Landfill to increase its daily delivery volume to 200,000 GPD at the Bissell Point hauled waste station.

Please note that should any problems with effluent quality or plant operations be detected, MSD reserves the right to require Bridgeton Landfill to immediately reduce the volume discharged at the hauled waste station. Please note also that weather conditions to date have been relatively mild. As late autumn and winter weather becomes colder, the normal lowering of biological treatment efficiency may require a reduction in the Bridgeton Landfill discharge volume .

As you stated below, the daily volume for the week of October 21 – October 27 will remain at 172,500 gallons. Should you determine a need for increased daily volume, we will need at least one week's prior notice.

Regarding the delivery schedule that you attached, we generally agree, with notations/modifications as shown below. For any weeks where you have pre-notified MSD that the volume will be only 150,000 GPD, we prefer to keep to the shorter daily schedule to reduce overtime requirements on our staff. However for weeks of 175,000 GPD or 200,000 GPD, should Bridgeton Landfill decide at any point that they will bring less than the approved amount for that week, you may do so with the understanding that full coverage time will still be manned by MSD. In those cases, please inform our hauled waste station staff at the start of the day that the volume will be less and how the trucks will be spread further between deliveries.

Week approved at 150,000 GPD: 5 am – 3:00 pm (with allowance up to 3:30 pm to accommodate delivery delays)
Week approved at 172,500 GPD: 5 am – 4:30 pm (with allowance up to 5:00 pm to accommodate delivery delays)
Week approved at 195,000 GPD: 5 am – 6:00 pm (with allowance up to 6:30 pm to accommodate delivery delays)

Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Manager

Doug Mendoza BRIDGETON LANDFILL

From:	Doug Mendoza
Sent:	Monday, October 14, 2013 9:05 AM
To:	'Merrigan, Jessie (LG)'; John Lodderhose; Ken Goins
Cc:	Power, Brian (BPower@republicservices.com); Sehie, Bryan; Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Catherine Politte; Mike Townley
Subject:	RE: Request to Increase to 200K gpd

Ms. Merrigan et al,

MSD has reviewed the data and operations for the Bissell Point treatment plant since Bridgeton Landfill increased its hauled volume to 172,500 GPD. We have determined that we can grant your request to allow Bridgeton Landfill to increase its daily delivery volume to 200,000 GPD at the Bissell Point hauled waste station.

Please note that should any problems with effluent quality or plant operations be detected, MSD reserves the right to require Bridgeton Landfill to immediately reduce the volume discharged at the hauled waste station. Please note also that weather conditions to date have been relatively mild. As late autumn and winter weather becomes colder, the normal lowering of biological treatment efficiency may require a reduction in the Bridgeton Landfill discharge volume .

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Week approved at 195,000 GPD: 5 am – 6:00 pm (with allowance up to 6:30 pm to accommodate delivery delays)

Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Manager

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Sunday, October 13, 2013 7:50 PM
To: Doug Mendoza; John Lodderhose; Ken Goins
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Ed Galbraith (EGalbraith@barr.com); Dan Feezor
Subject: Request to Increase to 200K gpd

Date: 10/13/2013
To: Doug Mendoza, Metropolitan St. Louis Sewer District
From: Bridgeton Landfill, LLC
Subject: Request to Increase Shipment of Leachate to Bissell Point WWTP to 200,000 Gallons Per Day

On behalf of Bridgeton Landfill, we are requesting a conditional authorization to increase shipment of leachate for disposal at Bissell Point WWTP. Currently we are authorized for 175,000 gallons per day (gpd) and for the next week or two, this appears to be an adequate capacity. However in order to anticipate increased flows, we are requesting that you pre-approve an additional 25,000 gpd of capacity, with the understanding that you will need a one-week notice in advance before any actual increase occurs above 175,000 gpd.

If approved, we understand that MSD will need to add staff hours over and above the current amount. The attached table shows the hours and loading schedule we think would accommodate the increased volume.

We greatly appreciate your continued assistance on this. This situation has been a significant challenge for Bridgeton Landfill and your partnership has been an indispensable part of the overall solution. We are available to answer any questions and provide any additional information you need regarding this request.

Thank you,
Jessie Merrigan

LATHROP & GAGE LLP

Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
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Doug Mendoza

From: Doug Mendoza
Sent: Monday, October 14, 2013 8:59 AM
To: 'Cooper, Ivan'
Cc: Bodnar, Randy; Walker, Tony (TWalker@republicservices.com); bpower@republicservices.com; Kamp, Kevin; John Lodderhose; Ken Gambaro
Subject: RE: Bridgeton Landfill transmittance.docx

Ivan,

I did some additional checking for your request below. I do not have a document to forward to you, but can provide details that should answer your questions.

65% transmittance:
The Missouri River treatment plant current uses trickling filters as its biological treatment process. However, concurrent with the start of its effluent disinfection, the plant also will be switching to an activated sludge treatment process. Since the disinfection system cannot be designed using the Missouri River plant's current effluent, the Coldwater Creek treatment plant effluent was used instead. The Coldwater Creek plant uses an activated sludge treatment process and has a similar wastewater customer base as the Missouri River plant. Thus, we expect the Coldwater Creek plant's current treated effluent to be similar to the Missouri River plant's future effluent. The Coldwater Creek plant's effluent has a UV transmittance of about 65%, as shown in the data provided to you last week. If Bridgeton Landfill's discharge causes a lower transmittance level in the total plant effluent, then it will negatively impact the disinfection process. Please remember also that laboratory readings of UV transmittance at various dilution levels may show higher levels than real world values, since the laboratory likely would use clear water as the diluting agent.

10 MGD plant flow rate:
Since disinfection requirements apply to the plant's discharge at all hours, the mixing effect of Bridgeton Landfill's discharge and other wastewater entering the treatment plant must be considered using the lowest normal flow rate. The flow rate at MSD's Missouri River treatment plant is about 10 MGD during nighttime hours, and this is the volume that must be used. We attempted to consider other timing variables such as travel time to allow variable discharge rates from Bridgeton Landfill. However, when also considering mixing and spreading effects in the collection system and treatment plant, this was found to be infeasible.

50,000 GPD (or less), from Bridgeton Landfill:
The 50,000 GPD figure was arrived at using a 1:200 dilution ratio for 'Bridgeton Landfill:Missouri River plant' to achieve 65% UV transmittance. 10 MGD/200 = 50,000 GPD.
However, that ratio was achieved using deionized laboratory water as the diluting agent. Subsequent analyses using Coldwater Creek treatment plant effluent showed lower transmittance (only 40% at 1:200 dilution), which would mean a correspondingly lower allowed discharge volume from Bridgeton Landfill. The results of those analyses were transmitted to you on October 8.

We trust this addresses your questions. If you have further questions, please let us know.

Doug Mendoza
MSD Industrial Pretreatment Manager

From: Cooper, Ivan [mailto:icooper@cecinc.com]
Sent: Friday, October 11, 2013 12:43 PM
To: Doug Mendoza
Cc: Bodnar, Randy; Walker, Tony (TWalker@republicservices.com); bpower@republicservices.com; Kamp, Kevin
Subject: RE: Bridgeton Landfill transmittance.docx

Good afternoon Doug,

Thanks for all the information that you sent. We are in the process of identifying UV-T treatment options and running tests to assist with comparing technologies. It would be very helpful if you can provide us with the report from B&V or others that documents the plan for the UV installation at the Missouri River WWTP and how the request for 65% transmittance at 10 MGD is arrived at, and how the 500,000 gpd number was developed for the anticipated Bridgeton discharge volume.

Thanks you for your help, and please forward this request to whomever can supply us with that documentation before our next MSD update meeting, and we look forward to seeing you next Friday.

Cheers,
Ivan

Ivan A. Cooper, PE, BCEE / Principal
National Water/Wastewater Practice Leader
Civil & Environmental Consultants, Inc.
2030 S. Tryon Street · Suite 3E · Charlotte, NC 28203
Office: (980) 224-8104 x 2810
Toll-Free: (855) 859-9932 · Fax: (980) 224-8172
Mobile: (704) 226-8074 · http://www.cecinc.com
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From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Tuesday, October 08, 2013 9:41 AM
To: Cooper, Ivan
Subject: FW: Bridgeton Landfill transmittance.docx

From: Margie Irvin
Sent: Monday, October 07, 2013 7:52 AM
To: John Lodderhose; Ken Gambaro
Cc: Doug Mendoza
Subject: Bridgeton Landfill transmittance.docx

October 7, 2013

Brian Power
Environmental Manager
BRIDGETON LANDFILL, LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Dear Mr. Power:

As you know, to assist Bridgeton Landfill in its design of a pretreatment system, the Metropolitan St. Louis Sewer District has been analyzing samples of Bridgeton Landfill's pilot plant treated effluent for ultraviolet transmittance. Bridgeton Landfill delivered three post-treatment samples to MSD, and is now disassembling the ultrafiltration pilot portion of the pretreatment system.

The results of MSD's analyses of Bridgeton Landfill's samples are as follows. Please note that some results have already been transferred to Bridgeton Landfill.

	UV Transmittance (note that all samples are unfiltered)		
Sample Date	No dilution	1:100 dilution	1:200 dilution
8/29/13	0.060 %	49.2 %	70.2 %
9/25/13	0.061 %	40.8 %	64.8 %
9/30/13	0.059 %	40.6 %	64.5 %

MSD has previously informed Bridgeton Landfill, most recently in MSD's September 10, 2013 letter of review for Bridgeton Landfill's "Leachate Pre-Treatment System Plan," that UV transmittance will be a critical discharge consideration. This is because MSD's Missouri River treatment plant soon will be required to meet disinfection standards for its effluent. The plant will use UV disinfection as the treatment method, and loss of transmittance through the wastewater will reduce its effectiveness.

Since disinfection requirements apply to the plant's discharge at all hours, the mixing effect of Bridgeton Landfill's discharge and other wastewater entering the treatment plant must be considered using the lowest normal flow rate. The flow rate at MSD's Missouri River treatment plant is about 10 MGD during nighttime hours, and this is the volume that must be used.

MSD personnel and our consultants have estimated that a minimum 65% UV transmittance will be required to meet our discharge disinfection requirements. This level may be higher, once disinfection is in operation. Please note also that the transmittance levels in the table above were achieved using deionized water as the diluting agent. In actuality, dilution of Bridgeton Landfill's discharge will be achieved through mixing with other wastewater, likely resulting in a less positive effect.

Because Bridgeton Landfill's effluent has already undergone biological treatment and ultrafiltration prior to the analyses for UV transmittance, we do not expect further improvement in those transmittance levels from the Missouri River plant's treatment process. From data provided by Bridgeton Landfill, we note that the COD in the pilot plant effluent remains high. Considering the pilot plant's treatment process, it is likely that a non-biodegradable soluble organic is contributing to the low level of UV transmittance in the treated effluent.

At 10 MGD flow rate for the Missouri River treatment plant, 65% UV transmittance, and assuming no loss of transmittance due to other wastewater at the plant, Bridgeton Landfill would not be able to discharge more than 50,000 GPD to MSD. The actual permissible discharge volume is likely to be lower.

To further assist Bridgeton Landfill, MSD on September 25, 2013 had also suggested to your consultants additional laboratory analyses to have performed. It was suggested that analyses for types of iron present (ferrous, ferric, soluble) be conducted, because iron can cause issues with UV transmittance, bulb fouling, and associated operation & maintenance costs. An ionic balance of the total dissolved solids (for sulfate, chloride, sodium, calcium) was also suggested. The high TDS in the treated leachate could cause problems with corrosion in the collection system, and could hinder UV transmittance.

We trust that Bridgeton Landfill and its consultants have been investigating methods to further improve UV transmittance in its treated leachate, and expect that the next updated information for the pretreatment system will include any findings to date. It may be that some form of advanced oxidation treatment or powdered activated carbon will be necessary.

Thank you for helping us comply with federal and state regulations. If you have any questions, please contact me at 314.436.8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

cc: John Lodderhose
Ken Gambaro

Doug Mendoza BRIDGETON LANDFILL

From:	Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent:	Sunday, October 13, 2013 7:50 PM
To:	Doug Mendoza; John Lodderhose; Ken Goins
Cc:	Power, Brian (BPower@republicservices.com); Sehie, Bryan; Ed Galbraith (EGalbraith@barr.com); Dan Feezor
Subject:	Request to Increase to 200K gpd
Attachments:	Truck Loading Schedules.xlsx

Date: 10/13/2013
To: Doug Mendoza, Metropolitan St. Louis Sewer District
From: Bridgeton Landfill, LLC
Subject: Request to Increase Shipment of Leachate to Bissell Point WWTP to 200,000 Gallons Per Day

On behalf of Bridgeton Landfill, we are requesting a conditional authorization to increase shipment of leachate for disposal at Bissell Point WWTP. Currently we are authorized for 175,000 gallons per day (gpd) and for the next week or two, this appears to be an adequate capacity. However in order to anticipate increased flows, we are requesting that you pre-approve an additional 25,000 gpd of capacity, with the understanding that you will need a one-week notice in advance before any actual increase occurs above 175,000 gpd.

If approved, we understand that MSD will need to add staff hours over and above the current amount. The attached table shows the hours and loading schedule we think would accommodate the increased volume.

We greatly appreciate your continued assistance on this. This situation has been a significant challenge for Bridgeton Landfill and your partnership has been an indispensable part of the overall solution. We are available to answer any questions and provide any additional information you need regarding this request.

Thank you,
Jessie Merrigan

LATHROP & GAGE LLP
Jessica E. Merrigan
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Current MSD Maximum 172,000 gpd (Bissell Discharge Time 5 AM through 5:00 PM)				
Trip Number	Truck Number	Time Leaving Bridgeton	Time Arrived at Bissell	Total Volume
1	1	4:30 AM	5:00 AM	7,500
2	2	5:00 AM	5:30 AM	15,000
3	3	5:30 AM	6:00 AM	22,500
4	1	6:00 AM	6:30 AM	30,000
5	2	6:30 AM	7:00 AM	37,500
6	3	7:00 AM	7:30 AM	45,000
7	1	7:30 AM	8:00 AM	52,500
8	2	8:00 AM	8:30 AM	60,000
9	3	8:30 AM	9:00 AM	67,500
10	1	9:00 AM	9:30 AM	75,000
11	2	9:30 AM	10:00 AM	82,500
12	3	10:00 AM	10:30 AM	90,000
13	1	10:30 AM	11:00 AM	97,500
14	2	11:00 AM	11:30 AM	105,000
15	3	11:30 AM	12:00 PM	112,500
16	1	12:00 PM	12:30 PM	120,000
17	2	12:30 PM	1:00 PM	127,500
18	3	1:00 PM	1:30 PM	135,000
19	1	1:30 PM	2:00 PM	142,500
20	2	2:00 PM	2:30 PM	150,000
21	3	2:30 PM	3:00 PM	157,500
22	1	3:00 PM	3:30 PM	165,000
23	2	3:30 PM	4:00 PM	172,500

Proposed MSD Maximum 195,000 gpd (Bissell Discharge Time 5 AM through 6:30 PM)				
Trip Number	Truck Number	Time Leaving Bridgeton	Time Arrived at Bissell	Total Volume
1	1	4:30 AM	5:00 AM	7,500
2	2	5:00 AM	5:30 AM	15,000
3	3	5:30 AM	6:00 AM	22,500
4	1	6:00 AM	6:30 AM	30,000
5	2	6:30 AM	7:00 AM	37,500
6	3	7:00 AM	7:30 AM	45,000
7	1	7:30 AM	8:00 AM	52,500
8	2	8:00 AM	8:30 AM	60,000
9	3	8:30 AM	9:00 AM	67,500
10	1	9:00 AM	9:30 AM	75,000
11	2	9:30 AM	10:00 AM	82,500
12	3	10:00 AM	10:30 AM	90,000
13	1	10:30 AM	11:00 AM	97,500
14	2	11:00 AM	11:30 AM	105,000
15	3	11:30 AM	12:00 PM	112,500
16	1	12:00 PM	12:30 PM	120,000
17	2	12:30 PM	1:00 PM	127,500
18	3	1:00 PM	1:30 PM	135,000
19	1	1:30 PM	2:00 PM	142,500
20	2	2:00 PM	2:30 PM	150,000
21	3	2:30 PM	3:00 PM	157,500
22	1	3:00 PM	3:30 PM	165,000
23	2	3:30 PM	4:00 PM	172,500
24	3	4:00 PM	4:30 PM	180,000
25	1	4:30 PM	5:00 PM	187,500
26	2	5:00 PM	5:30 PM	195,000

Proposed MSD Maximum 150,000 gpd (Bissell Discharge Time 5 AM through 6:30 PM)				
Trip Number	Truck Number	Time Leaving Bridgeton	Time Arrived at Bissell	Total Volume
1	1	4:30 AM	5:00 AM	7,500
2	2	5:00 AM	5:30 AM	15,000
3	3	5:30 AM	6:00 AM	22,500
		6:00 AM	No Truck	No Truck
4	1	6:30 AM	7:00 AM	30,000
5	2	7:00 AM	7:30 AM	37,500
6	3	7:30 AM	8:00 AM	45,000
		8:00 AM	No Truck	No Truck
7	1	8:30 AM	9:00 AM	52,500
8	2	9:00 AM	9:30 AM	60,000
9	3	9:30 AM	10:00 AM	67,500
		10:00 AM	No Truck	No Truck
10	1	10:30 AM	11:00 AM	75,000
11	2	11:00 AM	11:30 AM	82,500
12	3	11:30 AM	12:00 PM	90,000
		12:00 PM	No Truck	No Truck
13	1	12:30 PM	1:00 PM	97,500
14	2	1:00 PM	1:30 PM	105,000
15	3	1:30 PM	2:00 PM	112,500
		2:00 PM	No Truck	No Truck
16	1	2:30 PM	3:00 PM	120,000
17	2	3:00 PM	3:30 PM	127,500
18	3	3:30 PM	4:00 PM	135,000
		4:00 PM	No Truck	No Truck
19	1	4:30 PM	5:00 PM	142,500
20	2	5:00 PM	5:30 PM	150,000

Doug Mendoza

From: Darin Lewis
Sent: Saturday, October 12, 2013 4:03 PM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Sara Kammerer; Steve Grace
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 10/6/2013 to 10/12/2013.
10/6 – 172,500 gallons
10/7 – 172,500 gallons
10/8 – 172,500 gallons
10/9 – 172,500 gallons
10/10 – 172,500 gallons
10/11 – 172,500 gallons
10/12 – 172,500 gallons
Total = 1,207,500 gallons

Doug Mendoza

From: Jason T. Edwards
Sent: Friday, October 11, 2013 8:06 AM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: Bridgeton Landfill Reading

Hi Doug,

The Bridgeton Landfill meter reading was 1,313,266 gal. The reading was taken at 11:05 am on Thursday, October 10 , 2013.

Thanks,
Jason

TO: **Chris Verplancke, Finance Department**
Becky Bartholomew, Finance Department
Mary Wimsatt, Finance Department

FROM: **Darin Lewis**

DATE: **October 10, 2013**

SUBJECT: **BRIDGETON LANDFILL LLC**
WASTEWATER USER CHARGE BILLING
ACCOUNT NUMBER 0039145-8

Pursuant to the MSD Industrial Wastewater Discharge Permit for the above referenced facility, please bill this facility for the following volume for the indicated billing period:

VOLUME
On-Site Discharge

463,186 gallons with surcharge applied = $38,059.92

VOLUME
Hauled Waste Discharge

4,867,500 gallons X $0.08/Gal = $389,400.00

Department of Environmental Compliance (REG) labor fee is $1,247.46. Use Revenue Code "INFO" and utility type Q. Budget code is 1101-08050-51011 so revenue will be credited back to Department of Environmental Complience budget.

Department of Environmental Compliance (OT) labor fee is $7,649.94. Use Revenue Code "INFO" and utility type Q. Budget code is 1101-08050-51020 so revenue will be credited back to Department of Environmental Compliance budget.

Total Bill = $436,357.32

The volume was obtained from the customer's on-site discharge self-monitoring report and hauled waste total truck capacities.
SOURCE OF WASTE: SP 801 Commingled landfill leachate and landfill gas collection system condensate
BILLING PERIOD: September 1, 2013 through September 30, 2013
Other applicable wastewater user charges, as per Ordinance 13402, should be included in this bill.
Please call me at 436-8716 if you have any questions.

bv

ec: Brian Gibson
Doug Mendoza
Laura Joiner
Cathy Politte
Keidra King

FILE: IU, Bridgeton Landfill LLC, 1003803000

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, October 09, 2013 10:42 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. Please let us know if you have any questions. Please note that the data table includes the previous 12 weeks of data only. This change was made because the volume of data made the table cumbersome to compile and manage. The older data will remain on the site and we can always provide custom data reports if needed at MSD's request. Please let us know if you have any questions on that change.

We appreciate your continued assistance,
Jessie

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Table 1
VOCs and SVOCs
July 2013 - October 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-090	9/30/2013	Pace	Validated	60154302	ND
316-089	9/29/2013	Pace	Validated	60154301	ND
316-088	9/28/2013	Pace	Validated	60154298	ND
316-086	9/27/2013	Pace	Validated	60154217	ND
316-085	9/26/2013	Pace	QC pending	60154127	ND
316-084	9/25/2013	Pace	Validated	60153995	ND
316-083	9/24/2013	Pace	Validated	60153892	ND
316-082	9/23/2013	Pace	Validated	60153900	ND
316-081	9/22/2013	Pace	Validated	60153767	ND

MSD 027125

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen; ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	pH, field	Solids, total suspended
					NA	NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	pH units	mg/l
316-090	9/30/2013	Pace	Validated	60154302	29100	76700	664 *	631	ND	5.8	5.52	3180
316-089	9/29/2013	Pace	Validated	60154301	30500	80300	693	590	ND	5.6	5.50	2560
316-088	9/28/2013	Pace	Validated	60154298	33400	65800	683	587	7.9	5.7	5.58	2820
316-086	9/27/2013	Pace	Validated	60154217	31700	77000	685 *	478	8.1	5.6	5.42	2740
316-085	9/26/2013	Pace	QC pending	60154127	30000	86500	686	530	ND	5.4	5.39	3180
316-084	9/25/2013	Pace	Validated	60153995	28400	65400	685	493	ND	5.6	5.82	2280
316-083	9/24/2013	Pace	Validated	60153892	30300	68500 *	687 *	457	ND	5.5	5.66	5660
316-082	9/23/2013	Pace	Validated	60153900	30900	75800	712	472	6.8	5.5	5.61	5020
316-081	9/22/2013	Pace	Validated	60153767	33300	56400	721 *	550	ND	5.5	5.64	3280

MSD 027126

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-090	9/30/2013	Pace	Validated	60154302	10.4	ND	0.856	ND	ND	0.321	0.0548	0.0221
316-089	9/29/2013	Pace	Validated	60154301	6.81	ND	0.738	ND	ND	0.286	0.0493	ND
316-088	9/28/2013	Pace	Validated	60154298	10.9 *	ND	0.824	ND	ND	0.316	0.0590	0.0214
316-086	9/27/2013	Pace	Validated	60154217	6.8	0.0606	0.829	ND	ND	0.284	0.0581	ND
316-085	9/26/2013	Pace	QC pending	60154127	7.27	0.0608	0.844	ND	ND	0.298	0.0598	ND
316-084	9/25/2013	Pace	Validated	60153995	8.22	0.0587	0.827	ND	ND	0.298	0.0620	ND
316-083	9/24/2013	Pace	Validated	60153892	7.53	0.0622	0.798	ND	ND	0.288	0.0558	ND
316-082	9/23/2013	Pace	Validated	60153900	6.07	0.0615	0.79	ND	ND	0.271	0.0522	ND
316-081	9/22/2013	Pace	Validated	60153767	8.09	0.0546	0.806	ND	ND	0.314	0.0554	ND

MSD 027127

Table 1
General Parameters and Metals
July 2013 - October 2013
Bridgeton Landfill

					Iron	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-090	9/30/2013	Pace	Validated	60154302	941	0.223	0.0032	0.116	ND	ND	ND	13.2
316-089	9/29/2013	Pace	Validated	60154301	787	0.164	0.0021	0.115	ND	ND	ND	13.4
316-088	9/28/2013	Pace	Validated	60154298	987	0.252	0.0021	0.132	ND	ND	ND	14.7 *
316-086	9/27/2013	Pace	Validated	60154217	846	0.157	0.00022	0.129	ND	ND	ND	14.7
316-085	9/26/2013	Pace	QC pending	60154127	860	0.164	0.00055	0.133	ND	ND	ND	16.3
316-084	9/25/2013	Pace	Validated	60153995	897	0.189	0.00074	0.133	ND	ND	ND	15.9
316-083	9/24/2013	Pace	Validated	60153892	874	0.161	0.0014	0.125	ND	ND	ND	16.1
316-082	9/23/2013	Pace	Validated	60153900	741	0.108	0.00074	0.123	ND	ND	ND	16.3
316-081	9/22/2013	Pace	Validated	60153767	932	0.189	0.00046	0.135	ND	0.0192	ND	17.8

MSD 027128

10-9-13

OB-316-088

Bridgeton Landfill

Fill Data

Fill Start Date	9/27/2013
Fill Start Time	19:14
Fill Stop Date	9/27/2013
Fill Stop Time	23:32
Process Battery	316 AST

Processing Data

Process Start Date	9/27/2013
Process Start Time	23:32
Process Stop Date	9/28/2013
Process Stop Time	10:20

Approval Data

Approval Details	NAL13026-694
Test Results	Benzene 25 ppb
Reprocessed Batch	1st benzene = 51 ppb

Notes

Resample of 316-087 (NAL13026-692; MEK=58,000 ppb, benzene=51 ppb). 316-088 MEK = 33,000 ppb. Blower off 9/28/13 from 5:45a - 7:30a.

Monday, October 07, 2013

OB-316-089 Bridgeton Landfill

Fill Data

Fill Start Date	9/28/2013
Fill Start Time	18:15
Fill Stop Date	9/28/2013
Fill Stop Time	21:25
Process Battery	316 AST

Processing Data

Process Start Date	9/28/2013
Process Start Time	21:25
Process Stop Date	9/29/2013
Process Stop Time	05:50

Approval Data

Approval Details	NAL13026-695
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

MEK = 27,000 ppb.

Monday, October 07, 2013

OB-316-090

Bridgeton Landfill

Fill Data

Fill Start Date	9/29/2013
Fill Start Time	20:00
Fill Stop Date	9/29/2013
Fill Stop Time	23:10
Process Battery	316 AST

Processing Data

Process Start Date	9/29/2013
Process Start Time	21:34
Process Stop Date	9/30/2013
Process Stop Time	05:32

Approval Data

Approval Details	NAL13026-697
Test Results	Benzene 53 ppb
Reprocessed Batch	

Notes

MEK = 40,000 ppb.

Monday, October 07, 2013

OB-316-091

Bridgeton Landfill

Fill Data

Fill Start Date	9/30/2013
Fill Start Time	18:15
Fill Stop Date	9/30/2013
Fill Stop Time	21:53
Process Battery	316 AST

Processing Data

Process Start Date	9/30/2013
Process Start Time	18:15
Process Stop Date	10/1/2013
Process Stop Time	05:55

Approval Data

Approval Details	NAL13026-699
Test Results	Benzene 33 ppb
Reprocessed Batch	

Notes

MEK = 35,000 ppb.

Monday, October 07, 2013

OB-316-092

Bridgeton Landfill

Fill Data

Fill Start Date	10/1/2013
Fill Start Time	18:12
Fill Stop Date	10/1/2013
Fill Stop Time	22:03
Process Battery	316 AST

Processing Data

Process Start Date	10/1/2013
Process Start Time	20:08
Process Stop Date	10/2/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL13026-701
Test Results	Benzene 40 ppb
Reprocessed Batch	

Notes

MEK = 33,000 ppb. Blower turned on at 10 ft level during filling.

Monday, October 07, 2013

OB-316-093

Bridgeton Landfill

Fill Data

Fill Start Date	10/2/2013
Fill Start Time	18:20
Fill Stop Date	10/2/2013
Fill Stop Time	21:35
Process Battery	316 AST

Processing Data

Process Start Date	10/2/2013
Process Start Time	20:40
Process Stop Date	10/3/2013
Process Stop Time	05:55

Approval Data

Approval Details	NAL13026-703
Test Results	Benzene 31 ppb
Reprocessed Batch	

Notes

MEK = 27,000 ppb.

Monday, October 07, 2013

OB-316-094

Bridgeton Landfill

Fill Data

Fill Start Date	10/3/2013
Fill Start Time	18:10
Fill Stop Date	10/4/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	10/3/2013
Process Start Time	22:00
Process Stop Date	10/4/2013
Process Stop Time	05:10

Approval Data

Approval Details	NAL13026-705
Test Results	Benzene 83 ppb
Reprocessed Batch	

Notes

MEK = 32,000 ppb.

Monday, October 07, 2013

OB-316-095

Bridgeton Landfill

Fill Data

Fill Start Date	10/4/2013
Fill Start Time	18:20
Fill Stop Date	10/4/2013
Fill Stop Time	23:35
Process Battery	316 AST

Processing Data

Process Start Date	10/4/2013
Process Start Time	21:20
Process Stop Date	10/5/2013
Process Stop Time	05:00

Approval Data

Approval Details	NAL13026-707
Test Results	Benzene 84 ppb
Reprocessed Batch	

Notes

MEK = 29,000 ppb.

Monday, October 07, 2013

pm
17-9-13

MSD 027137

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table

Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, September 29, 2013	Batch 316-087/088	22,500	22,500
	Batch 316-089	150,000	150,000
Monday, September 30, 2013	Batch 316-089	22,500	22,500
	Batch 316-090	150,000	150,000
Tuesday, October 01, 2013	Batch 316-090	22,500	22,500
	Batch 316-091	150,000	150,000
Wednesday, October 02, 2013	Batch 316-091	22,500	22,500
	Batch 316-092	150,000	150,000
Thursday, October 03, 2013	Batch 316-092	22,500	22,500
	Batch 316-093	150,000	150,000
Friday, October 04, 2013	Batch 316-093	22,500	22,500
	Batch 316-094	150,000	150,000
Saturday, October 05, 2013	Batch 316-094	22,500	22,500
	Batch 316-095	150,000	150,000

Starting Date	*9/29/2013 7:00*
Ending Date	*10/6/2013 7:00*

MSD - Missouri River Tracking Table

Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, September 29, 2013	Batch 316-089	-	9/29/2013 7:00	9/30/2013 7:00	24.0	840	0.0	5.46
Monday, September 30, 2013	Accumulated	15,251	9/30/2013 7:00	10/1/2013 7:00	24.0	849	635.5	5.69
Tuesday, October 01, 2013	Accumulated	-	10/1/2013 7:00	10/2/2013 7:00	24.0	840	0.0	6.09
Wednesday, October 02, 2013	Accumulated	18,124	10/2/2013 7:00	10/3/2013 7:00	24.0	846	755.2	5.82
Thursday, October 03, 2013	Batch 316-093	19,615	10/3/2013 7:00	10/4/2013 7:00	24.0	840	817.3	5.83
Friday, October 04, 2013	Accumulated	19,502	10/4/2013 7:00	10/5/2013 7:00	24.0	840	812.6	5.71
Saturday, October 05, 2013	Batch 316-095	19,502	10/5/2013 7:00	10/6/2013 7:00	24.0	840	812.6	5.72

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] Title: Environmental Specialist Date: 10/7/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/30/2013 7:00:00 AM	9/29/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,172,492	1,172,492	0

Flow Meter Adjustment

Reading Adjustment: 0

Flow During Adjustment: 0

Comments

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/30/13

MSD Daily Flow Reading, ending 9-30-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/1/2013 7:00:00 AM	9/30/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,187,742	1,172,492	15,251

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 15,251 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 10/1/13

MSD Daily Flow Reading, ending 10-01-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/2/2013 7:00:00 AM	10/1/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,187,742	1,187,742	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/2/13

MSD Daily Flow Reading, ending 10-02-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/3/2013 7:00:00 AM	10/2/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,205,866	1,187,742	18,124

Flow Meter Adjustment	
Reading Adjustment:	0
Flow During Adjustment:	0

Comments

Total Flow: 18,124 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/3/13

MSD Daily Flow Reading, ending 10-03-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/4/2013 7:00:00 AM	10/3/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,225,481	1,205,866	19,615

Flow Meter Adjustment	
Reading Adjustment:	0
Flow During Adjustment:	0

Comments

Total Flow: 19,615 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 10/4/13

MSD Daily Flow Reading, ending 10-04-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/5/2013 7:00:00 AM	10/4/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,244,983	1,225,481	19,502

Flow Meter Adjustment	
Reading Adjustment:	0
Flow During Adjustment:	0

Comments

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 10/5/13

MSD Daily Flow Reading, ending 10-05-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	10/6/2013 7:00:00 AM	10/5/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,264,485	1,244,983	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 10/6/13

MSD Daily Flow Reading, ending 10-06-2013

Doug Mendoza

BRIDGETON LANDFILL

From: Doug Mendoza
Sent: Tuesday, October 08, 2013 8:41 AM
To: 'icooper@cecinc.com'
Subject: FW: Bridgeton Leachate Transmittence.xlsx
Attachments: Bridgeton Leachate Transmittence.xlsx

From: Stephen A. Bausano
Sent: Friday, October 04, 2013 9:46 AM
To: Doug Mendoza; John Lodderhose
Subject: Bridgeton Leachate Transmittence.xlsx

Results from study. Let me know if additional data is needed.

MSD 027146

Bridgeton LeachateTransmittence

Concentration	Dilution	in DI H20	in Tap H20	in Coldwater Final Effluent
0.00	Blank	100.00	100.00	62.86
0.040	1 to 25	2.86	2.57	1.83
0.020	1 to 50	17.45	15.28	10.60
0.010	1 to 100	41.95	36.56	25.60
0.007	1 to 150	56.00	48.98	34.71
0.005	1 to 200	64.67	56.67	40.19
0.004	1 to 250	70.66	61.92	43.58
0.003	1 to 300	75.12	65.94	46.66

Doug Mendoza

BRIDGETON LANDFILL

From: Doug Mendoza
Sent: Tuesday, October 08, 2013 8:41 AM
To: 'icooper@cecinc.com'
Subject: MSD rate/surcharge ordinance
Attachments: 13402.pdf

Excerpt from rate ordinance 13402. Entire ordinance is attached.

(d) An Extra Strength Surcharge shall be collected from any User subject to Extra Strength Surcharges as provided for herein for the discharge into the Wastewater System of Suspended Solids (SS) which average concentration exceeds 300 milligrams per liter or Biochemical Oxygen Demand (BOD) which average concentration exceeds 300 milligrams per liter, with said Extra Strength Surcharge ("ESS") calculated for each billing period according to the following formula, to wit:
0.00624 x V x [(SS-300) x RSS + (BOD-300) x RBOD]
ESS = 2000
(e) If the BOD/COD ratio of a User's Wastewater is equal to or less than 0.35 the BOD measurement may not be considered representative of the User's actual Wastewater strength. The District may substitute Chemical Oxygen Demand (COD) which average concentration exceeds 600 milligrams per liter, with said Extra Strength Surcharge ("ESS") calculated for each billing period according to the following formula, to wit:
0.00624 x V x [(SS-300) x RSS + (COD-600) x RCOD]
ESS = 2000
In the above formulas the following terms shall mean:
ESS = Extra Strength Surcharges.
300 = Maximum concentration of total BOD in Normal Wastewater in milligrams per liter.
300 = Maximum concentration of total Suspended Solids in Normal Wastewater in milligrams per liter.
600 = Maximum concentration of total COD in Normal Wastewater in milligrams per liter.
0.00624 = Conversion factor for milligrams per liter to pounds per hundred cubic feet.
V = Volume of water usage or Wastewater discharged expressed in hundred cubic feet.
RSS = Rate for SS in dollars per ton.
RBOD = Rate for BOD in dollars per ton.
RCOD = Rate for COD in dollars per ton.
2,000 = The number of pounds per ton.

WASTEWATER USER CHARGES
(BASED ON SUCCESSFUL JUNE 5, 2012 BOND ELECTION)

July 1, 2012 Charge	**July 1, 2013 Charge**	**July 1, 2014 Charge**	**July 1, 2015 Charge**
NON-RESIDENTIAL PROPERTY			
(per Month/per User Account)			
Extra Strength Surcharges			
(if water usage equals or exceeds 8000 cubic feet per month):			
Suspended Solids (SS) *	$231.35	$231.35	$244.03	$251.88
Over 300 mg/liter (Milligrams per liter)			
Biochemical Oxygen Demand (BOD) *	$620.14	$620.14	$620.14	$632.38
Over 300mg/liter (Milligrams per liter)			
Chemical oxygen Demand (COD)*	$310.07	$310.07	$310.07	$316.19

Over 600 mg/liter (Milligrams per liter)
* Per Ton

Base Charge	$ 13.15	$14.85	$16.25	$18.25
Volume Charge	$2.28/100	$2.50/100	$2.82/100	$3.21/100
All Volume	Cubic Feet	Cubic Feet	Cubic Feet	Cubic Feet

Doug Mendoza

From: Doug Mendoza
Sent: Monday, October 07, 2013 9:17 AM
To: 'Dan Feezor'
Cc: Bill Abernathy; 'Hunter King'; Christopher J. Bulmahn; Margie Irvin; Scott Rehmer; Brian G. Gibson; Darin Lewis; Rebecca Vitelli; Sara Kammerer; Steve Grace; Dave Schepers; Jason T. Edwards; Joe Pavlich; Keith Holderle; Dave Kupke; Jason Gill; Martin Blecha; Michael S. Kynion; Tom Boehm
Subject: RE: Bridgeton Landfill hauling volumes for Mon 10/14/13 - Sun 10/20/13?

Dan,

That is fine. We will have the station open from 5:00 am to 4:30 pm through Sunday 10/20/13. Just please let us know with the start of each day the intended volume/spacing for that day.

Doug

PS. I corrected the date in the subject line and my reply to correctly say 10/20/13 (not 10/21/14!).

From: Dan Feezor [mailto:dfeezor@feezorengineering.com]
Sent: Monday, October 07, 2013 8:54 AM
To: Doug Mendoza
Cc: Bill Abernathy; 'Hunter King'
Subject: FW: Bridgeton Landfill hauling volumes for Mon 10/14/13 - Sun 10/21/14?

Doug,
Our volumes are varying significantly. Currently, they are down, but a couple days ago we were over 220K per day. So we would like to keep the extended hours, and if our volume drop, we may have to increase time between trucks. I doubt we will, but would that be a problem since we are paying for the extra staffing times anyway?

Thank you,
Dan

From: Bill Abernathy
Sent: Monday, October 7, 2013 8:23 AM
To: Dan Feezor
Subject: RE: Bridgeton Landfill hauling volumes for Mon 10/14/13 - Sun 10/21/14?

I'd stay with 172,500 gpd. We can always skip 3 loads over the course of the day if we don't have the volume.

Bill Abernathy
Residuals Management Team Member
Feezor Engineering, Inc.
314-502-1299

From: Dan Feezor
Sent: Monday, October 7, 2013 8:12 AM

To: Bill Abernathy
Subject: Fwd: Bridgeton Landfill hauling volumes for Mon 10/14/13 - Sun 10/21/14?

What do you think?

Sent from my Verizon Wireless 4G LTE DROID

-------- Original Message --------
Subject: Bridgeton Landfill hauling volumes for Mon 10/14/13 - Sun 10/21/14?
From: Doug Mendoza <DMENDOZA@stlmsd.com>
To: Dan Feezor <dfeezor@feezorengineering.com>
CC:

Dan,

Can you let me know what volume (150,000 GPD or 172,500 GPD) Bridgeton Landfill wishes to haul to the MSD Bissell Point hauled waste station for 10/14 – 10/21?

Thanks,
Doug

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

October 7, 2013

Brian Power
Environmental Manager
BRIDGETON LANDFILL, LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Dear Mr. Power:

As you know, to assist Bridgeton Landfill in its design of a pretreatment system, the Metropolitan St. Louis Sewer District has been analyzing samples of Bridgeton Landfill's pilot plant treated effluent for ultraviolet transmittance. Bridgeton Landfill delivered three post-treatment samples to MSD, and is now disassembling the ultrafiltration pilot portion of the pretreatment system.

The results of MSD's analyses of Bridgeton Landfill's samples are as follows. Please note that some results have already been transferred to Bridgeton Landfill.

	UV Transmittance (note that all samples are unfiltered)		
Sample Date	No dilution	1:100 dilution	1:200 dilution
8/29/13	0.060 %	49.2 %	70.2 %
9/25/13	0.061 %	40.8 %	64.8 %
9/30/13	0.059 %	40.6 %	64.5 %

MSD has previously informed Bridgeton Landfill, most recently in MSD's September 10, 2013 letter of review for Bridgeton Landfill's "Leachate Pre-Treatment System Plan," that UV transmittance will be a critical discharge consideration. This is because MSD's Missouri River treatment plant soon will be required to meet disinfection standards for its effluent. The plant will use UV disinfection as the treatment method, and loss of transmittance through the wastewater will reduce its effectiveness.

Since disinfection requirements apply to the plant's discharge at all hours, the mixing effect of Bridgeton Landfill's discharge and other wastewater entering the treatment plant must be considered using the lowest normal flow rate. The flow rate at MSD's Missouri River treatment plant is about 10 MGD during nighttime hours, and this is the volume that must be used.

MSD personnel and our consultants have estimated that a minimum 65% UV transmittance will be required to meet our discharge disinfection requirements. This level may be higher, once disinfection is in operation. Please note also that the transmittance levels in the table above were achieved using deionized water as the diluting agent. In actuality, dilution of Bridgeton Landfill's discharge will be achieved through mixing with other wastewater, likely resulting in a less positive effect.

Because Bridgeton Landfill's effluent has already undergone biological treatment and ultrafiltration prior to the analyses for UV transmittance, we do not expect further improvement in those transmittance levels from the Missouri River plant's treatment process. From data provided by Bridgeton Landfill, we note that the COD in the pilot plant effluent remains high. Considering the pilot plant's treatment process, it is likely that a non-biodegradable soluble organic is contributing to the low level of UV transmittance in the treated effluent.

At 10 MGD flow rate for the Missouri River treatment plant, 65% UV transmittance, and assuming no loss of transmittance due to other wastewater at the plant, Bridgeton Landfill would not be able to discharge more than 50,000 GPD to MSD. The actual permissible discharge volume is likely to be lower.

To further assist Bridgeton Landfill, MSD on September 25, 2013 had also suggested to your consultants additional laboratory analyses to have performed. It was suggested that analyses for types of iron present (ferrous, ferric, soluble) be conducted, because iron can cause issues with UV transmittance, bulb fouling, and associated operation & maintenance costs. An ionic balance of the total dissolved solids (for sulfate, chloride, sodium, calcium) was also suggested. The high TDS in the treated leachate could cause problems with corrosion in the collection system, and could hinder UV transmittance.

We trust that Bridgeton Landfill and its consultants have been investigating methods to further improve UV transmittance in its treated leachate, and expect that the next updated information for the pretreatment system will include any findings to date. It may be that some form of advanced oxidation treatment or powdered activated carbon will be necessary.

Thank you for helping us comply with federal and state regulations. If you have any questions, please contact me at 314.436.8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

cc: John Lodderhose
Ken Gambaro

Doug Mendoza

From: Darin Lewis
Sent: Sunday, October 06, 2013 4:15 PM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Steve Grace; Sara Kammerer
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 9/29/2013 to 10/5/2013.
9/29 – 172,500 gallons
9/30 – 172,500 gallons
10/1 – 172,500 gallons
10/2 – 172,500 gallons
10/3 – 172,500 gallons
10/4 – 172,500 gallons
10/5 – 172,500 gallons
Total = 1,207,500 gallons

Doug Mendoza

From: Joe Pavlich
Sent: Thursday, October 03, 2013 3:02 PM
To: Doug Mendoza
Cc: Brian G. Gibson

Doug, the reading for Bridgeton Landfill was 1208310 at a rate of 840 gals/hr.

Table 3
VOCs and SVOCs
December 2012 - September 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
MSD Batch 309	9/22/2013	Pace	Validated	60153769	ND
316-080	9/21/2013	Pace	Validated	60153768	ND
MSD Batch 308	9/20/2013	Pace	Validated	60153766	ND
316-079	9/20/2013	Pace	Validated	60153721	ND
316-078	9/19/2013	Pace	QC pending	60153600	ND
316-077	9/18/2013	Pace	Validated	60153470	ND
316-076	9/17/2013	Pace	Validated	60153323	ND
316-075	9/16/2013	Pace	Validated	60153305	ND

Table 1
General Parameters and Metals
December 2012 - September 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5 day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	pH, field
					NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	pH units
MSD Batch 309	9/22/2013	Pace	Validated	60153769	36200	39600	748 *	506	ND	5.5	--
316-080	9/21/2013	Pace	Validated	60153768	35500	54200	733 *	544	6.8	5.5	5.72
MSD Batch 308	9/20/2013	Pace	Validated	60153766	36500 h	49200	716 *	430	5.3	5.5	--
316-079	9/20/2013	Pace	Validated	60153721	27300	80300	708 *	566	7.1	5.5	5.93
316-078	9/19/2013	Pace	QC pending	60153600	32800	65200	759	505	ND	5.5	5.77
316-077	9/18/2013	Pace	Validated	60153470	28600	51300 *	764 *	505	6.4	5.5	5.72
316-076	9/17/2013	Pace	Validated	60153323	29700	71200	834	37.0	--	5.6	5.60
316-075	9/16/2013	Pace	Validated	60153305	32400	73000 *	824 *	58.6	17.6	5.5	5.60

MSD 027156

Table 1
General Parameters and Metals
December 2012 - September 2013
Bridgeton Landfill

					Solids, total suspended	Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper
					NA	Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
MSD Batch 309	9/22/2013	Pace	Validated	60153769	3700	8.65	ND	0.826	ND	ND	0.323	0.0578	ND
316-080	9/21/2013	Pace	Validated	60153768	2840	10.3 *	0.0604	0.78	ND	ND	0.309	0.0579	0.0305
MSD Batch 308	9/20/2013	Pace	Validated	60153766	4960	10.1	0.0548	0.838	ND	ND	0.335	0.0614	0.0318
316-079	9/20/2013	Pace	Validated	60153721	2300	14.1	0.0596	0.758	ND	ND	0.322	0.0601	0.0448
316-078	9/19/2013	Pace	QC pending	60153600	3440	14.7	0.0582	0.774	ND	ND	0.302	0.0593	0.0336
316-077	9/18/2013	Pace	Validated	60153470	2140	12.3	ND	0.82	ND	ND	0.303	0.0588	ND
316-076	9/17/2013	Pace	Validated	60153323	3300	7.08	0.0524	0.763	ND	ND	0.255	0.0418	ND
316-075	9/16/2013	Pace	Validated	60153305	6020	11.1	ND	0.87	ND	ND	0.283	0.0558	0.0226

Table 1
General Parameters and Metals
December 2012 - September 2013
Bridgeton Landfill

					Iron Total	Lead Total	Mercury Total	Nickel Total	Selenium Total	Silver Total	Thallium Total	Zinc Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
MSD Batch 309	9/22/2013	Pace	Validated	60153769	946	0.195	0.0065	0.135	ND	0.0186	ND	17.8
316-080	9/21/2013	Pace	Validated	60153768	919	0.217	0.0127	0.14	ND	0.0181	ND	16.5
MSD Batch 308	9/20/2013	Pace	Validated	60153766	1170	0.251	0.00096	0.146	ND	0.0197	ND	17.4
316-079	9/20/2013	Pace	Validated	60153721	990	0.225	0.00074 *	0.145	ND	0.0183	ND	15.7
316-078	9/19/2013	Pace	QC pending	60153600	900	0.196	0.00070	0.15	ND	0.0169	ND	16.4
316-077	9/18/2013	Pace	Validated	60153470	886	0.191	0.00036	0.147	ND	0.0168	ND	15.7
316-076	9/17/2013	Pace	Validated	60153323	546	0.0824	0.00093	0.118	ND	ND	ND	15.1
316-075	9/16/2013	Pace	Validated	60153305	808	0.175	0.0011	0.139	ND	0.0154	ND	14.3

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table

Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, September 22, 2013	Batch 309	22,500	22,500
	Batch 316-081	150,000	150,000
Monday, September 23, 2013	Batch 316-081	22,500	22,500
	Batch 316-082	127,500	127,500
Tuesday, September 24, 2013	Batch 316-082	22,500	22,500
	Batch 316-083	127,500	127,500
Wednesday, September 25, 2013	Batch 316-083	22,500	22,500
	Batch 316-084	127,500	127,500
Thursday, September 26, 2013	Batch 316-084	22,500	22,500
	Batch 316-085	127,500	127,500
Friday, September 27, 2013	Batch 316-085	22,500	22,500
	Batch 316-086	127,500	127,500
Saturday, September 28, 2013	Batch 316-086	22,500	22,500
	Batch 316-087/088	150,000	150,000

Starting Date	*9/22/2013 7:00*
Ending Date	*9/29/2013 7:00*

MSD - Missouri River Tracking Table

Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, September 22, 2013	Batch 316-081	19,229	9/22/2013 7:00	9/23/2013 7:00	24.0	840	801.2	5.74
Monday, September 23, 2013	Batch 316-082	16,029	9/23/2013 7:00	9/24/2013 7:00	24.0	840	667.9	5.68
Tuesday, September 24, 2013	Batch 316-083	19,608	9/24/2013 7:00	9/25/2013 7:00	24.0	840	817.0	6.30
Wednesday, September 25, 2013	Batch 316-084	6,415	9/25/2013 7:00	9/26/2013 7:00	24.0	840	267.3	6.30
Thursday, September 26, 2013	Accumulated	-	9/26/2013 7:00	9/27/2013 7:00	24.0	840	0.0	5.43
Friday, September 27, 2013	Batch 316-086	-	9/27/2013 7:00	9/28/2013 7:00	24.0	840	0.0	5.45
Saturday, September 28, 2013	Accumulated	13,126	9/28/2013 7:00	9/29/2013 7:00	24.0	840	546.9	5.58

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] Title: Environmental Specialist Date: 10/1/13

10-7-13

Weekly Volume Summary - Week 23 (9-22-13 through 9-28-13).xlsx

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/23/2013 7:00:00 AM	9/22/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,117,313	1,098,084	19,229

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,229 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/23/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/24/2013 7:00:00 AM	9/23/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,133,342	1,117,313	16,029

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 16,029 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/24/13

MSD Daily Flow Reading, ending 9-24-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/25/2013 7:00:00 AM	9/24/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,152,950	1,133,342	19,608

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,608 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/25/13

MSD Daily Flow Reading, ending 9-25-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/26/2013 7:00:00 AM	9/25/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,159,365	1,152,950	6,415

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 6,415 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/26/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/27/2013 7:00:00 AM	9/26/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,159,365	1,159,365	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/27/13

MSD Daily Flow Reading, ending 9-27-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/28/2013 7:00:00 AM	9/27/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,159,365	1,159,365	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/28/13

MSD Daily Flow Reading, ending 9-28-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/29/2013 7:00:00 AM	9/28/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,172,492	1,159,365	13,126

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 13,126 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/29/13

PW
10-3-13

OB-309 MSD

Bridgeton Landfill

Fill Data

Fill Start Date	9/14/2013
Fill Start Time	15:30
Fill Stop Date	9/14/2013
Fill Stop Time	22:00
Process Battery	Tank Battery 2

Processing Data

Process Start Date	9/14/2013
Process Start Time	22:00
Process Stop Date	9/15/2013
Process Stop Time	07:50

Approval Data

Approval Details	NAL13026-668
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Estimated 45,000-gal batch.

Monday, September 30, 2013

OB-316-081

Bridgeton Landfill

Fill Data

Fill Start Date	9/21/2013
Fill Start Time	18:10
Fill Stop Date	9/21/2013
Fill Stop Time	22:20
Process Battery	316 AST

Processing Data

Process Start Date	9/21/2013
Process Start Time	21:06
Process Stop Date	9/22/2013
Process Stop Time	05:40

Approval Data

Approval Details	NAL13026-677
Test Results	Benzene 66 ppb
Reprocessed Batch	

Notes

Fill height 18.0 feet.

Monday, September 30, 2013

OB-316-082 Bridgeton Landfill

Fill Data

Fill Start Date	9/22/2013
Fill Start Time	18:05
Fill Stop Date	9/22/2013
Fill Stop Time	22:23
Process Battery	316 AST

Processing Data

Process Start Date	9/22/2013
Process Start Time	22:23
Process Stop Date	9/23/2013
Process Stop Time	06:05

Approval Data

Approval Details	NAL13026-680
Test Results	Benzene 31 ppb
Reprocessed Batch	

Notes

MEK = 28,000 ppb.

Monday, September 30, 2013

OB-316-083

Bridgeton Landfill

Fill Data

Fill Start Date	9/23/2013
Fill Start Time	18:10
Fill Stop Date	9/23/2013
Fill Stop Time	21:36
Process Battery	316 AST

Processing Data

Process Start Date	9/23/2013
Process Start Time	20:05
Process Stop Date	9/24/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL13026-684
Test Results	Benzene 36 ppb
Reprocessed Batch	

Notes

MEK = 29,000 ppb

Monday, September 30, 2013

OB-316-084

Bridgeton Landfill

Fill Data

Fill Start Date	9/24/2013
Fill Start Time	18:10
Fill Stop Date	9/24/2013
Fill Stop Time	21:17
Process Battery	316 AST

Processing Data

Process Start Date	9/24/2013
Process Start Time	19:40
Process Stop Date	9/25/2013
Process Stop Time	05:50

Approval Data

Approval Details	NAL13026-686
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

MEK = 25,000 ppb.

Monday, September 30, 2013

OB-316-085

Bridgeton Landfill

Fill Data

Fill Start Date	9/25/2013
Fill Start Time	18:10
Fill Stop Date	9/25/2013
Fill Stop Time	22:00
Process Battery	316 AST

Processing Data

Process Start Date	9/25/2013
Process Start Time	19:10
Process Stop Date	9/26/2013
Process Stop Time	05:40

Approval Data

Approval Details	NAL13026-688
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

MEK = 23,000 ppb.

Monday, September 30, 2013

OB-316-086

Bridgeton Landfill

Fill Data

Fill Start Date	9/26/2013
Fill Start Time	18:20
Fill Stop Date	9/26/2013
Fill Stop Time	20:23
Process Battery	316 AST

Processing Data

Process Start Date	9/26/2013
Process Start Time	20:23
Process Stop Date	9/27/2013
Process Stop Time	06:00

Approval Data

Approval Details	NAL13026-690
Test Results	Benzene 37 ppb
Reprocessed Batch	

Notes

MEK = 29,000 ppb. Fill height 14 feet.

Monday, September 30, 2013

OB-316-088

Bridgeton Landfill

Fill Data

Fill Start Date	9/27/2013
Fill Start Time	19:14
Fill Stop Date	9/27/2013
Fill Stop Time	23:32
Process Battery	316 AST

Processing Data

Process Start Date	9/27/2013
Process Start Time	23:32
Process Stop Date	9/28/2013
Process Stop Time	10:20

Approval Data

Approval Details	NAL13026-694
Test Results	Benzene 25 ppb
Reprocessed Batch	1st benzene = 51 ppb

Notes

Resample of 316-087 (NAL13026-692; MEK=58,000 ppb, benzene=51 ppb). 316-088 MEK = 33,000 ppb. Blower off 9/28/13 from 5:45a - 7:30a.

Monday, September 30, 2013

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, October 02, 2013 9:05 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. Please let us know if you have any questions.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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SEPTEMBER 2013

Doug Mendoza

From: Darin Lewis
Sent: Monday, September 30, 2013 6:18 AM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Steve Grace; Sara Kammerer
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 9/22/2013 to 9/28/2013.
9/22 – 172,500 gallons
9/23 – 150,000 gallons
9/24 – 150,000 gallons
9/25 – 150,000 gallons
9/26 – 150,000 gallons
9/27 – 150,000 gallons
9/28 – 172,500 gallons
Total = 1,095,000 gallons

Doug Mendoza

Bridgeton Landfill

From: Brian G. Gibson
Sent: Monday, September 30, 2013 6:14 AM
To: Doug Mendoza
Subject: FW: Bridgeton hauled waste for Monday 9/30/13

From: Darin Lewis
Sent: Monday, September 30, 2013 6:10 AM
To: Bill Abernathy; Brian G. Gibson; Sara Kammerer; Steve Grace
Cc: Dan Feezor; 'bpower@republicservices.com'; David Eastvold; Patti Abernathy
Subject: RE: Bridgeton hauled waste for Monday 9/30/13

Sounds good. Thanks for the information.

From: Bill Abernathy [mailto:babernathy@feezorengineering.com]
Sent: Monday, September 30, 2013 6:05 AM
To: Darin Lewis; Brian G. Gibson; Sara Kammerer; Steve Grace
Cc: Dan Feezor; 'bpower@republicservices.com'; David Eastvold; Patti Abernathy
Subject: RE: Bridgeton hauled waste for Monday 9/30/13

Thanks, Darin. As the last few trucks bound for Bissell were being loaded yesterday afternoon (and pre-loaded last night), we were adding caustic (NaOH) to the 316k AST in preparation for transferring pH-adjusted leachate over to our 96k AST (the holding tank for our direct discharge to MSD-Mo River). That's the reason for the higher pH in the later trucks yesterday and the early loads this morning. This is the first time we've done this so I'll let you know when we'll be performing the pH-adjustments in the future.

Thanks,

Bill Abernathy
Residuals Management Team Member
Feezor Engineering, Inc.
314-502-1299

From: Darin Lewis [mailto:DLEWIS@stlmsd.com]
Sent: Monday, September 30, 2013 5:55 AM
To: Bill Abernathy; Brian G. Gibson; Sara Kammerer; Steve Grace
Cc: Dan Feezor; 'bpower@republicservices.com'; David Eastvold; Patti Abernathy
Subject: RE: Bridgeton hauled waste for Monday 9/30/13

Bill,
Just to let you know. The pH value, at the hauled waste station, for the first two loads is an average of 8.20. The pH was climbing slowly during the afternoon yesterday. Might want to calibrate your pH probe. The pH probe here at the hauled waste station is calibrated every morning. The waste is still acceptable but the pH does not need to be adjusted so high.
Darin Lewis

From: Bill Abernathy [mailto:babernathy@feezorengineering.com]
Sent: Monday, September 30, 2013 5:41 AM

To: Darin Lewis; Brian G. Gibson; Sara Kammerer; Steve Grace
Cc: Dan Feezor; 'bpower@republicservices.com'; David Eastvold; Patti Abernathy
Subject: Bridgeton hauled waste for Monday 9/30/13

Everyone, the first 3 loads being hauled to Bissell today from Bridgeton will consist of Batch 316-089. This material had a field pH value yesterday morning of 5.50 su and no detectable benzene (<14 ppb). A copy of the benzene concentration statement (on lab letterhead) will accompany the driver of the first load. The full preliminary analytical report for 316-089 was emailed to MSD yesterday afternoon.

The remaining loads being hauled today will consist of Batch 316-090. This batch has a field pH value this morning of 5.52 su and an estimated (J-value) benzene concentration of 53 ppb. A copy of the benzene concentration statement (on lab letterhead) will accompany the driver of the first load of this material leaving the Bridgeton facility later this morning. The full report for Batch 316-090 will be e-mailed later today.

Barring unforeseen delays, there will be approximately 172,500 gallons of waste hauled to Bissell today between the hours of 5:00a and 4:30p. Loads will leave Bridgeton on 30 minute intervals. Bridgeton haulage to Bissell will be 172,500 gpd through at least 10/13/13.

If you have any questions about today's planned hauling, give me a call/reply at your earliest convenience.

Thanks,

Bill Abernathy
Residuals Management Team Member
Feezor Engineering, Inc.
314-502-1299

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

September 26, 2013

Brian Power, Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

RE: NOTICE OF VIOLATIONS – WASTEWATER DISCHARGE PERMIT NO. 0511559802 - 2
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Mr. Power:

As our field personnel notified Bryan Sehie on May 8, 2013, MSD personnel recently collected and analyzed samples of wastewater discharged to the MSD system from the premise above.
Unfortunately, we identified the following violation:

VIOLATION OF DISCHARGE LIMITATIONS:

DATE	TIME	SAMPLE POINT	SAMPLE TYPE	POLLUTANT	DISCHARGE LIMIT	LIMIT TYPE	VALUE FOUND
09/25/13	1015	007	Grab	pH	5.5 su < pH < 11.5 su	IN	5.41 su

The Bridgeton Landfill representative's reading was approximately 5.73 su.

007 = 14" pipe into Westlink Pump Station Wetwell, on S side
mg/L = milligrams per liter **IN = Instantaneous**

Our field personnel also provided him with a Field Notice of Discharge Violation, copy enclosed, for the above pH violations. Please be aware that laboratory analyses of the samples collected may potentially result in other discharge violations. Should there be any, we will notify you of them upon completion of the analyses.

REQUIRED ACTION/RESPONSE:

1. During this sampling event, MSD representatives met with Bridgeton Landfill representatives to measure pH simultaneously and to determine the reason for the variation in pH readings between the two parties. As discussed between the Landfill and MSD, it is our policy to recalibrate the meter after a low (< 5.5 su) reading using both pH 4 and 7 Standards. We then retest to verify the reading. From comparison of methods for reading pH and conversation between the parties, we understand that Bridgeton Landfill representatives do not perform calibration, but simply check their meter against a pH 4 Standard. We suggest using a meter that is readily calibrated in the field using either 4 and 7 Standards for low pH readings or 7 and 10 Standards for high readings.

2. Submit a report of corrective actions, to ensure compliance with MSD limitations for **pH.**
   In the report:

   a. Indicate which corrective actions are initiated and which are still to come
   b. Include plans for additional sampling to verify a return to compliance

3. Submit all additional sampling results to MSD. Sample collection must occur as follows:

   a. Sample at the identified sampling point
   b. Collect grab samples for **pH**
   c. Take samples at times representative of normal operations
   d. pH and temperature readings must be taken immediately when the sample is collected, and not after transporting to a laboratory for analysis
   e. pH readings must be measured using a pH probe, rather than with pH paper strips

4. Refer to the enclosure for additional information on:

    a. Potential enforcement actions should noncompliance continue
    b. Percentages applicable to Significant Noncompliance, when planning for additional sampling

5. **Please submit your response no later than <u>October 28, 2013</u>.**

Thank you for helping us to comply with state and federal regulations. If you have any questions, please contact me at 314.436.8719.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Tom Boehm
Environmental Engineering Associate

Enclosures: SNC enclosure, SP map, Field Notice of Violation

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, September 26, 2013 10:14 AM
To: Doug Mendoza
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
Subject: RE: Bridgeton Landfill - Field NOV for pH

Thank you for your help on this, we will have someone call Brian Gibson to get this set up.

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Thursday, September 26, 2013 9:49 AM
To: Merrigan, Jessie
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
Subject: RE: Bridgeton Landfill - Field NOV for pH

Jessie,

From what I understand, the Bridgeton Landfill meter is not actually being calibrated, but rather is being compared against a pH 4 standard. While this tells if the meter is accurate at pH 4, it does not actually calibrate over a range. MSD calibrated with both pH 4 and pH 7 standards. (When we have high readings, we calibrate using pH 7 and pH 10 standards. Or, as needed, will use all three standards: 4, 7, and 10.) There also are differences between the types of meters being used by Bridgeton Landfill and MSD. I understand that the types of meters used were also quite different.

If Bridgeton does not already do so, it would be prudent to operate with a minimum pH operating point of at least 6.0. Too often, MSD sees companies with lower values that experience drift or other matters that cause violations.

I am asking our Field supervisor to arrange for one of the field techs to meet with Bridgeton Landfill. However, we need to know whom he should contact to coordinate the time. Please let us know and/or have the contact call our Field Supervisor, Brian Gibson, at 314-436-8784.

Doug

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Thursday, September 26, 2013 9:17 AM
To: Doug Mendoza
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
Subject: RE: Bridgeton Landfill - Field NOV for pH

Good morning,

We appreciate MSD coming back out yesterday to help in the pH investigation. As I expect you know, the pH readings between the meters did not match – with Bridgeton's showing a compliant pH at the lift station and MSD's slightly below the allowable level. Because MSD's follow up reading was still below the permissible level, the facility ceased discharge.

Doug Mendoza

From: Doug Mendoza
Sent: Thursday, September 26, 2013 9:49 AM
To: 'Merrigan, Jessie (LG)'
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
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Doug

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To: Doug Mendoza
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
Subject: RE: Bridgeton Landfill - Field NOV for pH

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We followed up with the equipment vendor to assess next steps. He would like to have the MSD meter, the Bridgeton meter and a company meter calibrated and tested together and he would like to come out to do that. Would you be willing to send an MSD representative back out? Our goal would be to use this to set the pH "floor" using the facility's meter. That way we can assess an appropriate pH above 5.5 to confirm for daily discharge to ensure that discharge is in compliance with the limit using either the facility or MSD meter.

We know that your team is very busy, and understand that an additional trip out is an inconvenience. But we think this is the best way to develop a long term solution to ensure that the facility can accurately monitor and confirm compliance with MSD's discharge limitation.

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, September 26, 2013 9:17 AM
To: Doug Mendoza
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
Subject: RE: Bridgeton Landfill - Field NOV for pH

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We followed up with the equipment vendor to assess next steps. He would like to have the MSD meter, the Bridgeton meter and a company meter calibrated and tested together and he would like to come out to do that. Would you be willing to send an MSD representative back out? Our goal would be to use this to set the pH "floor" using the facility's meter. That way we can assess an appropriate pH above 5.5 to confirm for daily discharge to ensure that discharge is in compliance with the limit using either the facility or MSD meter.

We know that your team is very busy, and understand that an additional trip out is an inconvenience. But we think this is the best way to develop a long term solution to ensure that the facility can accurately monitor and confirm compliance with MSD's discharge limitation.

We appreciate your consideration of this request and are happy to answer any questions you might have.

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Wednesday, September 25, 2013 1:46 PM
To: Merrigan, Jessie
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
Subject: RE: Bridgeton Landfill - Field NOV for pH

Jessie,

DN

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, September 25, 2013 2:33 PM
To: Doug Mendoza
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
Subject: RE: Bridgeton Landfill - Field NOV for pH

Thanks, Doug, we really appreciate your working with us to investigate this. The second reading taken by the facility team was at the same point as the MSD reading – and was still nearly 0.5 su different, so we think a side-by-side reading will be helpful.

Thank you,
Jessie

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Wednesday, September 25, 2013 1:46 PM
To: Merrigan, Jessie
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
Subject: RE: Bridgeton Landfill - Field NOV for pH

Jessie,

It turns out that we do have a field person who can go out, and is on his way now. Our field supervisor will call over to Bridgeton Landfill to let them know.

He also reminded me that MSD and Bridgeton Landfill sample the leachate at different places. MSD is sampling and reading the pH at the actual point of discharge into MSD's pump station. Bridgeton Landfill apparently reads the pH from a sample collected on a recirculation loop in the holding tank. It does not necessarily represent the final product at the discharge.

Doug

From: Doug Mendoza
Sent: Wednesday, September 25, 2013 1:29 PM
To: 'Merrigan, Jessie (LG)'
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
Subject: RE: Bridgeton Landfill - Field NOV for pH

Jessie,

We can send someone tomorrow to check pH and compare readings and procedures with Bridgeton Landfill's staff. Unfortunately, they currently are working at other companies. We have to keep them with a pretty full schedule due to the thousand or so companies we monitor and the need to efficiently use the ratepayers' funds.

9-25-13

OB-308 MSD

Bridgeton Landfill

Fill Data

Fill Start Date	9/14/2013
Fill Start Time	08:00
Fill Stop Date	9/14/2013
Fill Stop Time	16:30
Process Battery	Tank Battery 1

Processing Data

Process Start Date	9/14/2013
Process Start Time	16:30
Process Stop Date	9/15/2013
Process Stop Time	10:00

Approval Data

Approval Details	NAL13026-663
Test Results	Benzene 28 ppb
Reprocessed Batch	

Notes

Estimated 60,000-gal batch.

Tuesday, September 24, 2013

OB-309 MSD

Bridgeton Landfill

Fill Data

Fill Start Date	9/14/2013
Fill Start Time	15:30
Fill Stop Date	9/14/2013
Fill Stop Time	22:00
Process Battery	Tank Battery 2

Processing Data

Process Start Date	9/14/2013
Process Start Time	22:00
Process Stop Date	9/15/2013
Process Stop Time	07:50

Approval Data

Approval Details	NAL13026-668
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Estimated 45,000-gal batch.

Tuesday, September 24, 2013

OB-316-073 Bridgeton Landfill

Fill Data

Fill Start Date	9/13/2013
Fill Start Time	18:25
Fill Stop Date	9/13/2013
Fill Stop Time	21:05
Process Battery	316 AST

Processing Data

Process Start Date	9/13/2013
Process Start Time	21:07
Process Stop Date	9/14/2013
Process Stop Time	11:00

Approval Data

Approval Details	NAL13026-660
Test Results	Benzene 68 ppb
Reprocessed Batch	1st benzene = 140 ppb

Notes

Blower operated for 2 hrs 9/13/13, then another 3 hrs 9/14/13.

Monday, September 23, 2013

OB-316-074 Bridgeton Landfill

Fill Data

Fill Start Date	9/14/2013
Fill Start Time	18:10
Fill Stop Date	9/14/2013
Fill Stop Time	20:00
Process Battery	316 AST

Processing Data

Process Start Date	9/14/2013
Process Start Time	18:10
Process Stop Date	9/15/2013
Process Stop Time	06:00

Approval Data

Approval Details	NAL13026-661
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Blower turned on at 11.5 feet.

Monday, September 23, 2013

OB-316-075 Bridgeton Landfill

Fill Data

Fill Start Date	9/15/2013
Fill Start Time	18:00
Fill Stop Date	9/15/2013
Fill Stop Time	21:20
Process Battery	316 AST

Processing Data

Process Start Date	9/15/2013
Process Start Time	20:00
Process Stop Date	9/16/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL13026-664
Test Results	Benzene 37 ppb
Reprocessed Batch	

Notes

Tuesday, September 24, 2013

OB-316-076 Bridgeton Landfill

Fill Data

Fill Start Date	9/16/2013
Fill Start Time	18:15
Fill Stop Date	9/16/2013
Fill Stop Time	22:05
Process Battery	316 AST

Processing Data

Process Start Date	9/16/2013
Process Start Time	21:28
Process Stop Date	9/17/2013
Process Stop Time	06:00

Approval Data

Approval Details	NAL13026-666
Test Results	Benzene 47 ppb
Reprocessed Batch	

Notes

Monday, September 23, 2013

OB-316-077 Bridgeton Landfill

Fill Data

Fill Start Date	9/17/2013
Fill Start Time	18:15
Fill Stop Date	9/17/2013
Fill Stop Time	21:20
Process Battery	316 AST

Processing Data

Process Start Date	9/17/2013
Process Start Time	20:00
Process Stop Date	9/18/2013
Process Stop Time	10:30

Approval Data

Approval Details	NAL13026-669
Test Results	Benzene 48 ppb
Reprocessed Batch	

Notes

Monday, September 23, 2013

OB-316-078 *Bridgeton Landfill*

Fill Data

Fill Start Date	9/18/2013
Fill Start Time	18:15
Fill Stop Date	9/18/2013
Fill Stop Time	21:20
Process Battery	316 AST

Processing Data

Process Start Date	9/18/2013
Process Start Time	20:00
Process Stop Date	9/19/2013
Process Stop Time	06:55

Approval Data

Approval Details	NAL13026-671
Test Results	Benzene 43 ppb
Reprocessed Batch	

Notes

Monday, September 23, 2013

OB-316-079 Bridgeton Landfill

Fill Data

Fill Start Date	9/19/2013
Fill Start Time	18:06
Fill Stop Date	9/19/2013
Fill Stop Time	21:35
Process Battery	316 AST

Processing Data

Process Start Date	9/19/2013
Process Start Time	21:35
Process Stop Date	9/20/2013
Process Stop Time	05:35

Approval Data

Approval Details	NAL13026-673
Test Results	Benzene 54 ppb
Reprocessed Batch	

Notes

Monday, September 23, 2013

OB-316-080 — *Bridgeton Landfill*

Fill Data

Fill Start Date	9/20/2013
Fill Start Time	18:20
Fill Stop Date	9/20/2013
Fill Stop Time	22:05
Process Battery	316 AST

Processing Data

Process Start Date	9/20/2013
Process Start Time	20:05
Process Stop Date	9/21/2013
Process Stop Time	05:50

Approval Data

Approval Details	NAL13026-675
Test Results	Benzene 39 ppb
Reprocessed Batch	

Notes

Monday, September 23, 2013

D M
9-25-13

MSD 027196

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table

Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, September 15, 2013	Batch 316-073	22,500	22,500
	Batch 316-074	150,000	150,000
Monday, September 16, 2013	Batch 316-074	22,500	22,500
	Batch 316-075	150,000	150,000
Tuesday, September 17, 2013	Batch 316-075	22,500	22,500
	Batch 316-076	150,000	150,000
Wednesday, September 18, 2013	Batch 308	22,500	22,500
	Batch 316-077	150,000	150,000
Thursday, September 19, 2013	Batch 308	37,500	37,500
	Batch 316-078	135,000	135,000
Friday, September 20, 2013	Batch 316-078	22,500	22,500
	Batch 316-079	150,000	150,000
Saturday, September 21, 2013	Batch 309	22,500	22,500
	Batch 316-080	150,000	150,000

Starting Date	*9/15/2013 7:00*
Ending Date	*9/22/2013 7:00*

MSD - Missouri River Tracking Table

Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, September 15, 2013	Accumulated	19,311	9/15/2013 7:00	9/16/2013 7:00	24.0	849	804.6	5.64
Monday, September 16, 2013	Batch 316-075	11,800	9/16/2013 7:00	9/17/2013 7:00	24.0	847	491.7	5.66
Tuesday, September 17, 2013	Batch 316-076	19,604	9/17/2013 7:00	9/18/2013 7:00	24.0	840	816.8	6.69
Wednesday, September 18, 2013	Batch 316-077	19,502	9/18/2013 7:00	9/19/2013 7:00	24.0	840	812.6	6.53
Thursday, September 19, 2013	Batch 316-078	19,502	9/19/2013 7:00	9/20/2013 7:00	24.0	845	812.6	7.02
Friday, September 20, 2013	Batch 316-079	19,502	9/20/2013 7:00	9/21/2013 7:00	24.0	840	812.6	6.53
Saturday, September 21, 2013	Batch 316-080	19,502	9/21/2013 7:00	9/22/2013 7:00	24.0	840	812.6	6.85

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, tru e, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violat ions.

Signed: _____ Title: Environmental Specialist Date: 9/23/13

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	9/16/2013 7:00:00 AM	9/15/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	988,672	969,362	19,311

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,311 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/16/13

MSD Daily Flow Reading, ending 9-16-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/17/2013 7:00:00 AM	9/16/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,000,472	988,672	11,800

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 11,800 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/17/13

MSD Daily Flow Reading, ending 9-17-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/18/2013 7:00:00 AM	9/17/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,020,076	1,000,472	19,604

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,604 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/18/13

MSD Daily Flow Reading, ending 9-18-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/19/2013 7:00:00 AM	9/18/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,039,578	1,020,076	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

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Signed: Bryan H Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/19/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/20/2013 7:00:00 AM	9/19/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,059,080	1,039,578	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

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Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/20/13

MSD Daily Flow Reading, ending 9-20-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	9/21/2013 7:00:00 AM	9/20/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,078,582	1,059,080	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

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Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/21/13

MSD Daily Flow Reading, ending 9-21-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/22/2013 7:00:00 AM	9/21/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	1,098,084	1,078,582	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

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Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/22/13

MSD Daily Flow Reading, ending 9-22-2013

DM

Doug Mendoza

BRIDGETON LANDFILL

From: Jason T. Edwards
Sent: Wednesday, September 25, 2013 2:24 PM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: Bridgeton Reading

Hi Doug,

The Bridgeton Landfill meter reading was 1,155,533 gal and 810 gal/hr. The reading was taken at 10:20 a.m. on Wednesday, September 25 , 2013.

Thanks,
Jason

Doug Mendoza

From: Doug Mendoza
Sent: Wednesday, September 25, 2013 1:46 PM
To: 'Merrigan, Jessie (LG)'
Cc: 'Power, Brian (BPower@republicservices.com)'; 'Sehie, Bryan'; 'Bill Abernathy (babernathy@feezorengineering.com)'; 'Ed Galbraith (EGalbraith@barr.com)'; 'Dan Feezor'; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
Subject: RE: Bridgeton Landfill - Field NOV for pH

Jessie,

It turns out that we do have a field person who can go out, and is on his way now. Our field supervisor will call over to Bridgeton Landfill to let them know.

He also reminded me that MSD and Bridgeton Landfill sample the leachate at different places. MSD is sampling and reading the pH at the actual point of discharge into MSD's pump station. Bridgeton Landfill apparently reads the pH from a sample collected on a recirculation loop in the holding tank. It does not necessarily represent the final product at the discharge.

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Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed Galbraith (EGalbraith@barr.com); Dan Feezor; Brian G. Gibson; Christopher J. Bulmahn; Tom Boehm
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Jessie,

We can send someone tomorrow to check pH and compare readings and procedures with Bridgeton Landfill's staff. Unfortunately, they currently are working at other companies. We have to keep them with a pretty full schedule due to the thousand or so companies we monitor and the need to efficiently use the ratepayers' funds.

Regarding the procedures MSD's staff uses, they calibrate the pH meter after each pH reading they take that is outside the limits, then recheck the pH to make sure it was accurate. They keep fresh standards on hand for the calibrations.

With the high concentration of pollutants in the leachate that is being discharged, stratification may occur in the holding tank, or other variation even if the tank is agitated – so variation in the pH would not be unexpected.

Hopefully, some answers can be provided tomorrow when they meet.

Doug Mendoza
MSD Industrial Pretreatment Manager

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, September 25, 2013 12:45 PM
To: Doug Mendoza
Cc: Power, Brian (BPower@republicservices.com); Sehie, Bryan; Bill Abernathy (babernathy@feezorengineering.com); Ed

Doug Mendoza

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Subject: Bridgeton Landfill - Field NOV for pH

Good afternoon Doug,

I spoke with the facility team and understand that a field NOV was issued this morning for violation of the pH limit for discharge to the Missouri River Treatment Facility. As you know, pH is monitored daily by the facility team. The pH reading from the 97,000 gallon tank this morning was 6.3 su. We understand your field representative obtained a reading at the MSD monitoring point of 5.44 su. Our team just went to sample at that point and the pH was 5.9 su.

We place the utmost importance on meeting MSD's discharge limits. For that reason the facility purchased a high quality pH meter earlier this year and calibrates that meter daily to ensure that pH can be accurately read.

We are surprised at the difference between these pH meters and would like to get to the bottom of this so that both parties have an accurate and consistent means of monitoring pH and ensuring compliance. Would it be possible to have your team member return to the site so that side-by-side readings can be taken and we can confirm how these meters compare? Does MSD have another meter that could also be used so we could evaluate the level of variation?

Doug Mendoza

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Because two site readings today have confirmed the compliance of the leachate with the limit, the facility has not at this point ceased discharge. However, we do not want to conduct any discharge in violation of MSD's limits and would like to resolve this as soon as possible.

Please let me know if you have any questions. Bryan Sehie, Brian Power and Bill Abernathy (of Feezor) are available at the site today to work with your representatives on this.

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

Any U.S. federal tax advice contained in this communication (including any attachments or enclosures) was not intended or written by the author to be used, and cannot be used, for the purpose of (1) avoiding penalties that may be imposed on a taxpayer or (2) promoting, marketing, or recommending to another party any transaction or other matter addressed herein.

DW

MSD 027208

Table 3
VOCs and SVOCs
December 2012 - September 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-074	9/15/2013	Pace	Validated	60153178	ND
316-073	9/14/2013	Pace	Validated	60153177	ND
MSD Batch 307	9/14/2013	Pace	Validated	60153176	ND
316-072	9/13/2013	Pace	Validated	60153105	ND
MSD Batch 306	9/12/2013	Pace	Validated	60152995	ND
316-071	9/12/2013	Pace	QC pending	60153006	ND
316-070	9/11/2013	Pace	Validated	60152897	ND
316-069	9/10/2013	Pace	Validated	60152788	ND
316-068	9/9/2013	Pace	Validated	60152783	ND

Table 1
General Parameters and Metals
December 2012 - September 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	pH, field
					NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	pH units
316-074	9/15/2013	Pace	Validated	60153178	31800	149000 *	828	567	8.3	5.6	5.68
316-073	9/14/2013	Pace	Validated	60153177	32400	89800	950	558	8.4	5.6	5.67
MSD Batch 307	9/14/2013	Pace	Validated	60153176	32600 h	80800 *	795	755	14.1	5.6	--
316-072	9/13/2013	Pace	Validated	60153105	27100	79000	678	515	10.5	5.5	5.59
MSD Batch 306	9/12/2013	Pace	Validated	60152995	28900	74100	637	662	ND	5.6	--
316-071	9/12/2013	Pace	QC pending	60153006	27300	83300	757	475	12.8	5.5	5.81
316-070	9/11/2013	Pace	Validated	60152897	28100 h	77600	725 *	528	8.2	5.5	5.73
316-069	9/10/2013	Pace	Validated	60152788	26000	67600	726	539	9.1	5.5	5.74
316-068	9/9/2013	Pace	Validated	60152783	25400	64000	717	393	23.3	5.5	5.70

MSD 027209

Table 1
General Parameters and Metals
December 2012 - September 2013
Bridgeton Landfill

					Solids, total suspended	Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper
					NA	Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-074	9/15/2013	Pace	Validated	60153178	3420	8.37	0.0563	0.753	ND	0.0122	0.278	0.0459	ND
316-073	9/14/2013	Pace	Validated	60153177	3500	9.61	0.0590	0.811	ND	0.0136	0.288	0.0503	ND
MSD Batch 307	9/14/2013	Pace	Validated	60153176	4040	9.43	0.0531	0.794	ND	0.0155	0.282	0.0564	0.0473
316-072	9/13/2013	Pace	Validated	60153105	3730	13.7	0.0606	0.778	ND	0.0135	0.303	0.0518	0.0343
MSD Batch 306	9/12/2013	Pace	Validated	60152995	4180	5.33	0.0628	0.724	ND	0.0139	0.263	0.0489	ND
316-071	9/12/2013	Pace	QC pending	60153006	4880	14.6	0.0569	0.753	ND	0.0134	0.276	0.0516	0.0397
316-070	9/11/2013	Pace	Validated	60152897	4840	8.23	0.0513	0.846	ND	ND	0.261	0.0536	0.0340
316-069	9/10/2013	Pace	Validated	60152788	5560	11.1	0.0537	0.872	ND	ND	0.275	0.0604	0.0432
316-068	9/9/2013	Pace	Validated	60152783	5360	18.2 *	0.0619	0.932	ND	0.0255	0.319	0.0764	0.0680

MSD 027210

Table 1
General Parameters and Metals
December 2012 - September 2013
Bridgeton Landfill

					Iron Total	Lead Total	Mercury Total	Nickel Total	Selenium Total	Silver Total	Thallium Total	Zinc Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-074	9/15/2013	Pace	Validated	60153178	710	0.146	0.00025	0.125	ND	0.0163	ND	13.4
316-073	9/14/2013	Pace	Validated	60153177	777	0.161	0.00027	0.132	ND	0.0166	ND	14.1
MSD Batch 307	9/14/2013	Pace	Validated	60153176	836	0.15	0.00024	0.131	ND	0.0188	ND	15.8
316-072	9/13/2013	Pace	Validated	60153105	807	0.182	0.00062	0.146	ND	0.0178	ND	14.6
MSD Batch 306	9/12/2013	Pace	Validated	60152995	755	0.0721	ND	0.176	ND	ND	ND	15
316-071	9/12/2013	Pace	QC pending	60153006	741	0.17	0.00068	0.144	ND	0.0162	ND	14.6
316-070	9/11/2013	Pace	Validated	60152897	728	0.179	0.00035	0.134	ND	ND	ND	14.6
316-069	9/10/2013	Pace	Validated	60152788	825	0.215	0.00051	0.142	ND	ND	ND	15
316-068	9/9/2013	Pace	Validated	60152783	1230	0.314	ND	0.168	ND	ND	ND	16.5

MSD 027211

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, September 25, 2013 11:32 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site.

We have continued to review the BOD levels following the earlier anomalous spikes in BOD. Batch 316-074 had a COD of 149,000 mg/l which is about twice normal. Fortunately, the BOD was not out of ordinary. The COD result is qualified and we have followed up with the lab to ask that the sample be rerun for COD. We will keep you updated on that.

Thank you for continuing to work with us on allowable volume as the facility team manages the facility's variable leachate generation. If there is any information you need as you continue your operational assessment please let us know and we are always appreciative of any feedback to ensure we are managing daily operations to best accommodate your plants.

Please let us know if you have any questions.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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CB

FIELD NOTICE OF DISCHARGE VIOLATION

METROPOLITAN ST. LOUIS SEWER DISTRICT
DIVISION OF ENVIRONMENTAL COMPLIANCE
10 EAST GRAND AVENUE
ST. LOUIS, MO 63147

COMPANY NAME Bridgeton Landfill PRETREATMENT ACCOUNT NO. 1003803000

MSD Industrial Waste Technicians conducted sampling of the wastewater discharge from your facility today. This sampling involved up to four separate visits to each sampling point (SP). The samples collected will be analyzed by the Division of Environmental Compliance laboratory and the results will become a part of the District's records for your facility.

Conditions, which we wish to bring to your attention at the earliest possible time, were noted during the sampling visits. These conditions may include pH and/or temperature readings which fell outside the limits allowed under MSD Sewer Use Ordinance 12559 or other conditions which may indicate a potential problem with the discharge from your facility.

SP NO.	TIME	pH	TEMP	OTHER CONDITIONS
007	1015	5.41	24.4	

SP NO.	TIME	pH	TEMP	OTHER CONDITIONS

pH must be within the range of 5.5 to 11.5 at all times and the temperature may not exceed 60 degrees Celsius (140 degrees Fahrenheit) at any time.

Your company will receive a formal notice of the above violations as well as notice of any violations of other parameter limits which are detected during analysis by the MSD laboratory.

This field notice is provided to assist you in making an early determination of the cause of the above violations and to take immediate corrective actions. Please direct any questions you may have to Doug Mendoza at 314-436-8717.

Presented to company representative (Printed Name) Bryan Sehic

(Signature) Bryan Sehic

by MSD Ind. Waste Technician Jason Edwards Date 9/25/13 Time 1645

NOV-Field 1/08 Distribution: White Copy → Industry; Yellow Copy → Pretreatment Unit; Pink Copy → Field Unit

DL

Doug Mendoza

BRIDGETON LANDFILL

From: Bill Abernathy <babernathy@feezorengineering.com>
Sent: Tuesday, September 24, 2013 4:28 PM
To: Darin Lewis; Brian G. Gibson; Sara Kammerer; Steve Grace; Doug Mendoza
Cc: Dan Feezor; David Eastvold; Paul Eastvold; John Powell; Paul Linscott
Subject: Corrected Bridgeton manifest
Attachments: 9-24-13 revised Bridgeton manifest - Load 18.pdf

All, attached is a PDF of a manifest of a Bridgeton hauled waste load disposed at Bissell today, 9/24/13. Both the time of waste release and the time of waste acceptance on the original Load 18 manifest were inadvertently listed as "AM", then corrected to "PM" and re-scanned. Please use the attached corrected manifest for your records.

Thanks,

Bill Abernathy
Residuals Management Team Member
Feezor Engineering, Inc.
314-502-1299

Metropolitan St. Louis Sewer District
Hauled Waste Receipt

NO. S-089629

A. Waste Source

Domestic ☐ Industrial ☒ Description of Waste: Landfill Leachate and Gas Condensate

Approximate Volume of Waste Loaded: 7500 gallons

Name: Bridgeton Landfill LLC Tel No: (314)744-8165

Address: 13570 St. Charles Rock Road City: Bridgeton State: MO Zip: 63044

I certify the above described waste was released to the transporter named below on 9-24-13 (DATE Mo/Day/Yr) at 12:00 pm (TIME) PL

Name of Owner or Representative *(Print)* Paul Linscott Signature Paul Linscott

B. Waste Transporter

Company Name: Mr. Bulk's, Inc. MSD HAULER AUTHORIZATION ID #: 0218

I certify I accepted the above described waste on 9-24-13 (DATE Mo/Day/Yr) at 12:00 pm (TIME) PL on the following transport vehicle:

MSD VEHICLE ID #: ~~0635~~ 0637 PL Total Vehicle Tank Capacity: 7500 gallons

This vehicle was empty ☒ when loaded from this source or contained ☐ _____ gallons of material from another source which is described on MSD Hauled Waste Receipt # _____.

Driver's Name *(Print)* _____ Signature _____

C. MSD Hauled Waste Receiving Station

Daily Receipt Log Number: _____

TRANSPORTER:

I certify the waste described in Part A was tendered for discharge on _____ (DATE Mo/Day/Yr) at _____ (TIME).

Driver's Name *(Print)* _____ Signature _____

RECEIVING STATION ATTENDANT:

The transport vehicle described in Part B entered the receiving station on _____ (DATE Mo/Day/Yr) at _____ (TIME) and

the vehicle was **allowed** ☐ to discharge; or the vehicle was **not allowed** ☐ to discharge and exited the facility.

Reason for Rejection: _____

pH: _____ Observations: _____

Attendant's Name *(Print)* _____ Signature _____

Instructions:

In Part A completely describe the nature and source of the waste. Examples of types of wastes are: residential septic tank, commercial establishment septic tank, restaurant or institutional kitchen grease, landfill leachate, industrial process waste, etc. The owner or representative of the waste source prints their name and certifies the information in Part A by signing where indicated.

After completing and signing Part B, the waste transporter gives the *pink* copy to the waste source before leaving the premise.

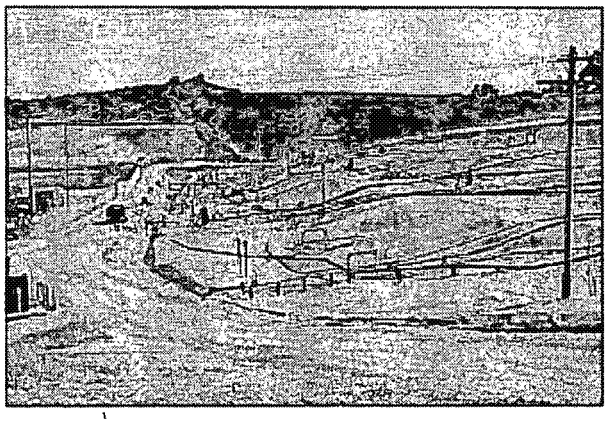
Part C is completed by the transporter and the Receiving Station attendant at the time the waste is tendered for discharge. The attendant records the date and time the transport vehicle enters the receiving station and indicates whether the waste is accepted or rejected. If the waste is rejected, the attendant records the reason for rejection. The signed *yellow* copy is retained by the transporter and the *white* copy is retained by the attendant.

HWR-S 5/01

ST. LOUIS POST-DISPATCH

LANDFILL

Republic Services to build firebreak at Bridgeton Landfill



SEPTEMBER 20, 2013 11:45 PM • BY JEFFREY TOMICH JTOMICH@POST-DISPATCH.COM 314-340-8320

The owner of a north St. Louis County landfill is declaring trench warfare on a waste fire that's been burning deep underground for almost three years to ensure it doesn't reach World War II-era radioactive waste buried nearby.

In a surprise move, Republic Services Inc. said it was moving ahead with plans to build a fire break, a trench filled with soil or clay, that will protect the adjacent West Lake Landfill Superfund site in case the underground fire continues to expand to the north.

There have been talks about building some type of physical barrier in the landfill since the fire intensified last year. And Republic Services submitted plans for a firebreak this summer under an agreement with Missouri Attorney General Chris Koster.

The legal agreement, which stems from a March lawsuit, doesn't require Republic to take action yet, given current conditions. In fact, the company insists current efforts to contain the fire — rows of gas "interceptor wells" and a cap across the southern half of the landfill — have been effective. But it decided to move forward anyway.

"Even though we don't think there is a driving technical need right now for the wall, we see a benefit of certainty," said Richard Callow, a landfill spokesman.

In addition to the barrier, the landfill will complete other projects outlined in contingency plans that were submitted to the state, including an expansion of the gas-collection system in the north half of the landfill and capping the remainder of the site to help further contain odors.

Though Republic knows its plans won't satisfy critics who will continue to push for removal of radioactive waste at West Lake, the company hopes it will bring at least some measure of relief to neighbors, fire officials and regulators, who had to acknowledge the possibility that the mass of hot waste would come in contact with nuclear material.

"Digging the trench sounds like a good first step to protect the communities around the landfill but does not solve the long-term risks," said Ed Smith of the Missouri Coalition for the Environment. But, he added, "full removal is the only option for long-term safety."

The company said its plans weren't a result of public pressure.

But after a year of constant deadlines and demands from regulators and politicians, the decision to go ahead is a way for the company to get out in front of a problem that's had landfill managers scrambling to play catch-up for more than a year.

MSD 027216

✓DM

Doug Mendoza

From: Darin Lewis
Sent: Saturday, September 21, 2013 4:05 PM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Sara Kammerer; Steve Grace
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 9/15/2013 to 9/21/2013.
9/15 – 172,500 gallons
9/15 – 172,500 gallons
9/17 – 172,500 gallons
9/18 – 172,500 gallons
9/19 – 172,500 gallons
9/20 – 172,500 gallons
9/21 – 172,500 gallons
Total = 1,207,500 gallons

PL

Doug Mendoza

From: Jason T. Edwards
Sent: Friday, September 20, 2013 6:59 AM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: Bridgeton Reading

Hi Doug,

The Bridgeton Landfill meter reading was 1,042,909 gal and 850 gal/hr. The reading was taken at 10:50 a.m. on Thursday, September 19 , 2013.

Thanks,
Jason

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, September 19, 2013 2:45 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good afternoon Doug,

We have looked into the pH concern and wanted to follow up to provide additional information. Based upon our records, only compliant leachate was discharged, but we see that some adjustments to the reporting would be appropriate to avoid this confusion in the future.

The summary table you referenced reports the laboratory data. While the laboratory reports include pH, the facility actually takes and relies on daily field pH readings. We would suggest that this field data be the controlling data for pH compliance purposes. This is especially important for the Missouri River WWTF discharge since the pH is adjusted in the 96,000 gallon tank, through periodic addition of caustic, in order to ensure that the pH is above 5.5. I have copied below the field readings for pH for the batch at issue, and the next batch (the first pH is from the leachate while in the 316,000 tank, the second from the leachate while in the 96,000 tank - higher due to the caustic that is added to that tank):

316-065	09/06/13	5.69	96-029	09/06/13	5.85
316-066	09/07/13	5.70	96-030	09/07/13	5.86

We will work to develop a procedure to report the field pH of the leachate so that it is easier for MSD to confirm the compliance of the discharge with the pH limit.

Please let me know if you have any questions or need any additional information.

Thank you,
Jessie

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Thursday, September 19, 2013 8:04 AM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good morning,

Doug Mendoza

From: Doug Mendoza
Sent: Thursday, September 19, 2013 2:51 PM
To: 'Merrigan, Jessie (LG)'; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Thank you Jessie. I had forgotten about the pH adjustments in the 96,000 tank. I remember now that those adjustments were started in response to this particular issue in the past.

Perhaps it would be easiest to simply include the discharge pH readings on the weekly summary sheet for discharge volumes.

Doug

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Thursday, September 19, 2013 2:45 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good afternoon Doug,

We have looked into the pH concern and wanted to follow up to provide additional information. Based upon our records, only compliant leachate was discharged, but we see that some adjustments to the reporting would be appropriate to avoid this confusion in the future.

The summary table you referenced reports the laboratory data. While the laboratory reports include pH, the facility actually takes and relies on daily field pH readings. We would suggest that this field data be the controlling data for pH compliance purposes. This is especially important for the Missouri River WWTF discharge since the pH is adjusted in the 96,000 gallon tank, through periodic addition of caustic, in order to ensure that the pH is above 5.5. I have copied below the field readings for pH for the batch at issue, and the next batch (the first pH is from the leachate while in the 316,000 tank, the second from the leachate while in the 96,000 tank - higher due to the caustic that is added to that tank):

316-065	09/06/13	5.69	96-029	09/06/13	5.85
316-066	09/07/13	5.70	96-030	09/07/13	5.86

We will work to develop a procedure to report the field pH of the leachate so that it is easier for MSD to confirm the compliance of the discharge with the pH limit.

Please let me know if you have any questions or need any additional information.

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, September 19, 2013 3:05 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report
Attachments: Weekly Volume Summary - Week 21 (9-8-13 through 9-14-13).pdf

Thanks, Doug. We do include that on the weekly summaries (see attached example – though apparently I was confused and we now call it the 97,000 gallon tank). I think we will likely also start adding it to the summary spreadsheet just to have one central database with all the accurate data, but we'll update you on that next week when we submit the report.

Thank you,
Jessie

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Thursday, September 19, 2013 2:51 PM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Thank you Jessie. I had forgotten about the pH adjustments in the 96,000 tank. I remember now that those adjustments were started in response to this particular issue in the past.

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Doug

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Thursday, September 19, 2013 2:45 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table			
Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, September 8, 2013	Batch 316-066	22,500	22,500
	Batch 316-067	127,500	127,500
Monday, September 9, 2013	Batch 316-067	22,500	22,500
	Batch 316-068	150,000	150,000
Tuesday, September 10, 2013	Batch 316-068	22,500	22,500
	Batch 316-069	150,000	150,000
Wednesday, September 11, 2013	Batch 316-069	22,500	22,500
	Batch 316-070	150,000	150,000
Thursday, September 12, 2013	Batch 306	22,500	22,500
	Batch 316-071	150,000	150,000
Friday, September 13, 2013	Batch 316-071	22,500	22,500
	Batch 316-072	150,000	150,000
Saturday, September 14, 2013	Batch 316-072	22,500	22,500
	Batch 306	45,000	45,000
	Batch 307	30,000	30,000
	Batch 316-073	60,000	60,000

Starting Date	***9/8/2013 7:00***
Ending Date	***9/15/2013 7:00***

MSD - Missouri River Tracking Table								
Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, September 8, 2013	Batch 316-067	19,502	9/8/2013 7:00	9/9/2013 7:00	24.0	840	812.6	6.11
Monday, September 9, 2013	Accumulated	15,321	9/9/2013 7:00	9/10/2013 7:00	24.0	840	638.4	5.79
Tuesday, September 10, 2013	Batch 316-069	19,601	9/10/2013 7:00	9/11/2013 7:00	24.0	840	816.7	5.74
Wednesday, September 11, 2013	Batch 316-070	756	9/11/2013 7:00	9/12/2013 7:00	24.0	840	31.5	5.74
Thursday, September 12, 2013	Accumulated	13,833	9/12/2013 7:00	9/13/2013 7:00	24.0	840	576.4	5.83
Friday, September 13, 2013	Accumulated	19,607	9/13/2013 7:00	9/14/2013 7:00	24.0	847	817.0	5.81
Saturday, September 14, 2013	Accumulated	19,502	9/14/2013 7:00	9/15/2013 7:00	24.0	840	812.6	5.79

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____ Title: _____ Date: _____

Doug Mendoza

From: Doug Mendoza
Sent: Thursday, September 19, 2013 3:11 PM
To: 'Merrigan, Jessie (LG)'; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

You are correct. Too much data to review!

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Thursday, September 19, 2013 3:05 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Thanks, Doug. We do include that on the weekly summaries (see attached example – though apparently I was confused and we now call it the 97,000 gallon tank). I think we will likely also start adding it to the summary spreadsheet just to have one central database with all the accurate data, but we'll update you on that next week when we submit the report.

Thank you,
Jessie

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Thursday, September 19, 2013 2:51 PM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Thank you Jessie. I had forgotten about the pH adjustments in the 96,000 tank. I remember now that those adjustments were started in response to this particular issue in the past.

Perhaps it would be easiest to simply include the discharge pH readings on the weekly summary sheet for discharge volumes.

Doug

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, September 19, 2013 8:56 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Thank you, Doug, we appreciate MSD rescinding the NOV. We will follow up on the pH issue noted below to confirm that discharge remains compliant with the pH limits.

Thank you,
Jessie

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Thursday, September 19, 2013 8:04 AM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good morning,

We have reviewed the data submitted for the weekly report. We note that while the pH for the batches is usually quite close to the 5.5 lower limit for pH, 9/6/13 batch 316-065's pH was measured by you at 5.4. Part of this batch was discharged on site to MSD. While we understand that the batch is transferred to the 96,000 gallon holding tank prior to final discharge, you cannot release batches that have pH measured below the discharge limit if they are going to be at least partially discharged on site to MSD.

Regarding the iron retesting and NOV, you may consider the September 4, 2013 NOV to be rescinded. No additional information or response is required from Bridgeton Landfill.

Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Manager

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, September 18, 2013 10:56 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson

Doug Mendoza

From: Doug Mendoza
Sent: Thursday, September 19, 2013 8:04 AM
To: 'Merrigan, Jessie (LG)'; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

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Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Manager

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, September 18, 2013 10:56 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site (which is operational again, sorry for any inconvenience during the downtime). The missing reports from last week (316-060: 09-01-2013; 316-059: 08-31-2013; and 316-057: 08-29-2013) were distributed by email earlier this week and have been added to the FTP site.

We have continued to review the BOD levels following the earlier anomalous spikes in BOD. We have now had 22 sampling events without a recurrence of the anomalous spikes, so continue to believe that the issue has been resolved.

We sincerely appreciate MSD retesting the iron sample that was the basis of the September 4, 2013, NOV. We are pleased that the retest was more consistent with the results that we have been seeing from ongoing analysis, and in compliance with the daily limit. We would appreciate if you could advise whether Bridgeton Landfill can consider the

MSD 027226

Table 1
General Parameters and Metals
December 2012 - September 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH
					NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-067	9/8/2013	Pace	Validated	60152680	28500	65300	718	536	30.9	5.5
316-066	9/7/2013	Pace	Validated	60152679	27800	79300	720	627	12.5	5.5
316-065	9/6/2013	Pace	Validated	60152644	23900	70600	695	607	7.4	5.4
316-064	9/5/2013	Pace	Validated	60152543	23100	65700	702	573	6.2	5.5
316-063	9/4/2013	Pace	Validated	60152398	31100	65100	673	621	6.8	5.6
316-062	9/3/2013	Pace	Validated	60152283	30300	54200	706	548	ND	5.5
316-061	9/2/2013	Pace	Validated	60152274	27000	49400	654	511	5.9	5.6
316-060	9/1/2013	Pace	Validated	60152237	28400	64300	716	731	21.4	5.6
316-059	8/31/2013	Pace	Validated	60152236	32500	63700	738	711	11.6	5.7
316-058	8/30/2013	Pace	Validated	60152198	38000	53800	695	691 *	12.6	5.7
316-057	8/29/2013	Pace	Validated	60152102	25200	60700	708	505 *	10.8	5.7

Table 1
General Parameters and Metals
December 2012 - September 2013
Bridgeton Landfill

					Solids, total suspended	Aluminum	Antimony	Arsenic	Beryllium	Cadmium
					NA	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-067	9/8/2013	Pace	Validated	60152680	6900	9.24	0.0523	0.87	ND	0.0168
316-066	9/7/2013	Pace	Validated	60152679	6540	9.94	0.0583	0.88	ND	0.0177
316-065	9/6/2013	Pace	Validated	60152644	4180	11.7	0.0530	0.891	ND	0.0189
316-064	9/5/2013	Pace	Validated	60152543	3000	11	0.0491	0.795	ND	0.0165
316-063	9/4/2013	Pace	Validated	60152398	3180	18	0.0550	0.887	ND	0.0212
316-062	9/3/2013	Pace	Validated	60152283	5560	13.8	0.0555	0.851	ND	0.0207
316-061	9/2/2013	Pace	Validated	60152274	6880	17.6 *	0.0490	0.809	ND	0.0196
316-060	9/1/2013	Pace	Validated	60152237	10600	20.7	0.0450	0.759	ND	0.0214
316-059	8/31/2013	Pace	Validated	60152236	11500	31.6	0.0460	0.767	ND	0.0264
316-058	8/30/2013	Pace	Validated	60152198	5680	12	0.0488	0.732	ND	0.0144
316-057	8/29/2013	Pace	Validated	60152102	6700	9.14	0.0543	0.729	ND	0.0172

Table 1
General Parameters and Metals
December 2012 - September 2013
Bridgeton Landfill

					Chromium	Cobalt	Copper	Iron	Lead	Mercury
					Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-067	9/8/2013	Pace	Validated	60152680	0.264	0.0552	0.0342	787	0.158	ND
316-066	9/7/2013	Pace	Validated	60152679	0.271	0.0564	0.0392	789	0.167	0.00029
316-065	9/6/2013	Pace	Validated	60152644	0.27	0.0597	0.0492	820	0.184	0.00042
316-064	9/5/2013	Pace	Validated	60152543	0.247	0.0537	0.0476	740	0.165	0.0039
316-063	9/4/2013	Pace	Validated	60152398	0.28	0.0592	0.0749	855	0.247	ND
316-062	9/3/2013	Pace	Validated	60152283	0.268	0.0576	0.0663	833	0.258	0.0011 *
316-061	9/2/2013	Pace	Validated	60152274	0.263	0.0591	0.0843	787	0.284	ND
316-060	9/1/2013	Pace	Validated	60152237	0.294	0.0635	0.0847	859	0.453	0.0012
316-059	8/31/2013	Pace	Validated	60152236	0.324	0.0712	0.151	853	0.618	0.0018
316-058	8/30/2013	Pace	Validated	60152198	0.26	0.0560	0.0394	691	0.203	0.0010
316-057	8/29/2013	Pace	Validated	60152102	0.274	0.0593	0.0244	868	0.217	ND

Table 1
General Parameters and Metals
December 2012 - September 2013
Bridgeton Landfill

					Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l
316-067	9/8/2013	Pace	Validated	60152680	**0.131**	ND	ND	ND	**16.3**
316-066	9/7/2013	Pace	Validated	60152679	**0.14**	ND	ND	ND	**16.1**
316-065	9/6/2013	Pace	Validated	60152644	**0.147**	ND	ND	ND	**17.4**
316-064	9/5/2013	Pace	Validated	60152543	**0.153**	ND	ND	ND	**15.6**
316-063	9/4/2013	Pace	Validated	60152398	**0.184**	ND	ND	ND	**15.3**
316-062	9/3/2013	Pace	Validated	60152283	**0.165**	ND	ND	ND	**15.5**
316-061	9/2/2013	Pace	Validated	60152274	**0.197**	ND	ND	ND	**14.7**
316-060	9/1/2013	Pace	Validated	60152237	**0.26**	ND	ND	ND	**16.6**
316-059	8/31/2013	Pace	Validated	60152236	**0.35**	ND	ND	ND	**17.6**
316-058	8/30/2013	Pace	Validated	60152198	**0.143**	ND	ND	ND	**13.6**
316-057	8/29/2013	Pace	Validated	60152102	**0.143**	ND	ND	ND	**13.7**

MSD 027230

Table 3
VOCs and SVOCs
December 2012 - September 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-067	9/8/2013	Pace	Validated	60152680	ND
316-066	9/7/2013	Pace	Validated	60152679	ND
316-065	9/6/2013	Pace	Validated	60152644	ND
316-064	9/5/2013	Pace	Validated	60152543	ND
316-063	9/4/2013	Pace	Validated	60152398	ND
316-062	9/3/2013	Pace	Validated	60152283	ND
316-061	9/2/2013	Pace	Validated	60152274	ND
316-060	9/1/2013	Pace	Validated	60152237	ND
316-059	8/31/2013	Pace	Validated	60152236	ND
316-058	8/30/2013	Pace	Validated	60152198	ND
316-057	8/29/2013	Pace	Validated	60152102	ND

9-19-13 DW

OB-306 MSD

Bridgeton Landfill

Fill Data

Fill Start Date	9/4/2013
Fill Start Time	09:00
Fill Stop Date	9/4/2013
Fill Stop Time	13:15
Process Battery	Tank Battery 1

Processing Data

Process Start Date	9/4/2013
Process Start Time	22:45
Process Stop Date	9/5/2013
Process Stop Time	07:30

Approval Data

Approval Details	NAL13026-640
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

55,000 gallon batch from forcemain diversion.

Sunday, September 15, 2013

OB-307 MSD

Bridgeton Landfill

Fill Data

Fill Start Date	9/10/2013
Fill Start Time	09:39
Fill Stop Date	9/10/2013
Fill Stop Time	18:18
Process Battery	Tank Battery 2

Processing Data

Process Start Date	9/10/2013
Process Start Time	23:06
Process Stop Date	9/11/2013
Process Stop Time	12:40

Approval Data

Approval Details	NAL13026-655
Test Results	Benzene 27 ppb
Reprocessed Batch	

Notes

Full batch - all 4 frac tanks filled.

Sunday, September 15, 2013

OB-316-066 Bridgeton Landfill

Fill Data

Fill Start Date	9/6/2013
Fill Start Time	18:05
Fill Stop Date	9/6/2013
Fill Stop Time	21:15
Process Battery	316 AST

Processing Data

Process Start Date	9/6/2013
Process Start Time	21:17
Process Stop Date	9/7/2013
Process Stop Time	05:42

Approval Data

Approval Details	NAL13026-643
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Fill level 17.9 feet.

Sunday, September 15, 2013

OB-316-067 Bridgeton Landfill

Fill Data

Fill Start Date	9/7/2013
Fill Start Time	18:18
Fill Stop Date	9/7/2013
Fill Stop Time	21:25
Process Battery	316 AST

Processing Data

Process Start Date	9/7/2013
Process Start Time	21:25
Process Stop Date	9/8/2013
Process Stop Time	06:10

Approval Data

Approval Details	NAL13026-645
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Filled on top of 4.8 feet.

Sunday, September 15, 2013

OB-316-068 Bridgeton Landfill

Fill Data

Fill Start Date	9/8/2013
Fill Start Time	18:12
Fill Stop Date	9/8/2013
Fill Stop Time	21:20
Process Battery	316 AST

Processing Data

Process Start Date	9/8/2013
Process Start Time	21:20
Process Stop Date	9/9/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL13026-647
Test Results	Benzene 32 ppb
Reprocessed Batch	

Notes

Sunday, September 15, 2013

OB-316-069 Bridgeton Landfill

Fill Data

Fill Start Date	9/9/2013
Fill Start Time	18:00
Fill Stop Date	9/9/2013
Fill Stop Time	21:45
Process Battery	316 AST

Processing Data

Process Start Date	9/9/2013
Process Start Time	20:30
Process Stop Date	9/10/2013
Process Stop Time	05:22

Approval Data

Approval Details	NAL13026-649
Test Results	Benzene 24 ppb
Reprocessed Batch	

Notes

Fill height 17.9 feet.

Sunday, September 15, 2013

OB-316-070 Bridgeton Landfill

Fill Data

Fill Start Date	9/10/2013
Fill Start Time	18:15
Fill Stop Date	9/10/2013
Fill Stop Time	22:05
Process Battery	316 AST

Processing Data

Process Start Date	9/10/2013
Process Start Time	22:05
Process Stop Date	9/11/2013
Process Stop Time	06:24

Approval Data

Approval Details	NAL13026-651
Test Results	Benzene 24 ppb
Reprocessed Batch	

Notes

Sunday, September 15, 2013

OB-316-071 Bridgeton Landfill

Fill Data

Fill Start Date	9/11/2013
Fill Start Time	16:30
Fill Stop Date	9/11/2013
Fill Stop Time	19:45
Process Battery	316 AST

Processing Data

Process Start Date	9/11/2013
Process Start Time	18:00
Process Stop Date	9/12/2013
Process Stop Time	06:00

Approval Data

Approval Details	NAL13026-653
Test Results	Benzene 42 ppb
Reprocessed Batch	

Notes

Filled on top of 5.1 feet.

Sunday, September 15, 2013

OB-316-072 Bridgeton Landfill

Fill Data

Fill Start Date	9/12/2013
Fill Start Time	17:30
Fill Stop Date	9/12/2013
Fill Stop Time	21:03
Process Battery	316 AST

Processing Data

Process Start Date	9/12/2013
Process Start Time	19:20
Process Stop Date	9/13/2013
Process Stop Time	05:30

Approval Data

Approval Details	NAL13026-656
Test Results	Benzene 40 ppb
Reprocessed Batch	

Notes

Sunday, September 15, 2013

OB-316-073 Bridgeton Landfill

Fill Data

Fill Start Date	9/13/2013
Fill Start Time	18:25
Fill Stop Date	9/13/2013
Fill Stop Time	21:05
Process Battery	316 AST

Processing Data

Process Start Date	9/13/2013
Process Start Time	21:07
Process Stop Date	9/14/2013
Process Stop Time	11:00

Approval Data

Approval Details	NAL13026-660
Test Results	Benzene 68 ppb
Reprocessed Batch	1st benzene = 140 ppb

Notes

Blower operated for 2 hrs 9/13/13, then another 3 hrs 9/14/13.

Sunday, September 15, 2013

9-19-13

MSD 027241

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table			
Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, September 8, 2013	Batch 316-066	22,500	22,500
	Batch 316-067	127,500	127,500
Monday, September 9, 2013	Batch 316-067	22,500	22,500
	Batch 316-068	150,000	150,000
Tuesday, September 10, 2013	Batch 316-068	22,500	22,500
	Batch 316-069	150,000	150,000
Wednesday, September 11, 2013	Batch 316-069	22,500	22,500
	Batch 316-070	150,000	150,000
Thursday, September 12, 2013	Batch 306	22,500	22,500
	Batch 316-071	150,000	150,000
Friday, September 13, 2013	Batch 316-071	22,500	22,500
	Batch 316-072	150,000	150,000
Saturday, September 14, 2013	Batch 316-072	22,500	22,500
	Batch 306	45,000	45,000
	Batch 307	30,000	30,000
	Batch 316-073	60,000	60,000

Starting Date	*9/8/2013 7:00*
Ending Date	*9/15/2013 7:00*

MSD - Missouri River Tracking Table								
Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, September 8, 2013	Batch 316-067	19,502	9/8/2013 7:00	9/9/2013 7:00	24.0	840	812.6	6.11
Monday, September 9, 2013	Accumulated	15,321	9/9/2013 7:00	9/10/2013 7:00	24.0	840	638.4	5.79
Tuesday, September 10, 2013	Batch 316-069	19,601	9/10/2013 7:00	9/11/2013 7:00	24.0	840	816.7	5.74
Wednesday, September 11, 2013	Batch 316-070	756	9/11/2013 7:00	9/12/2013 7:00	24.0	840	31.5	5.74
Thursday, September 12, 2013	Accumulated	13,833	9/12/2013 7:00	9/13/2013 7:00	24.0	840	576.4	5.83
Friday, September 13, 2013	Accumulated	19,607	9/13/2013 7:00	9/14/2013 7:00	24.0	847	817.0	5.81
Saturday, September 14, 2013	Accumulated	19,502	9/14/2013 7:00	9/15/2013 7:00	24.0	840	812.6	5.79

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Kyle Sehe Title: Environmental Specialist Date: 9/17/13

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	9/9/2013 7:00:00 AM	9/8/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	880,740	861,239	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/9/13

MSD Daily Flow Reading, ending 9-09-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/10/2013 7:00:00 AM	9/9/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	896,061	880,740	15,321

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 15,321 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/10/13

MSD Daily Flow Reading, ending 9-10-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/11/2013 7:00:00 AM	9/10/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	915,663	896,061	19,601

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,601 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

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Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/11/13

MSD Daily Flow Reading, ending 9-11-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/12/2013 7:00:00 AM	9/11/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	916,419	915,663	756

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 756 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/12/13

MSD Daily Flow Reading, ending 9-12-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/13/2013 7:00:00 AM	9/12/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	930,252	916,419	13,833

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 13,833 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental specialist *Date:* 9/13/13

MSD Daily Flow Reading, ending 9-13-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/14/2013 7:00:00 AM	9/13/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	949,860	930,252	19,607

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,607 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/14/13

MSD Daily Flow Reading, ending 9-14-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/15/2013 7:00:00 AM	9/14/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	969,362	949,860	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/15/13

MSD Daily Flow Reading, ending 9-15-2013

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, September 18, 2013 10:56 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site (which is operational again, sorry for any inconvenience during the downtime). The missing reports from last week (316-060: 09-01-2013; 316-059: 08-31-2013; and 316-057: 08-29-2013) were distributed by email earlier this week and have been added to the FTP site.

We have continued to review the BOD levels following the earlier anomalous spikes in BOD. We have now had 22 sampling events without a recurrence of the anomalous spikes, so continue to believe that the issue has been resolved.

We sincerely appreciate MSD retesting the iron sample that was the basis of the September 4, 2013, NOV. We are pleased that the retest was more consistent with the results that we have been seeing from ongoing analysis, and in compliance with the daily limit. We would appreciate if you could advise whether Bridgeton Landfill can consider the September 4, 2013, NOV rescinded. Please let us know if there is any additional information or response you would like to receive from the facility.

Thank you for continuing to work with us on volume limits as the facility team manages the somewhat variable daily flows at the facility. If there is any information you need as you continue your operational assessment please let us know and we are always appreciative of any feedback to ensure we are managing daily operations to best accommodate your plants.

Please let us know if you have any questions.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

Any U.S. federal tax advice contained in this communication (including any attachments or enclosures) was not intended or written by the author to be used, and cannot be used, for the purpose of (1) avoiding penalties that may be imposed on a taxpayer or (2) promoting, marketing, or recommending to another party any transaction or other matter addressed herein.

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, September 18, 2013 8:13 AM
To: Doug Mendoza
Cc: Bret A. Berthold; Brian G. Gibson; Brian Power; Bryan Sehie; Catherine Politte; Christopher J. Bulmahn; Craig Almanza; Darin Lewis; Doug Mendoza; Ed Galbraith; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; Michele Boussad; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; Steve Smith; Todd Heller; Tom Boehm; Beck, Bill (LG)
Subject: Re: Bridgeton Landfill discharge - reanalysis of iron from MSD's 8/16/13 sample

Doug, thank you. We really appreciate MSD working with us on investigating the earlier finding.

On Sep 18, 2013, at 8:08 AM, "Doug Mendoza" <DMENDOZA@stlmsd.com> wrote:

Jessie et al,

On 8/16/13, MSD sampled Bridgeton Landfill's discharge into the MSD pump station. As you were informed via 9/4/13 notice, the analysis for iron showed a concentration of 2180 mg/L for 355 lb discharged. This exceeded the 270 lb temporary limit that Bridgeton Landfill has been granted.

Per your subsequent request, we have had the laboratory reanalyze the sample. The chemist first verified that all quality checks had been achieved for the original analysis. During reanalysis, the chemist noted that the sample's particulate matter and high foam level when mixed both make for difficult homogeneity and analysis. Both the original test and the reanalysis required 1:1000 dilution to fall within the calibration curve. The reanalysis returned an iron concentration of 1219 mg/L, or about 198 lb. This is well below the 270 lb limit. Therefore, due to the high variability and subsequent uncertainty regarding the actual iron level, we will not consider the discharge to be a violation of the iron limit.

Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Manager

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This e-mail (including any attachments) may contain material that (1) is confidential and for the sole use of the intended recipient, and (2) may be protected by the attorney-client privilege, attorney work product doctrine or other legal rules. Any review, reliance or distribution by others or forwarding without express permission is strictly prohibited. If you are not the intended recipient, please contact the sender and delete all copies.

Doug Mendoza

From: Doug Mendoza
Sent: Wednesday, September 18, 2013 8:08 AM
To: Bret A. Berthold; Brian G. Gibson; Brian Power; Bryan Sehie; Catherine Politte; Christopher J. Bulmahn; Craig Almanza; Darin Lewis; Doug Mendoza; Ed Galbraith; Jessica Merrigan; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; Michele Boussad; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; Steve Smith; Todd Heller; Tom Boehm; William Beck
Subject: Bridgeton Landfill discharge - reanalysis of iron from MSD's 8/16/13 sample

Jessie et al,

On 8/16/13, MSD sampled Bridgeton Landfill's discharge into the MSD pump station. As you were informed via 9/4/13 notice, the analysis for iron showed a concentration of 2180 mg/L for 355 lb discharged. This exceeded the 270 lb temporary limit that Bridgeton Landfill has been granted.

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Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Manager

Doug Mendoza Bridgeton Landfill

From: Doug Mendoza
Sent: Wednesday, September 18, 2013 7:24 AM
To: 'Dan Feezor'
Cc: Brian Power (bpower@republicservices.com); egalbraith@barr.com; Bill Abernathy; Merrigan, Jessie (LG) (JMerrigan@LATHROPGAGE.COM); Sehie, Bryan; Darin Lewis; Jason T. Edwards; Dave Kupke
Subject: RE: 175,000 gallon at Bissell

Dan,

I'm sorry, but we have already released everyone from the extra afternoon coverage past 3:00 pm. Staff schedules are already set for next week.

However, the weekend coverage workers will already be on site. I met with each of them and asked if they could stay the extra 1 ½ hours (3:00 to 4:30 pm) that they had originally been scheduled to do. They all can. So you can bring in the full 23 loads (172,500 gal.) on Sat. 9/21, Sun. 9/22, Sat. 9/28, and Sun. 9/29.

Please let us know if you wish to bring in the extra volume on those weekend days.

In addition, if you already know that you will want to bring in 175,000 GPD for the week of 9/30 – 10/6, please let us know. If you are not yet certain, you may let us know on Monday, Sept. 30.

---Doug

From: Dan Feezor [mailto:dfeezor@feezorengineering.com]
Sent: Tuesday, September 17, 2013 4:44 PM
To: Doug Mendoza
Cc: Brian Power (bpower@republicservices.com); egalbraith@barr.com; Bill Abernathy; Merrigan, Jessie (LG) (JMerrigan@LATHROPGAGE.COM); Sehie, Bryan
Subject: 175,000 gallon at Bissell

Doug,
Over the last couple of days we have noticed a volume increase, as our buffer tank farm is filling. Is there any way we can stay at 175,000 gallons per day next week? If not, we would like to go back up 175,000 gallons as soon as possible.

Thank you,

Daniel R. Feezor, P.E.
Residuals Management Team Member
Feezor Engineering, Inc.
406 East Walnut
Chatham, IL 62692
(217) 836-8842

Dm

Doug Mendoza

Bridgeton Landfill

From: Dan Feezor <dfeezor@feezorengineering.com>
Sent: Wednesday, September 18, 2013 7:31 AM
To: Doug Mendoza
Cc: Brian Power (bpower@republicservices.com); egalbraith@barr.com; Bill Abernathy; Merrigan, Jessie (LG) (JMerrigan@LATHROPGAGE.COM); Sehie, Bryan; Darin Lewis; Jason T. Edwards; Dave Kupke
Subject: RE: 175,000 gallon at Bissell

Thank you Doug – that will help immensely. We will indeed extend the 172,500 loading through 9/22 and the following weekend. We will look at our volumes through this weekend and let you know on Monday September 23rd if we think we need the week of 9/30/-10/6. The volumes seem to be quite variable right now.

Thanks again,
Dan Feezor

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Wednesday, September 18, 2013 7:24 AM
To: Dan Feezor
Cc: Brian Power (bpower@republicservices.com); egalbraith@barr.com; Bill Abernathy; Merrigan, Jessie (LG) (JMerrigan@LATHROPGAGE.COM); Sehie, Bryan; Darin Lewis; Jason T. Edwards; Dave Kupke
Subject: RE: 175,000 gallon at Bissell

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Sent: Tuesday, September 17, 2013 4:44 PM
To: Doug Mendoza
Cc: Brian Power (bpower@republicservices.com); egalbraith@barr.com; Bill Abernathy; Merrigan, Jessie (LG) (JMerrigan@LATHROPGAGE.COM); Sehie, Bryan
Subject: 175,000 gallon at Bissell

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TO: **Chris Verplancke, Finance Department**
Becky Bartholomew, Finance Department
Mary Wimsatt, Finance Department

FROM: **Darin Lewis**

DATE: **September 17, 2013**

SUBJECT: **BRIDGETON LANDFILL LLC**
WASTEWATER USER CHARGE BILLING
ACCOUNT NUMBER 0039145-8

Pursuant to the MSD Industrial Wastewater Discharge Permit for the above referenced facility, please bill this facility for the following volume for the indicated billing period:

VOLUME
On-Site Discharge

409,024 gallons with surcharge applied = $40,617.92

VOLUME
Hauled Waste Discharge

4,402,500 gallons X $0.08/Gal = $352,200.00

Department of Environmental Compliance (REG) labor fee is $402.56. Use Revenue Code "INFO" and utility type Q. Budget code is 1101-08050-51011 so revenue will be credited back to Department of Environmental Complience budget.

Department of Environmental Compliance (OT) labor fee is $1,642.39. Use Revenue Code "INFO" and utility type Q. Budget code is 1101-08050-51020 so revenue will be credited back to Department of Environmental Compliance budget.

Total Bill = $394,862.87

The volume was obtained from the customer's on-site discharge self-monitoring report and hauled waste total truck capacities.
SOURCE OF WASTE: SP 801 Commingled landfill leachate and landfill gas collection system condensate
BILLING PERIOD: August 1, 2013 through August 31, 2013
Other applicable wastewater user charges, as per Ordinance 13402, should be included in this bill.
Please call me at 436-8716 if you have any questions.

bv

ec: Brian Gibson
Doug Mendoza
Laura Joiner
Cathy Politte

FILE: IU, Bridgeton Landfill LLC, 1003803000

Dr

Doug Mendoza

Bridgeton Landfill

From: Dan Feezor <dfeezor@feezorengineering.com>
Sent: Tuesday, September 17, 2013 4:44 PM
To: Doug Mendoza
Cc: Brian Power (bpower@republicservices.com); egalbraith@barr.com; Bill Abernathy; Merrigan, Jessie (LG) (JMerrigan@LATHROPGAGE.COM); Sehie, Bryan
Subject: 175,000 gallon at Bissell

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Thank you,

Daniel R. Feezor, P.E.
Residuals Management Team Member
Feezor Engineering, Inc.
406 East Walnut
Chatham, IL 62692
(217) 836-8842

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Tuesday, September 17, 2013 2:23 PM
To: Doug Mendoza
Subject: RE: Request to increase daily allowable discharge from Bridgeton Landfill to MSD's Bissell Point hauled waste station - need to gather additional data first

Oh, sorry – I was confused based upon the report I got from yesterday's meeting - the danger of multitasking.

We understand the need to have sufficient data. Your cooperation and assistance so far has been a huge help! I'll regroup with the team to see what follow up we need to do.

Thanks,
jessie

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Tuesday, September 17, 2013 2:21 PM
To: Merrigan, Jessie
Subject: RE: Request to increase daily allowable discharge from Bridgeton Landfill to MSD's Bissell Point hauled waste station - need to gather additional data first

Jessie,

While I appreciate the enthusiasm, I need to make sure you read that the request was denied, at least for now. We need more data before we can consider it.

Doug

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Tuesday, September 17, 2013 1:18 PM
To: Doug Mendoza
Subject: RE: Request to increase daily allowable discharge from Bridgeton Landfill to MSD's Bissell Point hauled waste station - need to gather additional data first

Thank you, Doug!

Any U.S. federal tax advice contained in this communication (including any attachments or enclosures) was not intended or written by the author to be used, and cannot be used, for the purpose of (1) avoiding penalties that may be imposed on a taxpayer or (2) promoting, marketing, or recommending to another party any transaction or other matter addressed herein.

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From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Tuesday, September 17, 2013 1:16 PM
To: Bret A. Berthold; Brian G. Gibson; Brian Power; Bryan Sehie; Catherine Politte; Christopher J. Bulmahn; Craig Almanza; Darin Lewis; Doug Mendoza; Ed Galbraith; Merrigan, Jessie; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; Michele Boussad; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; Steve Smith; Todd Heller; Tom Boehm; Beck, Bill
Subject: Request to increase daily allowable discharge from Bridgeton Landfill to MSD's Bissell Point hauled waste station - need to gather additional data first

During the September 17, 2013 technical issues meeting, Bridgeton Landfill representatives asked that MSD give approval for the landfill to truck up to 200,000 GPD to MSD's Bissell Point hauled waste station. We have checked with the treatment plant's personnel, and must deny the requested increase for now.

An increase from 150,000 GPD to 175,000 GPD was approved to begin September 3, 3013. However, Bridgeton Landfill did not need to begin the increased volume immediately, and did not begin hauling 175,000 (actually 172,500 GPD) until September 9, 2013. We currently have only one week of plant operations at the higher volume, which is too short a period to determine its effect on plant operations. In addition, the plant currently is experiencing odor issues. We will need to see how the odor issues trend, especially after the volume reverts to 150,000 GPD on September 21, 2013.

We understand that the current daily generation of leachate has been lower than it was earlier this summer. In addition, The landfill now has an additional local disposal source in the American Bottoms Treatment Plant at Sauget, IL.

Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Manager

Doug Mendoza

From: Doug Mendoza
Sent: Tuesday, September 17, 2013 1:16 PM
To: Bret A. Berthold; Brian G. Gibson; Brian Power; Bryan Sehie; Catherine Politte; Christopher J. Bulmahn; Craig Almanza; Darin Lewis; Doug Mendoza; Ed Galbraith; Jessica Merrigan; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; Michele Boussad; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; Steve Smith; Todd Heller; Tom Boehm; William Beck
Subject: Request to increase daily allowable discharge from Bridgeton Landfill to MSD's Bissell Point hauled waste station - need to gather additional data first

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We understand that the current daily generation of leachate has been lower than it was earlier this summer. In addition, The landfill now has an additional local disposal source in the American Bottoms Treatment Plant at Sauget, IL.

Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Manager

Doug Mendoza

From: Ed G <galbraith1812@gmail.com>
Sent: Tuesday, September 17, 2013 11:04 AM
To: Doug Mendoza; jmerrigan@lathropgage.com; dfeezor@feezorengineering.com; bsehie@republicservices.com; bpower@republicservices.com
Subject: Barr FTP Site Down
Attachments: Pace Lab Report 60152198_08-30-13.pdf

All,

Because of a fiber cable line being cut, our ftp site and email are down. I do not know for how long.

Doug attached is the analytical report for 316-058.

All, for tomorrow's update, Doug has asked that we send the Batch Reports and the signed Weekly Flow/Daily Volume Reports in the email along with Jessie's update. Dan and Bryan, just follow the same process to prepare those, and include Jessie on the distribution, as usual.

We will then notify everyone when the ftp is up and running.

I apologize for the inconvenience. Please call me if you need to contact me

573-638-5024 (office)
573-418-5562 (cell)

Ed Galbraith

Doug Mendoza

From: Doug Mendoza
Sent: Tuesday, September 17, 2013 7:59 AM
To: Kelly Caddy
Cc: Ed Galbraith
Subject: RE: Bridgeton Landfill Weekly Report

Kelly & Ed,

Thank you for the data. I notice that the TSS has jumped up to three or more times that of previous batches. I would like this to be addressed in the weekly report that is due tomorrow.

In addition, I didn't realize until I was reviewing the data (for the monthly billing) that 316-058 is not in the group. I was going to check the ftp site to see if the data is there, but cannot access the site. Do you know what the problem is? The error message we receive is, "A connection with the server could not be established."

All our other Internet access is working properly.

---Doug

From: Kelly Caddy [mailto:KCaddy@barr.com]
Sent: Monday, September 16, 2013 9:52 AM
To: Doug Mendoza
Cc: Ed Galbraith
Subject: FW: Bridgeton Landfill Weekly Report

Doug,
Please see the attached three reports that contain the data for 316-050, 316-059, 316-057 for reference.

Thank you,

Kelly Caddy

BA Environmental Policy
Data Management Specialist
Minneapolis office: 952.832.2776
kcaddy@barr.com
www.barr.com

resourceful. naturally. BARR

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Thursday, September 12, 2013 1:17 PM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace;

Doug Mendoza

From: Kelly Caddy <KCaddy@barr.com>
Sent: Monday, September 16, 2013 9:52 AM
To: Doug Mendoza
Cc: Ed Galbraith
Subject: FW: Bridgeton Landfill Weekly Report
Attachments: Pace Lab Report 60152237_09-01-13.pdf; Pace Lab Report 60152236_08-31-13.pdf; Pace Lab Report 60152102_08-29-13.pdf

Doug,
Please see the attached three reports that contain the data for 316-050, 316-059, 316-057 for reference.

Thank you,

Kelly Caddy

BA Environmental Policy
Data Management Specialist
Minneapolis office: 952.832.2776
kcaddy@barr.com
www.barr.com

resourceful. naturally. BARR

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Thursday, September 12, 2013 1:17 PM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Jessie,

Please provide the data for the three batches listed below as soon as they are available. You can then also update the ftp site with this data as part of the next weekly submittal.

Doug

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, September 11, 2013 8:14 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson

Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. The number of new data reports will be fewer than normal this week because instrument repairs at Pace have delayed reporting. Three data reports that would otherwise have been included are:

316-060	09-01-2013
316-059	08-31-2013
316-057	08-29-2013

We can provide those to you via email once we get final results, however we will not update the ftp site or data reports until next week. Please let us know how you would like to proceed.

As you know, there were anomalous spikes in BOD in three recent samples (Samples 316-038, 316-040, 316-045). Fortunately for the past 11 samples, BOD levels and BOD:COD ratios appear to have normalized. We believe this is an indication that Pace has successfully corrected is sample preparation procedure to avoid this problem in the future. We have resampled the three samples and can discuss the results with you at our next meeting on Monday. Because the resampling is outside of hold times, we do not intend to post the reports or include them in our data updates.

Also, the facility has temporarily ceased discharge to the Missouri River Treatment Facility as of this morning. The protocol proposed for resuming discharge in July, after investigation of the benzene occurrences, included recirculation for at least 6 hours in the 96,000 gallon tank. The pump in that tank failed yesterday. Since new liquid added to that tank will not have recirculated for the minimum time, we have ceased discharge until the pump can be replaced or we can propose a suitable alternative.

Please let us know if you have any questions.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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DW
CB
YCB—

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September 13, 2013

Mr. Chris Bulmahn
Environmental Engineer
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, MO 63147-2913

Re: Metropolitan St. Louis Sewer District – Administrative Compliance Order
Action Items #5 and #6
Bridgeton Landfill, LLC.
Discharge Permit No. 0511559802-2

Dear Mr. Bulmahn:

On behalf of the Bridgeton Landfill, in accordance with the Metropolitan St. Louis Sewer District (MSD) Administrative Compliance Order (AO), which was signed by legal representatives of MSD and the Bridgeton Landfill, LLC and entered effect on October 29, 2012, respectfully submits this progress report as outlined in the AO, Action Items' #5 and #6.

As required per Action Items #5 and #6, the Bridgeton Landfill shall submit a schedule, for MSD approval, of actions for the design, installation, and operation of the procedures and pretreatment options identified in AO Finding #8 which states that the Bridgeton Landfill is in the process of investigation for the implementation of the following pretreatment options in which to eliminate the occurrence of future prohibited discharges at Leachate Outfall 008:

a.) Installation and operation of a supplemental "enclosed" flare, as well as a supplemental "candlestick" utility flare within the landfill's gas collection and control system;

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b.) Design and operation of air monitoring/moving engineering controls at the landfill's outfall to the MSD sewer system within the Westlake Pump Station, and;

c.) Installation and operation of a foam suppressing agent. The following table outlines current progress and planned actions to be taken at the Bridgeton Landfill in regard to the aforementioned items.

Finding No.	**Proposed Option**	**Complete (Yes/No)**	**Completion Date**
8a(1)	Installation and Operation of Additional Enclosed Flare	Yes	2-Oct-12
8a(2)	Installation and Operation of Supplemental Candlestick Flare	Yes	18-Jul-12
8b	Design and Operation of Air Monitoring/Moving Engineering Controls within Westlake Pump Station	Yes	6-Jun-13
8c	Installation and Operation of a Foam Suppression Agent	No	Installation Suspended

The Bridgeton Landfill completed the construction and testing phases of the supplemental candlestick flare on July 18, 2012 (Finding 8a(2)). This flare was subsequently replaced with a larger 3,500 scfm candlestick flare that became operational in January 2013. The supplement candlestick flare was brought back on-line in June 2013.

The second enclosed flare was brought on-line October 2, 2012. A fourth flare with a capacity of 2,500 scfm was brought on-line June 6, 2013 to allow additional capacity as needed. The current combined flow of the four operational flares is 13,000 scfm.

The two existing 3,500 scfm enclosed flares are slated to be replaced with two 4,000 scfm candlestick flares by October 1, 2013. This will increase the available flow by 1,000 scfm for a combined flow of the four candlestick flares to 14, 000 scfm which will further allow the ability to improve landfill gas collection and odors at the facility and the surrounding environment. Similar to the existing flares, the new candlestick flares will be operated and maintained under a site-specific program which is designed to enable landfill personnel to minimize downtime and provide peak system performance efficiency.

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In a letter from MSD dated December 4, 2012, it was declared that the Bridgeton Landfill was no longer required to construct and operate a foam suppression system at the facility unless future foaming incidents occur. The Bridgeton Landfill will continue to monitor the Westlake Pump Station as well as the Leachate Tank System for indicators of foaming.

The design and development of the air quality engineering controls to be constructed and operated at the Westlake Pump Station (Finding 8b), were completed on December 20, 2012. Prior to finalization of the system design, meetings regarding the development of a plan of action for the preparation and construction of these air quality engineering controls were held at the MSD office on August 21, 2012, and September 24, 2012 between; MSD Environmental Compliance and Operations representatives and Bridgeton Landfill personnel. Additionally, series of on-site meetings were held at the Westlake Pump Station, involving the aforementioned parties, to determine the design of the system and to secure an incoming power supply.

On June 6, 2013 the air monitoring/moving engineering controls within the Westlake pump station became fully operational. Between the dates of June 6-16, 2013 a baseline evaluation of the 4-gas levels within the pump station wet well was conducted using the newly installed monitor. The purpose of this evaluation was to monitor the in-well conditions during discharge operations from the landfill. On June 17, 2013, following the baseline evaluation, the system's drum scrubber was activated. Bryan Sehie of Bridgeton Landfill coordinated this effort with Vince Stollhans of MSD, and both have reviewed MSD 4-gas monitoing data recorded by the system. Since operation of the drum scrubber the 4-gas meter levels within the pump station have decreased as confirmed by the MSD data maintained by Vince Stollhans.

In mid-August leachate discharge below 20,000 gallons per day was resumed after the implementation of upgrades to the system and new conveyance piping from the 316,000 gallon pre-treatment tank. In August the Bridgeton Landfill discharged on approximately 19,500 gallons per day. Since resuming discharge flows less than 20,000 gallons per day the 4-gas meter levels have continued to show a reduced level during drum scrubber operation than what was reported during the baseline study, proving the overall effectiveness of the air moving system. Elevated levels of hydrogen sulfide of approximately 10 ppm continue to be observed, however these levels were present at the outfall location without discharge from the landfill, as observed in the baseline study. Carbon monoxide levels have decreased, with average concentrations of

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200 ppm. The drum scrubber system has lowered the concentrations on average from 500 ppm observed when not in operation to 200 ppm when fully operational.

The facility has submitted the Leachate Pre-Treatment System Plan on August 30, 2013 and received comments from MSD on September 9, 2013. It is anticipated with the installation and operation of the pre-treatment system will further reduce the carbon monoxide levels observed at Outfall 008.

We will continue to provide ongoing updates on leachate and the pretreatment system to comply with the AO agreement as well as MSD ordinances. If there are any questions please contact Bryan Sehie with Bridgeton Landfill at 314-744-8190 or myself at 573-289-3379.

Sincerely,
Weaver Boos Consultants

Michele A Clark

Michele Clark
Senior Project Director

Cc: Bryan Sehie, Bridgeton Landfill, LLC.

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Doug Mendoza

From: Doug Mendoza
Sent: Monday, September 16, 2013 12:58 PM
To: Bret A. Berthold; Brian G. Gibson; Brian Power; Bryan Sehie; Catherine Politte; Christopher J. Bulmahn; Craig Almanza; Darin Lewis; Doug Mendoza; Ed Galbraith; Jessica Merrigan; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; Michele Boussad; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; Steve Smith; Todd Heller; Tom Boehm; William Beck
Subject: Correction to composite sample type in August 16, 2013 violation notice for iron from Bridgeton Landfill

Bryan (Sehie),

I want to give you a quick follow up to your question regarding the type of composite sample that was collected for the MSD sampling event on August 16, 2013. You had received a violation notice from MSD for an iron level of 355 lb/day discharged during that event, exceeding the 270 lb/day iron limit that had been granted. The notice referenced a 4 hour composite as the sample type.

The composite type listed in the notice was a typographical error. **The sample was in fact a 24 hour composite. Collection began at 09:40 am on 08/15/2013, and ended at 09:28 am on 08/16/2013.**

Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Manager

Doug Mendoza

From: Darin Lewis
Sent: Monday, September 16, 2013 10:52 AM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Sara Kammerer; Steve Grace
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 9/08/2013 to 9/14/2013.
9/08 – 150,000 gallons
9/09 – 172,500 gallons
9/10 – 172,500 gallons
9/11 – 172,500 gallons
9/12 – 172,500 gallons
9/13 – 172,500 gallons
9/14 – 157,500 gallons
Total = 1,170,000 gallons

Doug Mendoza

BRIDGETON LANDFILL

From: Ed Galbraith <EGalbraith@barr.com>
Sent: Monday, September 16, 2013 8:25 AM
To: John Lodderhose; Nora C. Estopare; Doug Mendoza; Rob G Daly
Cc: Merrigan, Jessie (LG); bsehie@republicservices.com; Power, Brian <BPower@republicservices.com> (BPower@republicservices.com); Dan Feezor (dfeezor@feezorengineering.com) (dfeezor@feezorengineering.com); Smith, Steve (ssmith10@republicservices.com)
Subject: Air Sampling Memo for August 8 sampling event
Attachments: Air Sampling Memo 2013_0809.pdf; EA Lab Report 0713-181_08-09-13.pdf

As requested at our last meeting, attached is a memo describing the August 8 air sampling event at the lift station. Please let me know if you have any questions.

Ed Galbraith

Senior Environmental Scientist
Jefferson City office: 573.638.5024
cell: 573.418.5562
egalbraith@barr.com
www.barr.com

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Technical Memorandum

To: Brian Power, Bridgeton Landfill, LLC.
From: Rick Campbell, Barr Engineering
Subject: Air Sampling Summary
Date: September 11, 2013
Project: 25871014
c: Jessie Merrigan, Lathrop and Gage

Purpose:
On August 9, 2013, air sampling was conducted at the Metropolitan Sewer District lift station for the Bridgeton Landfill. The purpose of the sampling was to closely replicate the benzene testing that was completed by Stantec Consulting Services (Stantec) and summarized in their report "*INDUSTRIAL HYGIENE EVALUATION OF VAPORS AND GASES ASSOCIATED WITH DISCHARGE OF TREATED LEACHATE FROM THE BRIDGETON LANDFILL, LLC TO THE METROPOLITAN SEWER DISTRICT LIFT STATION*".

Following completion of the Stantec sampling and evaluation it was discovered that some leachate discharged through the pump station had benzene levels above that authorized for discharge. Discharge was ceased following this discovery and not resumed until the benzene levels were confirmed to be within the acceptable range. This follow up air testing event was intended to evaluate the benzene levels in exposure settings at the lift station in order to assess worker exposure potentially resulting from discharge of compliant leachate.

Sampling Description:
Similar to the sampling conducted by Stantec, the Barr sampling was conducted using two 3.0 liter summa canisters. These canisters were equipped with flow control samplers calibrated to collect a six (6) hour sample. The canisters and samplers were supplied by Enthalpy Analytical, Inc.

The canisters were hung in the lift station by cordage that was secured on the surface. The canisters were suspended approximately 6 feet above the surface of the liquid material in the lift station and slightly above the in-falls. The canisters were allowed to sample in the lift station with the door open for approximately 5.5 hours, when the sampler pressure was reduced to approximately 3 inches of water. The samplers were then removed from the lift station and sealed. The canisters were returned to Enthalpy Analytical after the sampling was completed. Enthalpy used Environmental Protection Agency Method TO-15 to the benzene concentration.

Attached to this memorandum are the sampling summary and the analytical analysis from Enthalpy Analytical. As is listed in the analytical report, the benzene levels for both samples were significantly below the worker exposure thresholds.

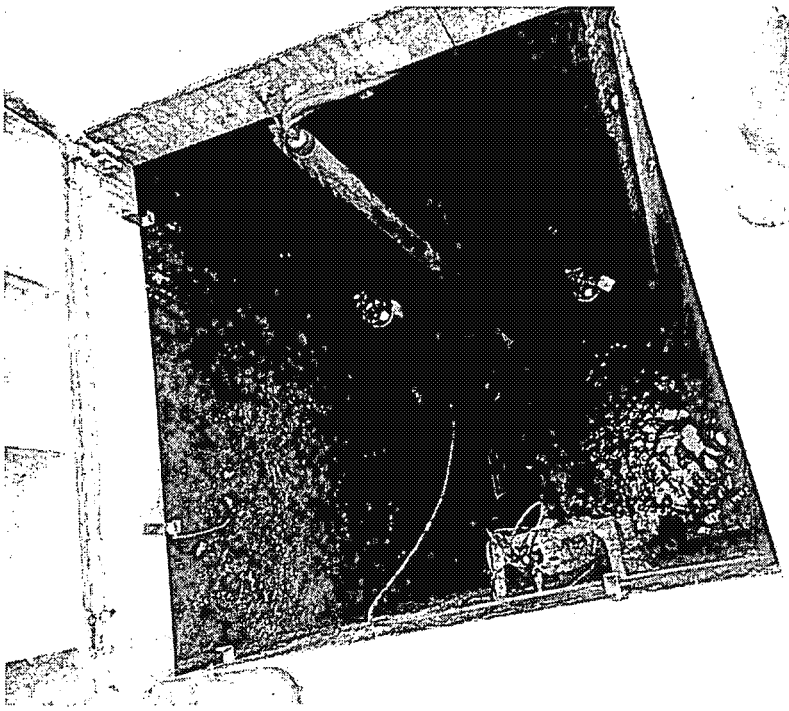
SAMPLING LOG

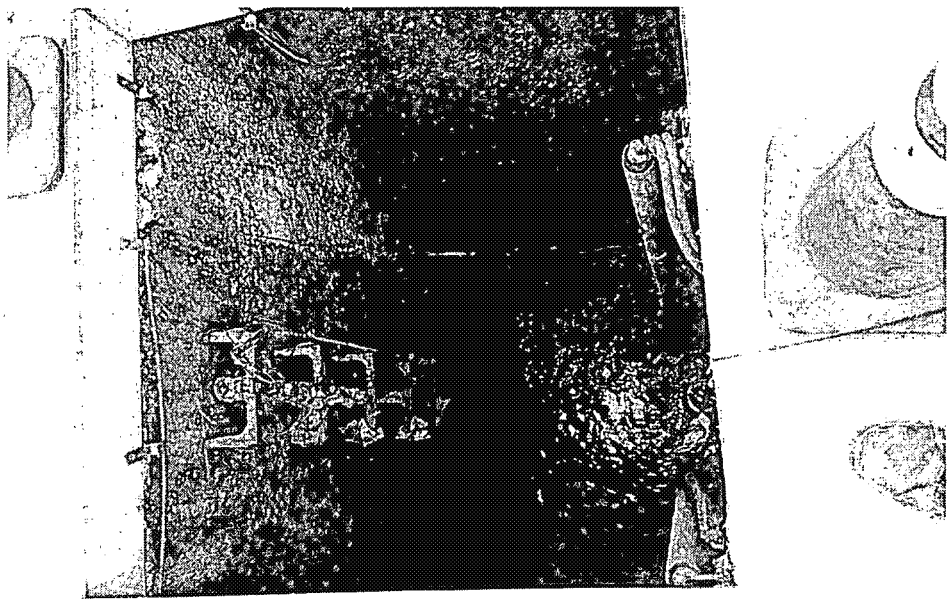
SAMPLE ID:	LT1301601
QA/QC SAMPLES:	Duplicate samples taken during the episode.
SAMPLE DATE/TIME:	August 9, 2013. 9:30 through 3:00
SAMPLE COLLECTED BY:	Rick Campbell
MEDIA/SOURCE/LOCATION:	MSD Lift Station
SAMPLE TYPE/COLLECTION:	Ambient air in lift station collected via summa canister.
SAMPLE DESCRIPTION:	Ambient air.
EQUIPMENT:	Summa canister.
SAMPLE PACKAGING/SHIPPING INFORMATION:	Canisters were imediately sealed with brass caps and packaged. The package was shipped via Fedex to Enthalpy Analytical.

SAMPLE ID:	LT1301599
QA/QC SAMPLES:	Duplicate samples taken during the episode.
SAMPLE DATE/TIME:	August 9, 2013. 9:30 through 3:00
SAMPLE COLLECTED BY:	Rick Campbell
MEDIA/SOURCE/LOCATION:	MSD Lift Station
SAMPLE TYPE/COLLECTION:	Ambient air in lift station collected via summa canister.
SAMPLE DESCRIPTION:	Ambient air.
EQUIPMENT:	Summa canister.
SAMPLE PACKAGING/SHIPPING INFORMATION:	Canisters were imediately sealed with brass caps and packaged. The package was shipped via Fedex to Enthalpy Analytical.

MSD Lift Station Sampling Photographs

August 9, 2013





Barr Engineering Company - Jefferson City

1001 Diamond Ridge, Suite 1100
Jefferson City, MO 65109

Bridgeton Landfill: Bridgeton, MO

Client 25871014 EBG1 001

Analytical Report (0713-181)

EPA Method TO-15

Benzene

Enthalpy Analytical, Inc.
Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713-4385

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 36 pages.

Michael Steven Schapira

QA Review Performed by: Michael Steven Schapira

Report Issued: 8/16/13

Summary of Results

Company	Barr Engineering
Analyst	Company
Parameters	DBS

Client #	25871014 EBG1 001
Job #	0713-181
# Samples	2 canisters

Compound	Sample ID / Concentrations (ppbv)	
	L1301601	***L1301599***
Benzene	22.3	26.2

Results

Sample Name	: L1301601
Sample Info	: 0713-181, 500mL, Can #3898
Data File	: L1302600.D
Dilution	: 1
Pressurization Factor	: 1.966
Acquisition Date	: 2013-08-15 04:27:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	MDL (PPBV)	Concentration (PPBV)	MDL (ug/m3)	Concentration (ug/m3)	Flag *
Benzene	0.393	22.3	1.26	71.2	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
1,4-Difluorobenzene (IS)	2,825,591	14.5	10.5	PASS

(ND) = Not Detected
*** (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration**
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name	: L1301599
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302601.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 05:20:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	MDL (PPBV)	Concentration (PPBV)	MDL (ug/m3)	Concentration (ug/m3)	Flag *
Benzene	0.369	26.2	1.18	83.7	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
1,4-Difluorobenzene (IS)	2,964,665	14.5	10.5	PASS

(ND) = Not Detected
*** (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration**
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Lab QC

Sample Name	: L1301599 LD
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302602.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 06:07:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	MDL (PPBV)	Concentration (PPBV)	MDL (ug/m3)	Concentration (ug/m3)	% Diff	Flag *
Benzene	0.369	26.6	1.18	85.0	1.5	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
1,4-Difluorobenzene (IS)	2,925,389	14.5	10.5	PASS

(ND) = Not Detected
*** (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration**
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name	: Humid Blank
Sample Info	: 500mL, Can #10893
Data File	: L1302599.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 18:46:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	MDL (PPBV)	Concentration (PPBV)	MDL (ug/m3)	Concentration (ug/m3)	Flag *
Benzene	0.200	ND	0.639	ND	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
1,4-Difluorobenzene (IS)	2,751,088	14.5	10.5	PASS

(ND) = Not Detected
*** (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration**
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name	: 5ppbv TO15 LCS
Sample Info	: 125mL load Can #1423
Data File	: L1302598.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 17:59:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	MDL (PPBV)	Concentration (PPBV)	MDL (ug/m3)	Concentration (ug/m3)	Flag *
Benzene	0.200	4.33	0.639	13.8	m

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
1,4-Difluorobenzene (IS)	2,876,943	14.5	10.5	PASS

(ND) = Not Detected
*** (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration**
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name	: 5ppbv TO15 LCS
Sample Info	: 125mL load Can #1423
Data File	: L1302598.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 17:59:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Benzene	780,075	4.33	5.10	84.8	PASS

Company	Barr Engineering Co. - Jefferson City
Analyst	DBS
Parameters	Canister Pressurizations

Client #	25871014 EBG1-001: Bridgeton Landfill
Job #	0713-181
# Samples	2 (3L) Canisters

					Pre-sample			Post-sample			Final		
Sample ID	Can #	Press. Factor	Canister Size	Sample Vol (L) at STP	Temp Field (°F)	P_{bar} Field (mmHg)	Gauge Field (mmHg)	Temp Lab/Field (°F)	P_{bar} Lab/Field (mmHg)	Gauge Lab/Field (mmHg)	Temp Lab (°F)	P_{bar} Lab (mmHg)	Gauge Lab (mmHg)
L1301601	3898	1.966	3.00	2.77	73.5	756	-756	69.5	760	-57	69.5	760	622
L1301599	4015	1.845	3.00	2.93	73.5	756	-756	69.5	760	-15	69.5	760	614

The canister pressurization factors are calculated using the following formula:

$$\frac{\dfrac{GaugeLab + PbarLab}{TempLab + 460}}{\dfrac{GaugeLab\ /\ Field + PbarLab\ /\ Field}{TempLab\ /\ Field + 460} - \dfrac{GaugeField + PbarField}{TempField + 460}}$$

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	Barr Engineering Company
Analyst	TDD
Parameters	EPA Method TO-15

Client #	25871014 EBG1 001
Job #	0713-181
# Samples	2 (3L) Canisters

Custody

Chester Burnett received the samples on 8/13/13 after being relinquished by Barr Engineering Company - Jefferson City. The samples were received at ambient temperature and in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for Benzene using the analytical procedures in EPA Method TO-15, *Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*. The samples were analyzed following the procedures in Section 10.0, Sample Analysis.

Both samples were received near ambient pressure and were pressurized with nitrogen prior to sample analysis. The canister pressurization factor was determined and is presented on the Canister Pressurization page in the Results section of this report.

The Hewlett Packard Model 5890, Gas Chromatograph ("Lurch" S/N 2750A15233) was equipped with a 5971A Mass Selective Detector and a Restek Rxi-624 Sil MS, 60 m x 0.32 mm x 1.8 µm (S/N 1035491) capillary column for these analyses. All samples and standards were introduced directly to the analyzer using an Entech 7100A Preconcentrator.

Calibration

All initial calibration % RSD and continuing calibration %D acceptance criteria were met for this analysis. A calibration summary report was included in the calibration section of this report.

Chromatographic Conditions

The acquisition method MM624-L.m has not been included in the Calibration Curve section of this report, but is available at the client's request.

QC Notes

The ICV met % Difference acceptance criteria.

All internal standard area responses and retention time criteria were met.

Sample ***L130159-Can #4015*** was analyzed in duplicate and met the QC criterion of less than 25% Difference.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes (continued)	The method blank associated with this sample analysis did not contain benzene at a concentration greater than the MDL. The sample was analyzed within the 30-day holding time required by the method.
Reporting Notes	These analyses met the requirements of the TNI Standard. Any deviations from the requirements of the reference method and/or the TNI Standard have been previously noted in this narrative. The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- Any analysis which referrs to the method as ***"Type"*** represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as "EPA Method 16-Type" because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.
- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.

General Reporting Notes

(continued)

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

Sample Custody

ENTHALPY analytical, inc.

Chain of Custody Record

Page 1 of 1

Special Handling:
- ☐ Standard Turn Around Time (10 business days)
- ■ Rush Turn Around Time – Date Needed 8/16/2013
- All TATs Subject to Approval by Enthalpy Analytical, Inc.
- All Bag/Can Samples Disposed of 1 Month from Receipt.
- All Other Samples Disposed of 4 Months from Receipt.

Client Name: Barr Engineering
Project Manager: Ed Galbraith
Report To: Ed Galbraith

Project Number: 25871014 EBG1 001
Site Name: Bridgeton Landfill
Location: Bridgeton, MO

PO#:
Telephone#: 573-638-5024
Email: egailbraith@barr.com

For spiked or duplicate samples: please provide sample volumes for recovery calculations.
For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H2SO4 2=NaOH 3= A 4= X
X=XAD C=Charcoal SG=Silica Gel
G=Grab C=Composite Q=Quality Control

CCB 8-13-13 Can #'s

	Sample ID	Date	Time	Sample Volume	Type	Matrix	# of VOA Vials	# of Glass	# of Plastic	# of Bags	# of Canisters	# of Tubes	# Other	TO-15 Benzene	Notes:
3898	L1301601	8/9/2013	14:51	3L	Control	Air					1			1	
4015	L1301599	8/9/2013	14:54	3L	Control	Air					1			1	

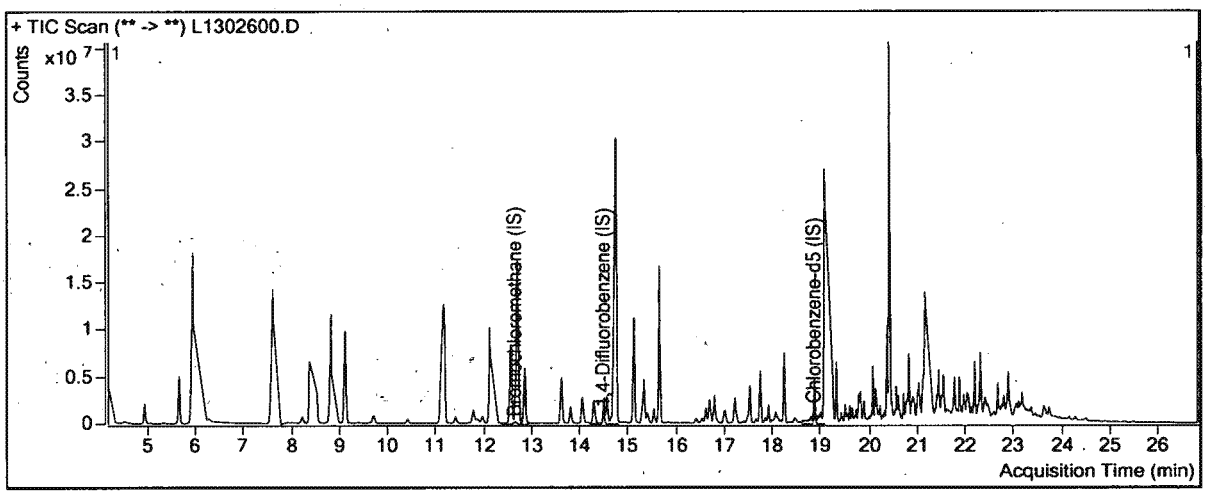
Relinquished By	Date	Received By	Date	Time	Sample Condition Upon Receipt
[illegible]	8/9/13				☐ Iced ☒ Ambient ☐ °C
		Chester Burnett	8-13-13	4:35P	☐ Iced ☒ Ambient ☐ °C
					☐ Iced ☐ Ambient ☐ °C

800-1 Capitola Drive • Durham, NC 27713 • (919) 850-4392 • FAX (919) 850-9012 • www.enthalpy.com

MSD 027292

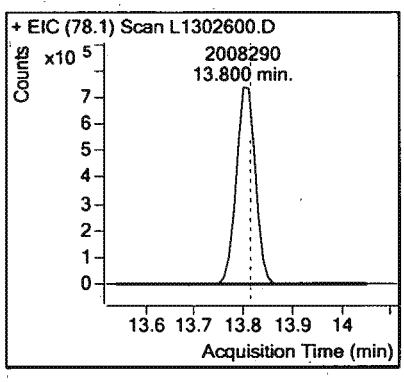
Sample Chromatograms

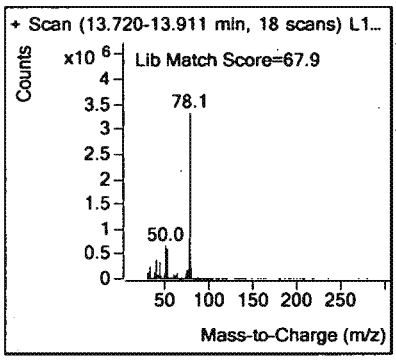
Sample Name	: L1301601
Sample Info	: 0713-181, 500mL, Can #3898
Data File	: L1302600.D
Dilution	: 1
Pressurization Factor	: 1.966
Acquisition Date	: 2013-08-15 04:27:00
Instrument Method	: MM624-L
Matrix	: AIR



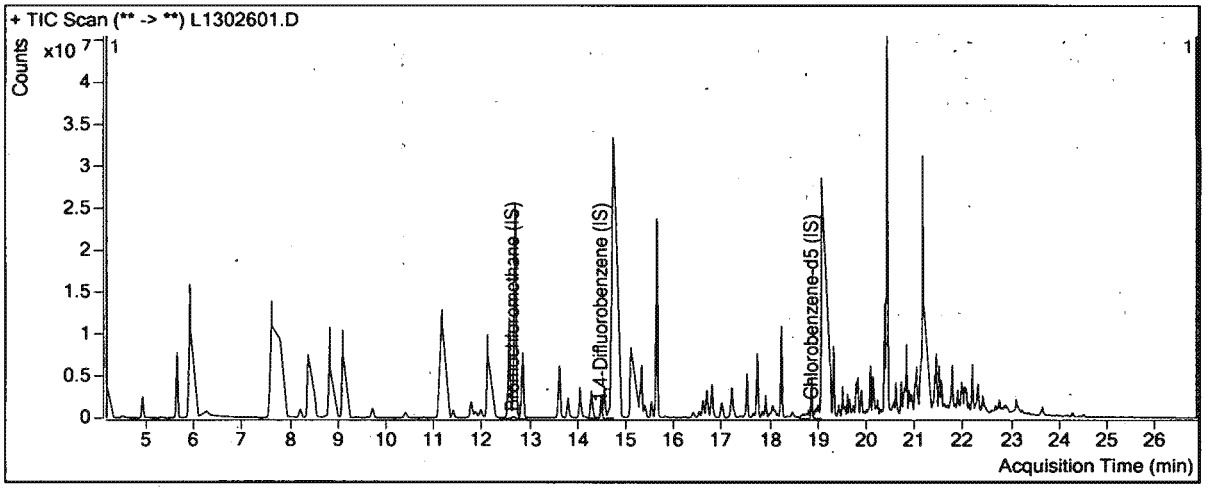
Sample Name	: L1301601
Sample Info	: 0713-181, 500mL, Can #3898
Data File	: L1302600.D
Dilution	: 1
Pressurization Factor	: 1.966
Acquisition Date	: 2013-08-15 04:27:00
Instrument Method	: MM624-L
Matrix	: AIR

Benzene



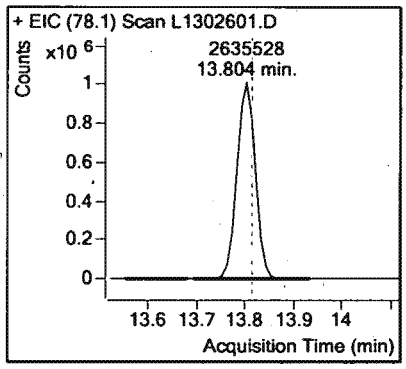


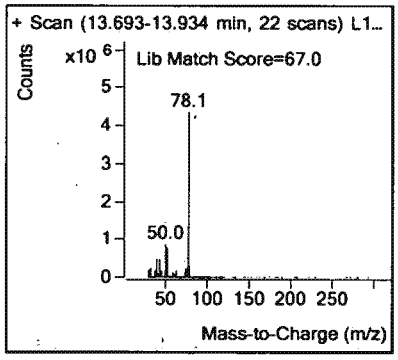
Sample Name	: L1301599
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302601.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 05:20:00
Instrument Method	: MM624-L
Matrix	: AIR



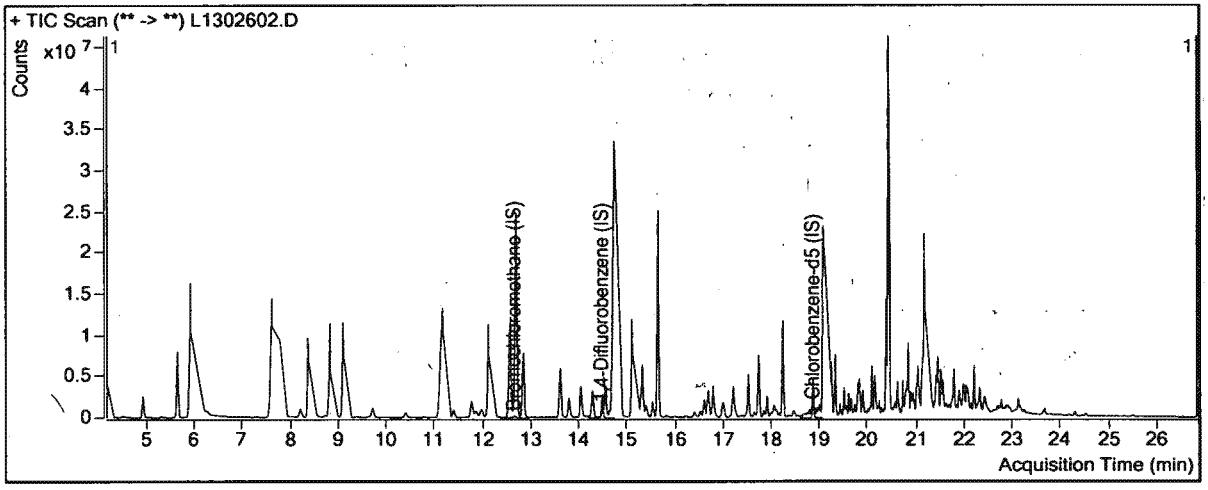
Sample Name	: L1301599
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302601.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 05:20:00
Instrument Method	: MM624-L
Matrix	: AIR

Benzene



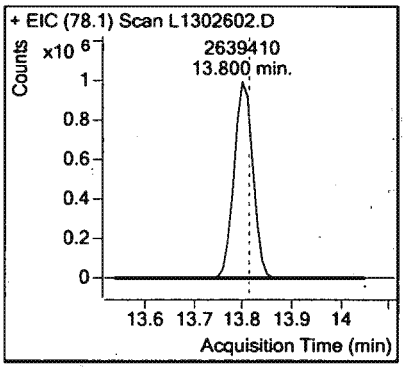


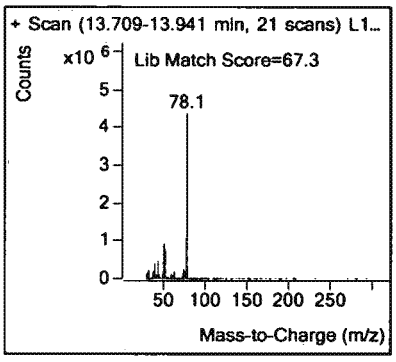
Sample Name	: L1301599 LD
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302602.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 06:07:00
Instrument Method	: MM624-L
Matrix	: AIR



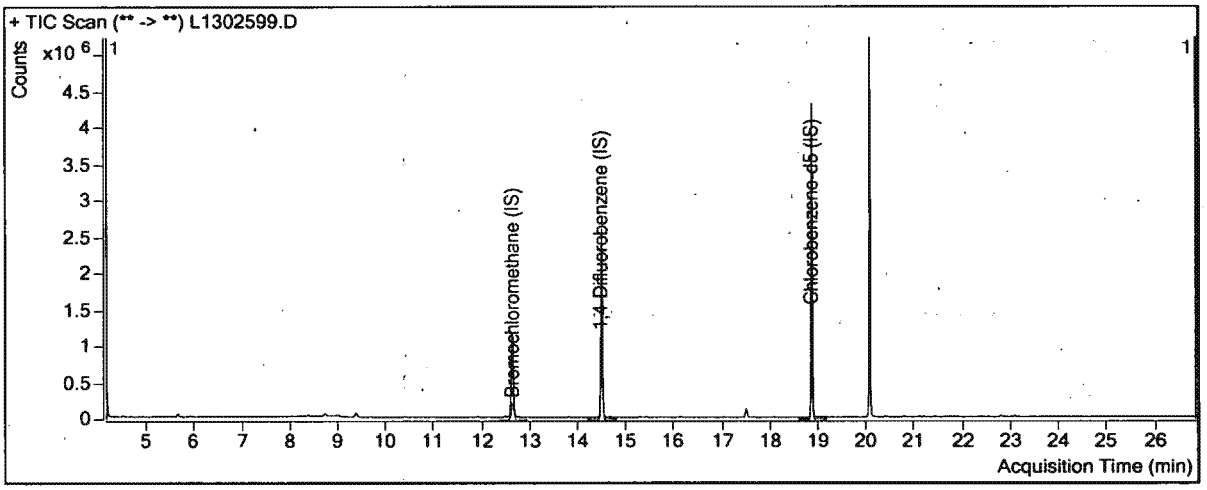
Sample Name	: L1301599 LD
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302602.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 06:07:00
Instrument Method	: MM624-L
Matrix	: AIR

Benzene

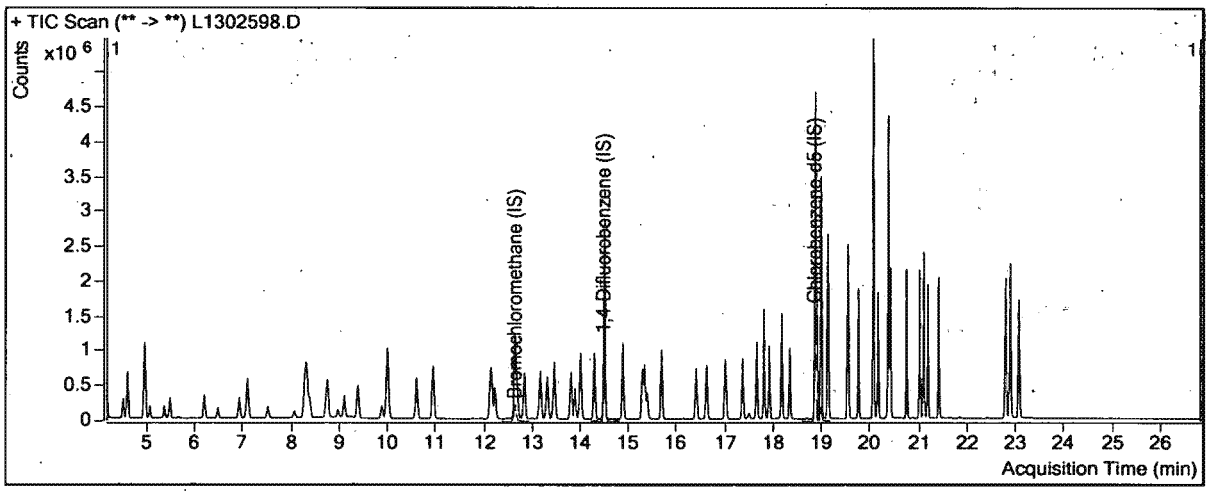




Sample Name	: Humid Blank
Sample Info	: 500mL, Can #10893
Data File	: L1302599.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 18:46:00
Instrument Method	: MM624-L
Matrix	: AIR

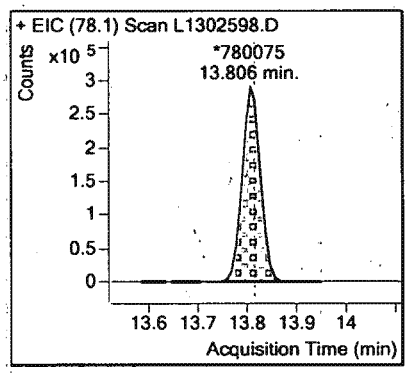


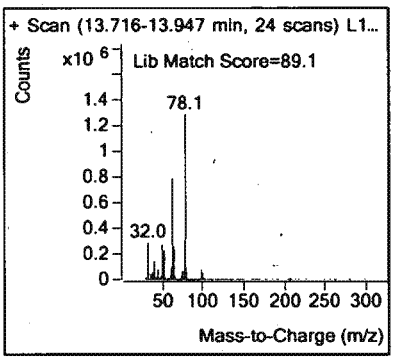
Sample Name	: 5ppbv TO15 LCS
Sample Info	: 125mL load Can #1423
Data File	: L1302598.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 17:59:00
Instrument Method	: MM624-L
Matrix	: AIR



Sample Name	: 5ppbv TO15 LCS
Sample Info	: 125mL load Can #1423
Data File	: L1302598.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 17:59:00
Instrument Method	: MM624-L
Matrix	: AIR

Benzene





Manual Int. "NI" (DBS)

Calibration Curve Chromatograms

Calibration Sequence L081413A
Calibration Date 8/15/2013

Compound	Type	RT	Average RRT	Average RF	%RSD	Flag
Bromochloromethane (IS)	ISTD	12.66				
Propylene	Target	4.51	0.356	0.688	20.8	PASS
Freon 12 (CCl2F2)	Target	4.61	0.364	3.35	15.1	PASS
Freon 114 (C2Cl2F4)	Target	4.96	0.392	3.64	16.4	PASS
Chloromethane	Target	5.08	0.401	0.856	16.1	PASS
Chloroethene (Vinyl chloride)	Target	5.38	0.425	0.909	15.5	PASS
1,3-Butadiene	Target	5.49	0.434	0.798	15.9	PASS
Bromomethane	Target	6.21	0.491	1.30	17.6	PASS
Chloroethane	Target	6.49	0.513	0.490	16.8	PASS
Bromoethene (Vinyl bromide)	Target	6.94	0.548	1.19	15.6	PASS
Freon 11 (CCl3F)	Target	7.11	0.561	2.76	15.3	PASS
Ethanol	Target	7.53	0.595	0.289	19.8	PASS
Acrolein	Target	8.08	0.638	0.364	31.3	FAIL
Freon 113 (C2Cl3F3)	Target	8.33	0.658	1.43	28.0	PASS
1,1-Dichloroethene	Target	8.29	0.655	1.72	21.1	PASS
Acetone	Target	8.39	0.663	1.96	21.0	PASS
Carbon disulfide	Target	8.78	0.693	2.84	26.5	PASS
Isopropyl alcohol	Target	8.75	0.691	1.81	23.8	PASS
Allyl chloride (3-chloropropene)	Target	9.12	0.720	0.409	24.9	PASS
Acetonitrile	Target	8.99	0.710	0.665	28.0	PASS
Methylene chloride	Target	9.40	0.743	1.63	26.8	PASS
trans-1,2-Dichloroethene	Target	10.0	0.791	1.70	16.5	PASS
Methyl tert-butyl ether	Target	10.0	0.792	2.87	15.8	PASS
Acrylonitrile	Target	9.89	0.782	0.775	15.6	PASS
Hexane	Target	10.6	0.839	1.34	17.0	PASS
1,1-Dichloroethane	Target	11.0	0.866	2.01	17.2	PASS
Vinyl acetate	Target	11.0	0.866	3.33	13.7	PASS
cis-1,2-Dichloroethylene	Target	12.2	0.961	1.65	13.1	PASS
Methyl ethyl ketone (2-Butanone)	Target	12.1	0.959	0.468	15.3	PASS
Ethyl acetate	Target	12.2	0.967	0.373	13.0	PASS
Chloroform	Target	12.9	1.02	2.58	15.5	PASS
Tetrahydrofuran	Target	12.7	1.00	0.464	15.9	PASS
1,1,1-Trichloroethane	Target	13.2	1.04	2.53	14.4	PASS
Cyclohexane	Target	13.3	1.05	1.45	16.7	PASS
Carbon tetrachloride	Target	13.5	1.06	2.70	14.1	PASS
1,4-Difluorobenzene (IS)	ISTD	14.5				
Benzene	Target	13.8	0.952	0.659	17.3	PASS
2,2,4-trimethylpentane	Target	14.0	0.966	0.984	17.3	PASS
1,2-Dichloroethane	Target	13.9	0.958	0.407	14.8	PASS
Heptane	Target	14.3	0.986	0.189	19.0	PASS
Trichloroethene	Target	14.9	1.03	0.420	16.6	PASS
1,2-Dichloropropane	Target	15.3	1.05	0.242	16.8	PASS
Methyl methacrylate	Target	15.3	1.06	0.253	17.2	PASS
1,4-Dioxane	Target	15.4	1.06	0.181	16.9	PASS
Bromodichloromethane	Target	15.7	1.08	0.667	15.9	PASS

Calibration Sequence L081413A
Calibration Date 8/15/2013

Compound	Type	RT	Average RRT	Average RF	%RSD	Flag
cis-1,3-Dichloropropene	Target	16.4	1.13	0.415	15.1	PASS
Methyl isobutyl ketone	Target	16.6	1.15	0.670	15.5	PASS
Chlorobenzene-d5 (IS)	ISTD	18.9				
Toluene	Target	17.0	0.901	0.858	16.3	PASS
trans-1,3-Dichloropropene	Target	17.4	0.920	0.479	15.4	PASS
1,1,2-Trichloroethane	Target	17.7	0.936	0.364	16.9	PASS
Tetrachloroethene	Target	17.8	0.944	0.538	17.2	PASS
2-Hexanone (Methyl butyl ketone)	Target	17.9	0.949	0.693	15.8	PASS
Dibromochloromethane	Target	18.2	0.963	0.840	15.6	PASS
1,2-Dibromoethane	Target	18.4	0.972	0.730	16.2	PASS
Chlorobenzene	Target	18.9	1.00	0.828	16.4	PASS
Ethylbenzene	Target	19.0	1.01	1.15	18.7	PASS
1,1,1,2-Tetrachloroethane	Target	19.0	1.01	0.494	19.1	PASS
m-/p-Xylenes	Target	19.1	1.01	0.921	16.6	PASS
o-Xylene	Target	19.5	1.04	0.925	18.3	PASS
Styrene	Target	19.6	1.04	0.811	18.1	PASS
Bromoform	Target	19.8	1.05	0.846	16.6	PASS
1,1,2,2-Tetrachloroethane	Target	20.2	1.07	0.809	17.5	PASS
4-Ethyltoluene	Target	20.4	1.08	1.38	16.3	PASS
2-Chlorotoluene	Target	20.4	1.08	1.03	18.3	PASS
1,3,5-Trimethylbenzene	Target	20.5	1.08	1.15	19.1	PASS
1,2,4-Trimethylbenzene	Target	20.8	1.10	1.13	16.4	PASS
1,3-Dichlorobenzene	Target	21.1	1.12	0.877	16.4	PASS
1,4-Dichlorobenzene	Target	21.1	1.12	0.931	16.2	PASS
Benzyl chloride	Target	21.2	1.12	1.18	14.8	PASS
1,2-Dichlorobenzene	Target	21.5	1.14	0.857	15.8	PASS
1,2,4-Trichlorobenzene	Target	22.8	1.21	0.765	17.2	PASS
Hexachlorobutadiene	Target	22.9	1.22	0.474	19.0	PASS
Naphthalene	Target	23.1	1.23	1.68	16.3	PASS

Sample Name	: 5ppbv TO15 ICV/LCS
Sample Info	: 125mL load Can #1423
Data File	: L1302598.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 17:59:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Propylene	187,126	4.43	5.40	82.1	PASS
Freon 12 (CCl2F2)	817,861	3.98	4.75	83.8	PASS
Freon 114 (C2Cl2F4)	906,733	4.06	4.80	84.6	PASS
Chloromethane	210,771	4.02	4.80	83.7	PASS
Chloroethene (Vinyl chloride)	228,327	4.10	4.85	84.5	PASS
1,3-Butadiene	206,638	4.22	5.10	82.8	PASS
Bromomethane	332,753	4.17	4.90	85.2	PASS
Chloroethane	122,136	4.06	4.80	84.6	PASS
Bromoethene (Vinyl bromide)	312,981	4.29	5.10	84.0	PASS
Freon 11 (CCl3F)	729,532	4.31	5.05	85.4	PASS
Ethanol	88,408	4.99	5.50	90.7	PASS
Acrolein	89,514	4.01	5.00	80.2	PASS
Freon 113 (C2Cl3F3)	362,630	4.12	5.15	80.0	PASS
1,1-Dichloroethene	452,520	4.28	5.25	81.6	PASS
Acetone	532,995	4.44	5.25	84.5	PASS
Carbon disulfide	742,828	4.26	5.25	81.1	PASS
Isopropyl alcohol	509,261	4.58	5.50	83.3	PASS
Allyl chloride (3-chloropropene)	101,009	4.03	5.40	74.5	PASS
Acetonitrile	150,822	3.70	4.80	77.0	PASS
Methylene chloride	426,623	4.27	5.15	82.9	PASS
trans-1,2-Dichloroethene	455,626	4.36	5.10	85.5	PASS
Methyl tert-butyl ether	771,581	4.39	5.15	85.3	PASS
Acrylonitrile	199,530	4.20	5.05	83.2	PASS
Hexane	370,286	4.51	5.20	86.8	PASS
1,1-Dichloroethane	540,211	4.39	5.10	86.1	PASS
Vinyl acetate	931,944	4.56	5.25	86.9	PASS
cis-1,2-Dichloroethylene	444,128	4.39	5.20	84.4	PASS
Methyl ethyl ketone (2-Butanone)	131,727	4.59	5.20	88.3	PASS
Ethyl acetate	102,655	4.49	5.15	87.2	PASS
Chloroform	687,038	4.34	5.15	84.3	PASS
Tetrahydrofuran	123,835	4.35	5.05	86.2	PASS
1,1,1-Trichloroethane	663,725	4.28	5.05	84.7	PASS
Cyclohexane	387,242	4.34	5.15	84.4	PASS
Carbon tetrachloride	700,810	4.23	5.00	84.7	PASS
Benzene	780,075	4.33	5.10	84.8	PASS
2,2,4-trimethylpentane	1,159,076	4.31	5.15	83.7	PASS
1,2-Dichloroethane	469,623	4.22	5.05	83.6	PASS
Heptane	227,981	4.41	5.20	84.9	PASS
Trichloroethene	487,707	4.24	5.05	84.0	PASS
1,2-Dichloropropane	288,385	4.36	5.10	85.6	PASS

Sample Name	: 5ppbv TO15 ICV/LCS
Sample Info	: 125mL load Can #1423
Data File	: L1302598.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 17:59:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Methyl methacrylate	296,930	4.29	5.05	84.9	PASS
1,4-Dioxane	219,873	4.45	5.05	88.1	PASS
Bromodichloromethane	789,696	4.33	5.05	85.7	PASS
cis-1,3-Dichloropropene	513,116	4.52	5.25	86.1	PASS
Methyl isobutyl ketone	772,418	4.22	5.00	84.3	PASS
Toluene	913,803	4.25	5.15	82.4	PASS
trans-1,3-Dichloropropene	537,434	4.47	5.40	82.8	PASS
1,1,2-Trichloroethane	393,806	4.31	5.10	84.6	PASS
Tetrachloroethene	566,035	4.19	4.95	84.7	PASS
2-Hexanone (Methyl butyl ketone)	772,432	4.44	5.25	84.6	PASS
Dibromochloromethane	901,046	4.27	5.05	84.6	PASS
1,2-Dibromoethane	782,083	4.27	5.00	85.4	PASS
Chlorobenzene	898,777	4.32	5.15	84.0	PASS
Ethylbenzene	1,292,171	4.46	5.10	87.5	PASS
1,1,1,2-Tetrachloroethane	561,878	4.54	5.20	87.2	PASS
m-/p-Xylenes	1,963,174	8.50	9.90	85.8	PASS
o-Xylene	1,000,195	4.31	5.15	83.6	PASS
Styrene	887,654	4.36	5.10	85.5	PASS
Bromoform	895,565	4.22	4.95	85.2	PASS
1,1,2,2-Tetrachloroethane	886,243	4.37	5.15	84.8	PASS
4-Ethyltoluene	1,564,616	4.51	5.00	90.2	PASS
2-Chlorotoluene	1,163,764	4.52	5.10	88.6	PASS
1,3,5-Trimethylbenzene	1,116,158	3.86	4.95	77.9	PASS
1,2,4-Trimethylbenzene	1,217,713	4.29	5.00	85.8	PASS
1,3-Dichlorobenzene	972,191	4.42	5.15	85.7	PASS
1,4-Dichlorobenzene	998,048	4.27	4.90	87.1	PASS
Benzyl chloride	1,304,637	4.39	5.15	85.3	PASS
1,2-Dichlorobenzene	934,667	4.35	4.95	87.8	PASS
1,2,4-Trichlorobenzene	741,547	3.86	4.50	85.8	PASS
Hexachlorobutadiene	460,990	3.87	4.60	84.2	PASS
Naphthalene	1,777,478	4.21	4.85	86.8	PASS

This Is The Last Page Of This Report.

Doug Mendoza

Bridgeton Landfill

From: Dan Feezor <dfeezor@feezorengineering.com>
Sent: Sunday, September 15, 2013 5:54 PM
To: Bill Abernathy; Darin Lewis; Brian G. Gibson; Sara Kammerer; Steve Grace; Doug Mendoza
Cc: David Eastvold; Paul Eastvold; John Powell; Julie Croak
Subject: RE: Corrected Bridgeton manifests

All,
We had 2 new employees that we thought were trained. When we tried to use them, they made some omissions, that our QC caught only after the trucks left. These employees have been replaced as of today. We apologize for the inconvenience. Please note that all our manifests are fully QC'ed within 24 hours of the time the delivery is made.

Thank you,
Dan Feezor

From: Bill Abernathy
Sent: Sunday, September 15, 2013 4:07 PM
To: 'Darin Lewis'; 'Brian G. Gibson'; 'Sara Kammerer'; 'Steve Grace'; dmendoza@stlmsd.com
Cc: Dan Feezor; David Eastvold; Paul Eastvold; John Powell
Subject: Corrected Bridgeton manifests

All, attached are PDF's of several manifests of Bridgeton hauled waste loads disposed at Bissell yesterday, 9/14/13. Information was inadvertently omitted or entered incorrectly on the original copies of these manifests, so they were corrected and re-scanned. Please use the attached corrected manifests for your records. Note also that information was omitted in Section B of the manifest for yesterday's Load 19, including the driver's signature. This manifest will likewise be corrected and forwarded once the driver is available to sign it later this week.

Thanks,

Bill Abernathy
Residuals Management Team Member
Feezor Engineering, Inc.
314-502-1299

Doug Mendoza

Bridgeton Landfill

From: Bill Abernathy <babernathy@feezorengineering.com>
Sent: Sunday, September 15, 2013 4:07 PM
To: Darin Lewis; Brian G. Gibson; Sara Kammerer; Steve Grace; Doug Mendoza
Cc: Dan Feezor; David Eastvold; Paul Eastvold; John Powell
Subject: Corrected Bridgeton manifests
Attachments: 9-14-13 revised Bridgeton manifests.pdf

All, attached are PDF's of several manifests of Bridgeton hauled waste loads disposed at Bissell yesterday, 9/14/13. Information was inadvertently omitted or entered incorrectly on the original copies of these manifests, so they were corrected and re-scanned. Please use the attached corrected manifests for your records. Note also that information was omitted in Section B of the manifest for yesterday's Load 19, including the driver's signature. This manifest will likewise be corrected and forwarded once the driver is available to sign it later this week.

Thanks,

Bill Abernathy
Residuals Management Team Member
Feezor Engineering, Inc.
314-502-1299

Metropolitan St. Louis Sewer District
Hauled Waste Receipt

NO. S-089252

A. Waste Source

Domestic ☐ Industrial ☒ Description of Waste: Landfill Leachate and Gas Condensate

Approximate Volume of Waste Loaded: 7500 gallons

Name: Bridgeton Landfill LLC Tel No: (314)744-8165

Address: 13570 St. Charles Rock Road City: Bridgeton State: MO Zip: 63044

I certify the above described waste was released to the transporter named below on 9-14-13 (DATE (Mo/Day/Yr)) at ~~5:00 AM~~ 5:00 (TIME)

Name of Owner or Representative *(Print)* Bernice Hunnefort Signature Bernice Hunnefort

B. Waste Transporter

Company Name: Mr. Bult's, Inc. MSD HAULER AUTHORIZATION ID #: 0218

I certify I accepted the above described waste on 9-14-13 (DATE (Mo/Day/Yr)) at ~~5:00 AM~~ 5:00 (TIME) on the following transport vehicle:

MSD VEHICLE ID #: 06-15 Total Vehicle Tank Capacity: 7500 gallons

This vehicle was empty ☒ when loaded from this source or contained ☐ _____ gallons of material from another source which is described on MSD Hauled Waste Receipt # N/A.

Driver's Name *(Print)* [illegible] Signature [illegible]

C. MSD Hauled Waste Receiving Station

Daily Receipt Log Number: _____

TRANSPORTER:

I certify the waste described in Part A was tendered for discharge on _____ (DATE (Mo/Day/Yr)) at _____ (TIME).

Driver's Name *(Print)* _____ Signature _____

RECEIVING STATION ATTENDANT:

The transport vehicle described in Part B entered the receiving station on _____ (DATE (Mo/Day/Yr)) at _____ (TIME) and

the vehicle was **allowed** ☐ to discharge; or the vehicle was **not allowed** ☐ to discharge and exited the facility.

Reason for Rejection: _____

pH: _____ Observations: _____

Attendant's Name *(Print)* _____ Signature _____

Instructions:

In Part A completely describe the nature and source of the waste. Examples of types of wastes are: residential septic tank, commercial establishment septic tank, restaurant or institutional kitchen grease, landfill leachate, industrial process waste, etc. The owner or representative of the waste source prints their name and certifies the information in Part A by signing where indicated.

After completing and signing Part B, the waste transporter gives the *pink* copy to the waste source before leaving the premise.

Part C is completed by the transporter and the Receiving Station attendant at the time the waste is tendered for discharge. The attendant records the date and time the transport vehicle enters the receiving station and indicates whether the waste is accepted or rejected. If the waste is rejected, the attendant records the reason for rejection. The signed *yellow* copy is retained by the transporter and the *white* copy is retained by the attendant.

HWR-S 5/01

Metropolitan St. Louis Sewer District
Hauled Waste Receipt

NO. S-089257

A. Waste Source

Domestic ☐ Industrial ☒ Description of Waste: Landfill Leachate and Gas Condensate

Approximate Volume of Waste Loaded: 7500 gallons

Name: Bridgeton Landfill LLC Tel No: (314)744-6165

Address: 13570 St. Charles Rock Road City: Bridgeton State: MO Zip: 63044

I certify the above described waste was released to the transporter named below on 9-14-15 (DATE (Mo/Day/Yr)) at 8:40 AM (TIME)

Name of Owner or Representative *(Print)* Bernice Hourfort Signature Bernice Hourfort

B. Waste Transporter

Company Name: Mr. Bulk's, Inc. MSD HAULER AUTHORIZATION ID #: 0218

I certify I accepted the above described waste on 9-14-15 (DATE (Mo/Day/Yr)) at 8:40 AM (TIME) on the following transport vehicle:

MSD VEHICLE ID #: 0636 Total Vehicle Tank Capacity: 7500 gallons

This vehicle was empty ☒ when loaded from this source or contained ☐ _____ gallons of material from another source which is described on MSD Hauled Waste Receipt # N/A.

Driver's Name *(Print)* [illegible] Signature [illegible]

C. MSD Hauled Waste Receiving Station

Daily Receipt Log Number: ____

TRANSPORTER:

I certify the waste described in Part A was tendered for discharge on _____ (DATE (Mo/Day/Yr)) at _____ (TIME).

Driver's Name *(Print)* _____ Signature _____

RECEIVING STATION ATTENDANT:

The transport vehicle described in Part B entered the receiving station on _____ (DATE (Mo/Day/Yr)) at _____ (TIME) and

the vehicle was **allowed** ☐ to discharge; or the vehicle was **not allowed** ☐ to discharge and exited the facility.

Reason for Rejection: _____

pH: _____ Observations: _____

Attendant's Name *(Print)* _____ Signature _____

Instructions:

In Part A completely describe the nature and source of the waste. Examples of types of wastes are: residential septic tank, commercial establishment septic tank, restaurant or institutional kitchen grease, landfill leachate, industrial process waste, etc. The owner or representative of the waste source prints their name and certifies the information in Part A by signing where indicated.

After completing and signing Part B, the waste transporter gives the *pink* copy to the waste source before leaving the premise.

Part C is completed by the transporter and the Receiving Station attendant at the time the waste is tendered for discharge. The attendant records the date and time the transport vehicle enters the receiving station and indicates whether the waste is accepted or rejected. If the waste is rejected, the attendant records the reason for rejection. The signed *yellow* copy is retained by the transporter and the *white* copy is retained by the attendant.

HWR-S 5/01

Metropolitan St. Louis Sewer District
Hauled Waste Receipt

NO. S-089262

A. Waste Source

Domestic ☐ Industrial ☒ Description of Waste: Landfill Leachate and Gas Condensate

Approximate Volume of Waste Loaded: 7500 gallons

Name: Bridgeton Landfill LLC Tel No: (314)744-8165

Address: 13570 St. Charles Rock Road City: Bridgeton State: MO Zip: 63044

I certify the above described waste was released to the transporter named below on 09-14-13 (DATE (Mo/Day/Yr)) at 11:30am (TIME)

Name of Owner or Representative *(Print)* Bernice Honigfort Signature Bernice Honigfort

B. Waste Transporter

Company Name: Mr. Bult's, Inc. MSD HAULER AUTHORIZATION ID #: 0218

I certify I accepted the above described waste on 9-14-13 (DATE (Mo/Day/Yr)) at 11:30 AM (TIME) on the following transport vehicle:

MSD VEHICLE ID #: 0637 Total Vehicle Tank Capacity: 7500 gallons

This vehicle was empty ☒ when loaded from this source or contained ☐ _____ gallons of material from another source which is described on MSD Hauled Waste Receipt # N/A.

Driver's Name *(Print)* Nathaniel Winston Signature Nathaniel Winston

C. MSD Hauled Waste Receiving Station

Daily Receipt Log Number: _____

TRANSPORTER:
I certify the waste described in Part A was tendered for discharge on _____ (DATE (Mo/Day/Yr)) at _____ (TIME).

Driver's Name *(Print)* _____ Signature _____

RECEIVING STATION ATTENDANT:
The transport vehicle described in Part B entered the receiving station on _____ (DATE (Mo/Day/Yr)) at _____ (TIME) and

the vehicle was **allowed** ☐ to discharge; or the vehicle was **not allowed** ☐ to discharge and exited the facility.

Reason for Rejection: _____

pH: _____ Observations: _____

Attendant's Name *(Print)* _____ Signature _____

Instructions:

In Part A completely describe the nature and source of the waste. Examples of types of wastes are: residential septic tank, commercial establishment septic tank, restaurant or institutional kitchen grease, landfill leachate, industrial process waste, etc. The owner or representative of the waste source prints their name and certifies the information in Part A by signing where indicated.

After completing and signing Part B, the waste transporter gives the *pink* copy to the waste source before leaving the premise.

Part C is completed by the transporter and the Receiving Station attendant at the time the waste is tendered for discharge. The attendant records the date and time the transport vehicle enters the receiving station and indicates whether the waste is accepted or rejected. If the waste is rejected, the attendant records the reason for rejection. The signed *yellow* copy is retained by the transporter and the *white* copy is retained by the attendant.

HWR-S 5/01

Metropolitan St. Louis Sewer District
Hauled Waste Receipt

NO. S-089264

A. Waste Source

Domestic ☐ Industrial ☒ Description of Waste: Landfill Leachate and Gas Condensate

Approximate Volume of Waste Loaded: 7500 gallons

Name: Bridgeton Landfill LLC Tel No: (314)744-8165

Address: 13570 St. Charles Rock Road City: Bridgeton State: MO Zip: 63044

I certify the above described waste was released to the transporter named below on 09.14.13 (DATE (Mo/Day/Yr)) at 12:40pm (TIME)

Name of Owner or Representative *(Print)* [illegible] Signature [illegible]

B. Waste Transporter

Company Name: Mr. Bult's, Inc. MSD HAULER AUTHORIZATION ID #: 0218

I certify I accepted the above described waste on 09.14.13 (DATE (Mo/Day/Yr)) at 12:40pm (TIME) on the following transport vehicle:

MSD VEHICLE ID #: 0635 Total Vehicle Tank Capacity: 7500 gallons

This vehicle was empty ☒ when loaded from this source or contained ☐ _____ gallons of material from another source which is described on MSD Hauled Waste Receipt # N/A.

Driver's Name *(Print)* [illegible] Signature [illegible]

C. MSD Hauled Waste Receiving Station

Daily Receipt Log Number: _____

TRANSPORTER:

I certify the waste described in Part A was tendered for discharge on _____ (DATE (Mo/Day/Yr)) at _____ (TIME).

Driver's Name *(Print)* _____ Signature _____

RECEIVING STATION ATTENDANT:

The transport vehicle described in Part B entered the receiving station on _____ (DATE (Mo/Day/Yr)) at _____ (TIME) and

the vehicle was **allowed** ☐ to discharge; or the vehicle was **not allowed** ☐ to discharge and exited the facility.

Reason for Rejection: _____

pH: _____ Observations: _____

Attendant's Name *(Print)* _____ Signature _____

Instructions:

In Part A completely describe the nature and source of the waste. Examples of types of wastes are: residential septic tank, commercial establishment septic tank, restaurant or institutional kitchen grease, landfill leachate, industrial process waste, etc. The owner or representative of the waste source prints their name and certifies the information in Part A by signing where indicated.

After completing and signing Part B, the waste transporter gives the *pink* copy to the waste source before leaving the premise.

Part C is completed by the transporter and the Receiving Station attendant at the time the waste is tendered for discharge. The attendant records the date and time the transport vehicle enters the receiving station and indicates whether the waste is accepted or rejected. If the waste is rejected, the attendant records the reason for rejection. The signed *yellow* copy is retained by the transporter and the *white* copy is retained by the attendant.

HWR-S 5/01

Metropolitan St. Louis Sewer District
Hauled Waste Receipt

NO. S-089265

A. Waste Source

Domestic ☐ Industrial ☒ Description of Waste: Landfill Leachate and Gas Condensate

Approximate Volume of Waste Loaded: 7500 gallons

Name: Bridgeton Landfill LLC Tel No: (314)744-6165

Address: 13570 St. Charles Rock Road City: Bridgeton State: MO Zip: 63044

I certify the above described waste was released to the transporter named below on 09.14.13 (DATE Mo/Day/Yr) at 1:05 pm (TIME)

Name of Owner or Representative *(Print)* [illegible] Signature [illegible]

B. Waste Transporter

Company Name: Mr. Bult's, Inc. MSD HAULER AUTHORIZATION ID #: 0218

I certify I accepted the above described waste on 09.14.13 (DATE Mo/Day/Yr) at 1:05 pm (TIME) on the following transport vehicle:

MSD VEHICLE ID #: 0637 Total Vehicle Tank Capacity: 7500 gallons

This vehicle was empty ☒ when loaded from this source or contained ☐ _____ gallons of material from another source which is described on MSD Hauled Waste Receipt # N/A.

Driver's Name *(Print)* Nathaniel Winter Signature [illegible]

C. MSD Hauled Waste Receiving Station

Daily Receipt Log Number: _____

TRANSPORTER:

I certify the waste described in Part A was tendered for discharge on _____ (DATE Mo/Day/Yr) at _____ (TIME).

Driver's Name *(Print)* _____ Signature _____

RECEIVING STATION ATTENDANT:

The transport vehicle described in Part B entered the receiving station on _____ (DATE Mo/Day/Yr) at _____ (TIME) and

the vehicle was **allowed** ☐ to discharge; or the vehicle was **not allowed** ☐ to discharge and exited the facility.

Reason for Rejection: _____

pH: _____ Observations: _____

Attendant's Name *(Print)* _____ Signature _____

Instructions:

In Part A completely describe the nature and source of the waste. Examples of types of wastes are: residential septic tank, commercial establishment septic tank, restaurant or institutional kitchen grease, landfill leachate, industrial process waste, etc. The owner or representative of the waste source prints their name and certifies the information in Part A by signing where indicated.

After completing and signing Part B, the waste transporter gives the *pink* copy to the waste source before leaving the premise.

Part C is completed by the transporter and the Receiving Station attendant at the time the waste is tendered for discharge. The attendant records the date and time the transport vehicle enters the receiving station and indicates whether the waste is accepted or rejected. If the waste is rejected, the attendant records the reason for rejection. The signed *yellow* copy is retained by the transporter and the *white* copy is retained by the attendant.

HWR-S 5/01

Metropolitan St. Louis Sewer District
Hauled Waste Receipt

NO. S-089271

A. Waste Source

Domestic ☐ Industrial ☒ Description of Waste: Landfill Leachate and Gas Condensate

Approximate Volume of Waste Loaded: 7500 gallons

Name: Bridgeton Landfill LLC Tel No: (314)744-8165

Address: 13570 St. Charles Rock Road City: Bridgeton State: MO Zip: 63044

I certify the above described waste was released to the transporter named below on 07.14.13 (DATE (Mo/Day/Yr)) at 4:00pm (TIME)

Name of Owner or Representative *(Print)* Connie M McFarlen Signature Connie M McFarlen

B. Waste Transporter

Company Name: Mr. Bult's, Inc. MSD HAULER AUTHORIZATION ID #: 0218

I certify I accepted the above described waste on 07.14.13 (DATE (Mo/Day/Yr)) at 4:00pm (TIME) on the following transport vehicle:

MSD VEHICLE ID #: 0632 Total Vehicle Tank Capacity: 7500 gallons

This vehicle was empty ☐ when loaded from this source or contained ☐ _____ gallons of material from another source which is described on MSD Hauled Waste Receipt # N/A.

Driver's Name *(Print)* Nathaniel Winston Signature Nathaniel Winston

C. MSD Hauled Waste Receiving Station

Daily Receipt Log Number: ____

TRANSPORTER:

I certify the waste described in Part A was tendered for discharge on _____ (DATE (Mo/Day/Yr)) at _____ (TIME).

Driver's Name *(Print)* _____ Signature _____

RECEIVING STATION ATTENDANT:

The transport vehicle described in Part B entered the receiving station on _____ (DATE (Mo/Day/Yr)) at _____ (TIME) and

the vehicle was **allowed** ☐ to discharge; or the vehicle was **not allowed** ☐ to discharge and exited the facility.

Reason for Rejection: _____

pH: _____ Observations: _____

Attendant's Name *(Print)* _____ Signature _____

Instructions:

In Part A completely describe the nature and source of the waste. Examples of types of wastes are: residential septic tank, commercial establishment septic tank, restaurant or institutional kitchen grease, landfill leachate, industrial process waste, etc. The owner or representative of the waste source prints their name and certifies the information in Part A by signing where indicated.

After completing and signing Part B, the waste transporter gives the *pink* copy to the waste source before leaving the premise.

Part C is completed by the transporter and the Receiving Station attendant at the time the waste is tendered for discharge. The attendant records the date and time the transport vehicle enters the receiving station and indicates whether the waste is accepted or rejected. If the waste is rejected, the attendant records the reason for rejection. The signed *yellow* copy is retained by the transporter and the *white* copy is retained by the attendant.

HWR-S 5/01

Doug Mendoza

From: Doug Mendoza
Sent: Thursday, September 12, 2013 1:17 PM
To: 'Merrigan, Jessie (LG)'; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Jessie,

Please provide the data for the three batches listed below as soon as they are available. You can then also update the ftp site with this data as part of the next weekly submittal.

Doug

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, September 11, 2013 8:14 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. The number of new data reports will be fewer than normal this week because instrument repairs at Pace have delayed reporting. Three data reports that would otherwise have been included are:

316-060	09-01-2013
316-059	08-31-2013
316-057	08-29-2013

We can provide those to you via email once we get final results, however we will not update the ftp site or data reports until next week. Please let us know how you would like to proceed.

As you know, there were anomalous spikes in BOD in three recent samples (Samples 316-038, 316-040, 316-045). Fortunately for the past 11 samples, BOD levels and BOD:COD ratios appear to have normalized. We believe this is an indication that Pace has successfully corrected is sample preparation procedure to avoid this problem in the future. We have resampled the three samples and can discuss the results with you at our next meeting on Monday. Because the resampling is outside of hold times, we do not intend to post the reports or include them in our data updates.

Doug Mendoza

From: Joe Pavlich
Sent: Thursday, September 12, 2013 3:08 PM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: reading at Bridgeton Landfill

The reading for Bridgeton Landfill for 9/12/13 was 916419 with 0gals/hour discharge, the reading was taken at 10:58 a.m.

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, September 12, 2013 2:43 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good afternoon,

The recirculator has been repaired and the facility is resuming to the Missouri River Treatment Facility. Please let us know if you have any questions.

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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From: Merrigan, Jessie
Sent: Wednesday, September 11, 2013 8:14 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, September 12, 2013 2:39 PM
To: Doug Mendoza
Subject: RE: Bridgeton Landfill Weekly Report - one more thing

The recirculator is fixed and discharge is resuming. I will send an email to the full group.

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Thursday, September 12, 2013 1:41 PM
To: Merrigan, Jessie
Subject: RE: Bridgeton Landfill Weekly Report - one more thing

One more thing, would you please make sure that MSD is informed when the discharge to the Missouri River Treatment Facility recommences?

For the last week or so, we have been experiencing some higher than normal soluble COD readings within the plant, as well as "different" odor. We are not sure of the source for these changes, and we do not have Bridgeton Landfill's discharge results for the last two weeks. But if the changes also track with cessation and restarting of the landfill's discharge, we may need further investigation.

Doug

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, September 11, 2013 8:14 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. The number of new data reports will be fewer than normal this week because instrument repairs at Pace have delayed reporting. Three data reports that would otherwise have been included are:

316-060	09-01-2013
316-059	08-31-2013
316-057	08-29-2013

We can provide those to you via email once we get final results, however we will not update the ftp site or data reports until next week. Please let us know how you would like to proceed.

As you know, there were anomalous spikes in BOD in three recent samples (Samples 316-038, 316-040, 316-045). Fortunately for the past 11 samples, BOD levels and BOD:COD ratios appear to have normalized. We believe this is an indication that Pace has successfully corrected is sample preparation procedure to avoid this problem in the future. We have resampled the three samples and can discuss the results with you at our next meeting on

pm

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, September 12, 2013 1:52 PM
To: Doug Mendoza
Subject: Re: BRIDGETON LANDFILL LLC - Notice of Violations

Thank you.

On Sep 12, 2013, at 1:31 PM, "Doug Mendoza" <DMENDOZA@stlmsd.com> wrote:

> With attachment
>
> -----Original Message-----
> From: Doug Mendoza
> Sent: Thursday, September 12, 2013 1:30 PM
> To: 'Merrigan, Jessie (LG)'; John Lodderhose; Ken Goins
> Cc: Power, Brian (BPower@republicservices.com); Almanza, Craig; Sehie, Bryan; Ed Galbraith (EGalbraith@barr.com); Dan Feezor
> Subject: RE: BRIDGETON LANDFILL LLC - Notice of Violations
>
> Jessie,
>
> We have asked the laboratory to see if they still have a retain bottle for this particular sample. The laboratory handles an exceptionally large volume of samples, and may not have had room to keep it this long. We will let you know. If they do not have a retain, I have asked for details on any reanalyses that were performed on the original sample.
>
> As you also requested, the results of all analyses for that particular sample are attached. Note the higher than normal suspended solids concentration (6,800 mg/L).
>
> ---Doug Mendoza
>
> -----Original Message-----
> From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
> Sent: Wednesday, September 11, 2013 10:12 PM
> To: Doug Mendoza; John Lodderhose; Ken Goins
> Cc: Power, Brian (BPower@republicservices.com); Almanza, Craig; Sehie, Bryan; Ed Galbraith (EGalbraith@barr.com); Dan Feezor
> Subject: RE: BRIDGETON LANDFILL LLC - Notice of Violations
>
> Good evening,
>
> In advance of Monday's meeting, we wanted to follow up with you to update you on where we are with the investigation of the iron NOV. We are working to ensure we have adequately investigated this issue to ensure that discharge to MSD remains compliant with the conditions allowed by the conditional discharge approval and variance. The concentration reflected in the MSD NOV is well outside the trend reflected by the extensive data collected as part of the MSD discharge. We are currently trying to assess any basis for that spike, and gather an understanding of anything that may have impacted that reading.
>

Doug Mendoza

From: Doug Mendoza
Sent: Thursday, September 12, 2013 1:30 PM
To: 'Merrigan, Jessie (LG)'; John Lodderhose; Ken Goins
Cc: Power, Brian (BPower@republicservices.com); Almanza, Craig; Sehie, Bryan; Ed Galbraith (EGalbraith@barr.com); Dan Feezor
Subject: RE: BRIDGETON LANDFILL LLC - Notice of Violations

Jessie,

We have asked the laboratory to see if they still have a retain bottle for this particular sample. The laboratory handles an exceptionally large volume of samples, and may not have had room to keep it this long. We will let you know. If they do not have a retain, I have asked for details on any reanalyses that were performed on the original sample.

As you also requested, the results of all analyses for that particular sample are attached. Note the higher than normal suspended solids concentration (6,800 mg/L).

---Doug Mendoza

-----Original Message-----
From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, September 11, 2013 10:12 PM
To: Doug Mendoza; John Lodderhose; Ken Goins
Cc: Power, Brian (BPower@republicservices.com); Almanza, Craig; Sehie, Bryan; Ed Galbraith (EGalbraith@barr.com); Dan Feezor
Subject: RE: BRIDGETON LANDFILL LLC - Notice of Violations

Good evening,

In advance of Monday's meeting, we wanted to follow up with you to update you on where we are with the investigation of the iron NOV. We are working to ensure we have adequately investigated this issue to ensure that discharge to MSD remains compliant with the conditions allowed by the conditional discharge approval and variance. The concentration reflected in the MSD NOV is well outside the trend reflected by the extensive data collected as part of the MSD discharge. We are currently trying to assess any basis for that spike, and gather an understanding of anything that may have impacted that reading.

In order to ensure there is no difference between the results at the sampling point used by MSD and that used by Bridgeton Landfill, Bridgeton Landfill will perform an iron test at the MSD West Lake sampling port in addition to the tank sampling port during the third quarterly sampling event planned for this week. To help us with that review, it would be helpful to have iron results from MSD's prior sampling so that we could compare them to Bridgeton Landfill's data.

It would also be helpful to know if the sample with the high iron value also had other leachate constituents outside the range of the values we typically see (i.e. , potentially representative of a slug). One goal of the recirculation practice is to avoid any inconsistent discharge and we want to make sure there are not conditions that require attention. As such, we would appreciate if MSD could provide the full analytical report for that sampling event.

SP	SP description	Date	Pollutant	Type	<	Result	Unit	Sampler
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,1,1-Trichloroethane	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,1,2,2-Tetrachloroethane	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,1,2-Trichloroethane	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,1-Dichloroethane	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,1-Dichloroethene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,2-Dichlorobenzene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,2-Dichloroethane	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,2-Dichloropropane	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,3-Dichlorobenzene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,4-Dichlorobenzene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	2,4,6-Trichlorophenol	Grab	<	10	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	2,4-Dichlorophenol	Grab	<	10	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	2,4-Dimethylphenol	Grab	<	10	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	2,4-Dinitrophenol	Grab	<	200	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	2-Chloroethyl vinyl ether	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	2-Chlorophenol	Grab	<	10	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	2-Nitrophenol	Grab	<	10	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	4,6-Dinitro-2-Methylphenol	Grab	<	78	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	4-Chloro-3-Methylphenol	Grab	<	10	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	4-Nitrophenol	Grab	<	25	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Ammonia (as N)	Grab		742	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Benzene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Bromodichloromethane	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Bromoform	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Bromomethane	Grab	<	20	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Carbon Tetrachloride	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Chlorobenzene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Chloroethane	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Chloroform	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Chloromethane	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Dibromochloromethane	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Ethylbenzene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Methylene Chloride	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Oil and Grease (Hydrocarbon)	Grab	<	4	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Oil and Grease (Total)	Grab		25.7	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Pentachlorophenol	Grab	<	25	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	pH	Grab		5.52	SU	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Phenol	Grab		18877	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Temperature	Grab		23.9	Deg C	MSD

007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Tetrachloroethene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Toluene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Total Phenols	Grab		61.1	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Trans-1,2-Dichloroethene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Trichloroethene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Vinyl Chloride	Grab	<	6	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Xylene	Grab	<	100	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,2,4-Trichlorobenzene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,2-Dichlorobenzene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,2-Diphenylhydrazine	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,3-Dichlorobenzene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	1,4-Dichlorobenzene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	2,4-Dinitrotoluene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	2,6-Dinitrotoluene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	2-Chloronaphthalene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	3,3-Dichlorobenzidine	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	4-Bromophenyl phenyl ether	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	4-Chlorophenyl phenyl ether	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Acenaphthene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Acenaphthylene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Anthracene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Antimony (Total)	Comp-Time 24 Hrs	<	0.024	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Arsenic (Total)	Comp-Time 24 Hrs		0.304	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Benzidine	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Benzo (A) Anthracene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Benzo (A) Pyrene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Benzo (B) Fluoranthene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Benzo (G,H,I) Perylene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Benzo (K) Fluoranthene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Beryllium (Total)	Comp-Time 24 Hrs		0.002	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Biochemical Oxygen Demand (5 Day)	Comp-Time 24 Hrs		29400	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Bis (2-Chloroethoxy) Methane	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Bis (2-Chloroethyl) Ether	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Bis (2-Chloroisopropyl) Ether	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Bis (2-EthylHexyl) Phthalate	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Butylbenzyl Phthalate	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Cadmium (Total)	Comp-Time 24 Hrs	<	0.009	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Chemical Oxygen Demand	Comp-Time 24 Hrs		62300	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Chromium (Total)	Comp-Time 24 Hrs		0.538	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Chrysene	Comp-Time 24 Hrs	<	50	ug/L	MSD

007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Copper (Total)	Comp-Time 24 Hrs	<	0.009	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Dibenzo (A,H) Anthracene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Diethyl Phthalate	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Dimethyl Phthalate	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Di-n-butyl Phthalate	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Di-n-octyl Phthalate	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Fluoranthene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Fluorene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Hexachlorobenzene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Hexachlorobutadiene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Hexachlorocyclopentadiene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Hexachloroethane	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Indeno (1,2,3-cd) pyrene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Iron (Total)	Comp-Time 24 Hrs		2180	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Isophorone	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Lead (Total)	Comp-Time 24 Hrs		0.324	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Mercury (Total)	Comp-Time 24 Hrs		0.0068	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Naphthalene	Comp-Time 24 Hrs		87.9	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Nickel (Total)	Comp-Time 24 Hrs		0.251	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Nitrobenzene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	N-Nitrosodimethylamine	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	N-Nitrosodi-n-Propylamine	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	N-Nitrosodiphenylamine	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Phenanthrene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Pyrene	Comp-Time 24 Hrs	<	50	ug/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Selenium (Total)	Comp-Time 24 Hrs	<	0.006	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Silver (Total)	Comp-Time 24 Hrs	<	0.006	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Thallium (Total)	Comp-Time 24 Hrs		0.0095	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Total Suspended Solids	Comp-Time 24 Hrs		6800	mg/L	MSD
007	14" pipe into Westlink Pump Station Wetwell, on S side	08/16/13	Zinc (Total)	Comp-Time 24 Hrs		27.7	mg/L	MSD

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH
					NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-056	8/28/2013	Pace	Validated	60152008	27500	61900	682	568	13.1	5.6
316-055	8/27/2013	Pace	Validated	60151872	30100	65700 *	749 *	472	9.2	5.7
316-054	8/26/2013	Pace	Validated	60151792	29200	45300	821	484	6.6	5.8
316-053	8/25/2013	Pace	Validated	60151790	36500	49700 *	777	493	15.5	5.6
316-052	8/24/2013	Pace	Validated	60151787	26800	53400	756	340	14.4	5.7
316-051	8/23/2013	Pace	Validated	60151723	24300	47800	703	220	7.0	5.8

MSD 027326

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Solids, total suspended	Aluminum	Antimony	Arsenic	Beryllium	Cadmium
					NA	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-056	8/28/2013	Pace	Validated	60152008	3800	5.77	0.0486	0.668	ND	0.0122
316-055	8/27/2013	Pace	Validated	60151872	3340	7.03	ND	0.708	ND	ND
316-054	8/26/2013	Pace	Validated	60151792	2980	6.44	0.0433	0.698	ND	0.0126
316-053	8/25/2013	Pace	Validated	60151790	4060	5.12	0.0449	0.671	ND	0.0111
316-052	8/24/2013	Pace	Validated	60151787	2600	4.58	0.0473	0.718	ND	0.0106
316-051	8/23/2013	Pace	Validated	60151723	2640	6.41	0.0442	0.691	ND	0.0103

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Chromium	Cobalt	Copper	Iron	Lead	Mercury
					Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-056	8/28/2013	Pace	Validated	60152008	0.245	0.0503	ND	640	0.14	0.00043
316-055	8/27/2013	Pace	Validated	60151872	0.253	0.0423	ND	751	0.159	0.00024
316-054	8/26/2013	Pace	Validated	60151792	0.264	0.0530	ND	780	0.164	ND
316-053	8/25/2013	Pace	Validated	60151790	0.25	0.0529	ND	672	0.133	ND
316-052	8/24/2013	Pace	Validated	60151787	0.24	0.0539	ND	653	0.126	ND
316-051	8/23/2013	Pace	Validated	60151723	0.218	0.0442	ND	594	0.134	0.00054

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l
316-056	8/28/2013	Pace	Validated	60152008	**0.126**	ND	ND	ND	**12.2**
316-055	8/27/2013	Pace	Validated	60151872	**0.15**	ND	ND	ND	**13.5**
316-054	8/26/2013	Pace	Validated	60151792	**0.142**	ND	ND	ND	**12.8**
316-053	8/25/2013	Pace	Validated	60151790	**0.138**	ND	ND	ND	**12.8**
316-052	8/24/2013	Pace	Validated	60151787	**0.141**	ND	ND	ND	**11.6**
316-051	8/23/2013	Pace	Validated	60151723	**0.126**	ND	ND	ND	**10.5**

MSD 027330

Table 3
VOCs and SVOCs
December 2012 - August 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-056	8/28/2013	Pace	Validated	60152008	ND
316-055	8/27/2013	Pace	Validated	60151872	ND
316-054	8/26/2013	Pace	Validated	60151792	ND
316-053	8/25/2013	Pace	Validated	60151790	ND
316-052	8/24/2013	Pace	Validated	60151787	ND
316-051	8/23/2013	Pace	Validated	60151723	ND

To: BRIDGETON LANDFILL LLC [1003803000]

From: Doug Mendoza

Date: September 11, 2013

Re: Addition of radioactivity alert limits

Bridgeton Landfill monitors radioactivity levels in its wastewater discharge for gross alpha, gross beta, gross gamma (as cesium-137), radium-226, radium-228, and uranium at sample point 008. This is the point that contains the leachate. To notify MSD of a high level in the self-monitoring results, alert limits have been added to PIMS for these items. This is in case the person entering the data does not notice the high levels.

The alert level for gross alpha is 15 picoCuries/liter. This is the current maximum contaminant level from EPA's drinking water regulations.

The alert level for gross beta is 50 picoCuries/liter. The current maximum contaminant level from EPA's drinking water regulations is 4 millirems per year, but 50 pCi/L is used as a trigger level for additional testing.

The alert level for uranium is 30 micrograms/liter. This is the current maximum contaminant level from EPA's drinking water regulations.

The alert level for radium-226 is 5 pCi/L. This is the current maximum contaminant level from EPA's drinking water regulations for "radium-226 and radium-228 combined." [The NRC's 10 CFR 20 limit for radium-226 discharge to sewer is 600 pCi/L.]

The alert level for radium-228 is 5 pCi/L. This is the current maximum contaminant level from EPA's drinking water regulations for "radium-226 and radium-228 combined." [The NRC's 10 CFR 20 limit for radium-226 discharge to sewer is 600 pCi/L.]

The alert level for gross gamma (as cesium-137) is 10,000 pCi/L. This is the NRC's 10 CFR 20 discharge limit for cesium-137 discharge to sewer. [There are no EPA drinking water maximum contaminant levels for gross gamma.]

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, September 11, 2013 10:12 PM
To: Doug Mendoza; John Lodderhose; Ken Goins
Cc: Power, Brian (BPower@republicservices.com); Almanza, Craig; Sehie, Bryan; Ed Galbraith (EGalbraith@barr.com); Dan Feezor
Subject: RE: BRIDGETON LANDFILL LLC - Notice of Violations

Good evening,

In advance of Monday's meeting, we wanted to follow up with you to update you on where we are with the investigation of the iron NOV. We are working to ensure we have adequately investigated this issue to ensure that discharge to MSD remains compliant with the conditions allowed by the conditional discharge approval and variance. The concentration reflected in the MSD NOV is well outside the trend reflected by the extensive data collected as part of the MSD discharge. We are currently trying to assess any basis for that spike, and gather an understanding of anything that may have impacted that reading.

In order to ensure there is no difference between the results at the sampling point used by MSD and that used by Bridgeton Landfill, Bridgeton Landfill will perform an iron test at the MSD West Lake sampling port in addition to the tank sampling port during the third quarterly sampling event planned for this week. To help us with that review, it would be helpful to have iron results from MSD's prior sampling so that we could compare them to Bridgeton Landfill's data.

It would also be helpful to know if the sample with the high iron value also had other leachate constituents outside the range of the values we typically see (i.e. , potentially representative of a slug). One goal of the recirculation practice is to avoid any inconsistent discharge and we want to make sure there are not conditions that require attention. As such, we would appreciate if MSD could provide the full analytical report for that sampling event.

Finally, in order to ensure that there was no error associated with that sample result, we would like to request that MSD request that the lab re-run the iron analysis for that sample. Bridgeton Landfill would be happy to pay the costs for that additional analysis.

We appreciate your cooperation as we work to undertake a full investigation and prepare a comprehensive response to the NOV in advance of the deadline requested by your notice. As always, please let us know if you have any questions or need additional information.

Thank you,
Jessie

Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com www.lathropgage.com

-------- Original message --------
From: Doug Mendoza <DMENDOZA@stlmsd.com>
Date: 09/04/2013 7:27 AM (GMT-06:00)
To: "Almanza, Craig" <CAlmanza@republicservices.com>
Subject: FW: BRIDGETON LANDFILL LLC - Notice of Violations

Craig,

I wanted to make sure you were aware of this as soon as possible. The hard copy is being mailed today.

Doug Mendoza
MSD Industrial Pretreatment Manager

September 4, 2013

Craig Almanza, Area Environmental Manager BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

RE: NOTICE OF VIOLATIONS - WASTEWATER DISCHARGE PERMIT NO. 0511559802 - 2
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Mr. Almanza:

As relayed by Doug Mendoza in an email on September 4, 2013, MSD personnel recently collected and analyzed samples of wastewater discharged to the MSD system from the premise above. Unfortunately, we identified the following violations:

VIOLATIONS OF DISCHARGE LIMITATIONS:

SAMPLE

SAMPLE

DISCHARGE

LIMIT

VALUE

DATE

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, September 11, 2013 8:14 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. The number of new data reports will be fewer than normal this week because instrument repairs at Pace have delayed reporting. Three data reports that would otherwise have been included are:

316-060	09-01-2013
316-059	08-31-2013
316-057	08-29-2013

We can provide those to you via email once we get final results, however we will not update the ftp site or data reports until next week. Please let us know how you would like to proceed.

As you know, there were anomalous spikes in BOD in three recent samples (Samples 316-038, 316-040, 316-045). Fortunately for the past 11 samples, BOD levels and BOD:COD ratios appear to have normalized. We believe this is an indication that Pace has successfully corrected is sample preparation procedure to avoid this problem in the future. We have resampled the three samples and can discuss the results with you at our next meeting on Monday. Because the resampling is outside of hold times, we do not intend to post the reports or include them in our data updates.

Also, the facility has temporarily ceased discharge to the Missouri River Treatment Facility as of this morning. The protocol proposed for resuming discharge in July, after investigation of the benzene occurrences, included recirculation for at least 6 hours in the 96,000 gallon tank. The pump in that tank failed yesterday. Since new liquid added to that tank will not have recirculated for the minimum time, we have ceased discharge until the pump can be replaced or we can propose a suitable alternative.

Please let us know if you have any questions.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

9-12-B

MSD 027335

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table

Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, September 01, 2013	Batch 316-059	22,500	22,500
	Batch 316-060	127,500	127,500
Monday, September 02, 2013	Batch 316-060	22,500	22,500
	Batch 316-061	127,500	127,500
Tuesday, September 03, 2013	Batch 316-061	22,500	22,500
	Batch 316-062	127,500	127,500
Wednesday, September 04, 2013	Batch 316-062	22,500	22,500
	Batch 316-063	127,500	127,500
Thursday, September 05, 2013	Batch 316-063	22,500	22,500
	Batch 316-064	127,500	127,500
Friday, September 06, 2013	Batch 316-064	22,500	22,500
	Batch 316-065	127,500	127,500
Saturday, September 07, 2013	Batch 316-065	22,500	22,500
	Batch 316-066	127,500	127,500

Starting Date	*9/1/2013 7:00*
Ending Date	*9/8/2013 7:00*

MSD - Missouri River Tracking Table

Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, September 01, 2013	Batch 316-060	19,502	9/1/2013 7:00	9/2/2013 7:00	24.0	844	812.6	5.78
Monday, September 02, 2013	Batch 316-061	19,501	9/2/2013 7:00	9/3/2013 7:00	24.0	843	812.5	5.82
Tuesday, September 03, 2013	Batch 316-062	19,501	9/3/2013 7:00	9/4/2013 7:00	24.0	840	812.5	5.70
Wednesday, September 04, 2013	Batch 316-063	19,502	9/4/2013 7:00	9/5/2013 7:00	24.0	1379	812.6	5.92
Thursday, September 05, 2013	Batch 316-064	15,575	9/5/2013 7:00	9/6/2013 7:00	24.0	840	649.0	5.70
Friday, September 06, 2013	Batch 316-065	19,600	9/6/2013 7:00	9/7/2013 7:00	24.0	840	816.7	5.85
Saturday, September 07, 2013	Batch 316-066	19,502	9/7/2013 7:00	9/8/2013 7:00	24.0	838	812.6	5.86

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] Title: Environmental Specialist Date: 9/10/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/2/2013 7:00:00 AM	9/1/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	748,058	728,556	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/2/13

MSD Daily Flow Reading, ending 9-02-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/3/2013 7:00:00 AM	9/2/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	767,559	748,058	19,501

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,501 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/3/13

MSD Daily Flow Reading, ending 9-03-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/4/2013 7:00:00 AM	9/3/2013 7:00:00 AM	24.0 hours,
Reading (Gallons):	787,060	767,559	19,501

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,501 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/4/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/5/2013 7:00:00 AM	9/4/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	806,562	787,060	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/5/13

MSD Daily Flow Reading, ending 9-05-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/6/2013 7:00:00 AM	9/5/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	822,137	806,562	15,575

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 15,575 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/6/13

MSD Daily Flow Reading, ending 9-06-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	9/7/2013 7:00:00 AM	9/6/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	841,737	822,137	19,600

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,600 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/7/13

MSD Daily Flow Reading, ending 9-07-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	9/8/2013 7:00:00 AM	9/7/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	861,239	841,737	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/8/13

MSD Daily Flow Reading, ending 9-08-2013

9-12-13

OB-316-059 Bridgeton Landfill

Fill Data

Fill Start Date	8/30/2013
Fill Start Time	18:05
Fill Stop Date	8/30/2013
Fill Stop Time	21:20
Process Battery	316 AST

Processing Data

Process Start Date	8/30/2013
Process Start Time	17:21
Process Stop Date	8/31/2013
Process Stop Time	07:30

Approval Data

Approval Details	NAL13026-628
Test Results	Benzene 22 ppb
Reprocessed Batch	

Notes

Fill Level 18.0 feet

Monday, September 09, 2013

OB-316-060 Bridgeton Landfill

Fill Data

Fill Start Date	8/31/2013
Fill Start Time	18:25
Fill Stop Date	8/31/2013
Fill Stop Time	21:35
Process Battery	316 AST

Processing Data

Process Start Date	8/31/2013
Process Start Time	21:37
Process Stop Date	9/1/2013
Process Stop Time	07:00

Approval Data

Approval Details	NAL13026-630
Test Results	Benzene 70 ppb
Reprocessed Batch	

Notes

Fill height 18.0 feet

Monday, September 09, 2013

OB-316-061 Bridgeton Landfill

Fill Data

Fill Start Date	9/1/2013
Fill Start Time	18:10
Fill Stop Date	9/1/2013
Fill Stop Time	22:20
Process Battery	316 AST

Processing Data

Process Start Date	9/1/2013
Process Start Time	22:20
Process Stop Date	9/2/2013
Process Stop Time	09:45

Approval Data

Approval Details	NAL13026-632
Test Results	Benzene 16 ppb
Reprocessed Batch	

Notes

Monday, September 09, 2013

OB-316-062 Bridgeton Landfill

Fill Data

Fill Start Date	9/2/2013
Fill Start Time	18:14
Fill Stop Date	9/2/2013
Fill Stop Time	22:05
Process Battery	316 AST

Processing Data

Process Start Date	9/2/2013
Process Start Time	20:10
Process Stop Date	9/3/2013
Process Stop Time	06:20

Approval Data

Approval Details	NAL13026-634
Test Results	Benzene 19 ppb
Reprocessed Batch	

Notes

Monday, September 09, 2013

OB-316-063 Bridgeton Landfill

Fill Data

Fill Start Date	9/3/2013
Fill Start Time	18:18
Fill Stop Date	9/3/2013
Fill Stop Time	22:04
Process Battery	316 AST

Processing Data

Process Start Date	9/3/2013
Process Start Time	20:09
Process Stop Date	9/4/2013
Process Stop Time	05:42

Approval Data

Approval Details	NAL13026-636
Test Results	Benzene 25 ppb
Reprocessed Batch	

Notes

Monday, September 09, 2013

OB-316-064 Bridgeton Landfill

Fill Data

Fill Start Date	9/4/2013
Fill Start Time	18:14
Fill Stop Date	9/4/2013
Fill Stop Time	22:40
Process Battery	316 AST

Processing Data

Process Start Date	9/4/2013
Process Start Time	20:38
Process Stop Date	9/5/2013
Process Stop Time	05:00

Approval Data

Approval Details	NAL13026-638
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Monday, September 09, 2013

OB-316-065 Bridgeton Landfill

Fill Data

Fill Start Date	9/5/2013
Fill Start Time	18:07
Fill Stop Date	9/5/2013
Fill Stop Time	20:58
Process Battery	316 AST

Processing Data

Process Start Date	9/5/2013
Process Start Time	20:30
Process Stop Date	9/6/2013
Process Stop Time	05:32

Approval Data

Approval Details	NAL13026-641
Test Results	Benzene 23 ppb
Reprocessed Batch	

Notes

Monday, September 09, 2013

OB-316-066 Bridgeton Landfill

Fill Data

Fill Start Date	9/6/2013
Fill Start Time	18:05
Fill Stop Date	9/6/2013
Fill Stop Time	21:15
Process Battery	316 AST

Processing Data

Process Start Date	9/6/2013
Process Start Time	21:17
Process Stop Date	9/7/2013
Process Stop Time	05:42

Approval Data

Approval Details	NAL13026-643
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Fill level 17.9 feet.

Monday, September 09, 2013

NOTE: Complete Report i

LEACHATE PRE-TREATMENT SYSTEM PLAN

SUBMITTED IN COMPLIANCE WITH AGREED ORDER SECTION 17.D.

Prepared for:

BRIDGETON LANDFILL, LLC
13570 ST. CHARLES ROCK RD.
BRIDGETON, MO 63044

Prepared by:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
ST. LOUIS, MISSOURI

CEC Project 130-484

September 9, 2013
(Rev 7)

STATE OF MISSOURI
IVAN COOPER
NUMBER
PE-2003009211
9/9/13
PROFESSIONAL ENGINEER

RECEIVED
SEP 10 2013
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Civil & Environmental Consultants, Inc.

St. Louis
4848 Park 370 Blvd. • Suite F • Hazelwood, MO 63042
Phone 314/656-4566 • Fax 314/656-4595 • Toll Free 866/250-3679 • E-mail stlouis@cecinc.com

Austin Boston Charlotte Chicago Cincinnati Cleveland Columbus Detroit Export Indianapolis Nashville North Central PA Phoenix Pittsburgh

Corporate Web Site http://www.cecinc.com

Doug Mendoza

Bridgeton Landfill

From: Doug Mendoza
Sent: Monday, September 09, 2013 3:16 PM
To: Bret A. Berthold; Brian G. Gibson; Brian Power; Bryan Sehie; Catherine Politte; Christopher J. Bulmahn; Craig Almanza; Darin Lewis; Doug Mendoza; Ed Galbraith; Jessica Merrigan; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; Michele Boussad; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; Steve Smith; Todd Heller; Tom Boehm; William Beck
Subject: MSD review of "Leachate Pre-Treatment System Plan" and draft "Preliminary Spill and Slug Control Plan" submitted on August 30, 2013

Jessie et al,

We have completed our review of the "Leachate Pre-Treatment System Plan" and draft "Preliminary Spill and Slug Control Plan" submitted on August 30, 2013. Our formal response is being mailed to Brian Power. However, we have copied the text of the response below for your immediate information.

Doug Mendoza
MSD Industrial Pretreatment Manager

Brian Power
Environmental Manager
BRIDGETON LANDFILL, LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Dear Mr. Power:

We have reviewed the "Leachate Pre-Treatment System Plan" and draft "Preliminary Spill and Slug Control Plan" submitted on August 30, 2013. These plans were submitted by Kevin Kamp of Civil & Environmental Consultants for Bridgeton Landfill.

We recognize that your accelerated design and construction schedule means that the pretreatment system essentially is a design-build situation. Thus, we have not objected to construction commencing prior to MSD's approval of the plans, as required under MSD ordinance 12559, Article VII, Section Two. Please note however, that this does not remove the right for MSD to require changes to facilities, whether or not they have already been placed. In addition, discharge from Bridgeton Landfill's pretreatment system to MSD may not commence until MSD gives final approval.

MSD's comments, questions, and notes on the submitted plans are included below. We have correlated them to the specific sections of the plans for your convenience.

Leachate Pre-Treatment System Plan

1.1 Regulatory Background

- Please note that MSD ordinance 12559 does not contain pretreatment limits for surcharge. However, MSD did direct Bridgeton Landfill to have its pretreatment system achieve surcharge pollutant (BOD, COD, TSS) discharge levels consistent with those for which it was certified prior to the change in its leachate characteristics. We understand that it may be difficult to achieve the exact levels for which Bridgeton Landfill was previously certified. MSD can consider other discharge levels, so long as the wastewater system and treatment plant have capacity for and can adequately treat the wastewater, while still properly serving our other customers.

- Note also that while the plan acknowledges and lists the ordinance's numerical pollutant discharge limitations, MSD ordinance 12559 also contains a list of prohibited discharge conditions. Those prohibitions must not be violated by Bridgeton Landfill's discharge, and include exposure limits for gases, vapors, and fumes in the wastewater system's atmosphere.

1.3 Source, Volume and Nature of Leachate

- The leachate volume is characterized as ranging from 150,000 to 300,000 GPD, with the design flow based on 300,000 GPD. However, historical data submitted to MSD shows flows between 300,000 and 400,000 GPD as recently as 2008 – 2010. The plan also characterizes the average leachate volume as 150,000 GPD. Please provide supporting documentation for the figures used in the plan.

- The sizing of equipment also appears to be based on the design flow, without allowance for peak or maximum flows. Please clarify how flows above design flow will be handled for pretreatment.

- Zinc (50 mg/L) and iron (800 mg/L) are listed as the metals used for the design basis. However, arsenic and mercury – other metals that also are present above discharge limits in the untreated leachate – are of equal or greater concern to MSD. Please include these metals as in the treatment evaluation, and include them in the evaluation. Additional comments regarding this are included below.

- MSD also previously informed Bridgeton Landfill that ultraviolet transmittance will be a critical discharge consideration, due to the use of UV disinfection at MSD's Missouri River Treatment Plant. Please include transmittance as part of the treatment evaluation, and include it in the evaluation. Additional comments regarding this are included below.

1.4 Treatability Test Program – Bench Scale

- Should sufficient ultraviolet transmittance not be achieved through the clarification and biological treatment steps, you may wish to further investigate electrocoagulation to help achieve this. A number of studies are cited on the Internet regarding the use of electrocoagulation to remove humic acids, which may assist you in this.

1.5 Treatability Test Program – Pilot Scale

- The pilot membrane bioreactor system consists of two aeration tanks of 3,000 gallons and 1,000 gallons and an ultrafilter module. No information was included regarding the ultrafilter's through rate. However, during meetings between MSD and Bridgeton Landfill, it was mentioned that the pilot MBRs treated only 1.5 GPM. It was unclear if that was limited by the ultrafilter's through rate.

- We have concerns about moving directly from 1.5 GPM to 105–210 GPM (150K–300K GPD), especially concerning fouling rates for the ultrafilters. Please provide information regarding how this will be addressed, as well as data and other information you have regarding the ultrafilters' fouling rates.

2.0 Full Scale Pretreatment Facility Design

- Most items listed above also apply to the full scale design, and therefore will not be repeated here. However, any changes are expected also to be applied to the full scale design.

- Equalization is to occur in the existing 316,000 gallon tank, operated at ½ full level. This will give 12 hour detention based on 300,000 GPD leachate generation.

- Clarification will use an inclined plate clarifier with 0.11 gpm/sf net loading rate (translating to traditional circular clarifier loading of 148 gpd/sf). No information was provided regarding overall sizing of the final clarifiers, rather than the loading rate. At 0.11 gpm/sf, 150,000 GPD would require about 950 sf and 300,000 GPD would require about 1900 sf. <u>However, we need for you to provide actual data from the pilot studies and your planned total size for the clarifiers.</u>

- To reduce the amount of scaling that is expected with pH levels at 10–11, you plan to precipitate metals at a pH of 9. Zinc precipitation is most efficient at pH 10, and degrades quickly as pH lowers. <u>Please provide data showing the continued effectiveness of zinc precipitation at the lower pH level.</u>

- <u>Please also provide data showing the levels of removal achieved for iron and, especially, arsenic and mercury – along with any other metals that have been evaluated.</u>

- Please note that MSD is not requiring that the plant startup meet a date of December 31, 2013. However, Bridgeton Landfill has a strong economic reason to meet as early a date as possible. No additional discharge to MSD will be allowed until the plant is in operation.

- For the biological treatment, you indicate that the expected F/M (food to microorganism) ratio of 0.2 – 0.4 results in MLSS "double the concentration usually seen at complete mixed aeration systems." However, you also state that "this is consistent with the process used at other landfills for an aeration system and membrane separation technology."

- As noted above, no information or data is included for sizing of the ultrafilters.

- As noted above, transmittance and atmospheric exposure limits in the wastewater system also are critical considerations for the pretreatment facility design. <u>Design data you have regarding these items need to be submitted.</u>

- MSD does recognize that design aspects continue to be addressed and adjusted, as implied in the plan's statement: "In addition, other unit processes may be recommended to reduce the leachate concentrations to a level acceptable by MSD, if the proposed processes in the full scale pretreatment plant do not adequately treat the leachate to the level desired, based on the bench and pilot tests described herein."

3.6 Chemical – Defoamer

- We recognize that silicone based defoamers will be avoided to prevent fouling of the ultrafilters. However, we also caution against excess use of oil based defoamers. Please keep MSD's oil & grease discharge limits in mind when determining application levels.

Appendix B – Control Narrative

- We did not notice alarms for the following conditions. <u>Please either indicate where they are mentioned, add the alarms, or explain why they are not needed.</u>
    - Alarms on pH levels outside the adjustment start and stop levels. E.g. pH is at 6.5 and adjustment does not raise the pH to at least 7.5 within XX minutes. This could indicate a bad probe or a blocked/empty chemical tank.

- Alarms if caustic or acid pH adjustment tanks get below a minimum level or become empty.
- Alarms for dissolved oxygen levels, similar to that for pH levels. This could indicate equipment failures for the aeration blowers, etc.

Preliminary Spill and Slug Control Plan for the Pretreatment System at the Bridgeton Landfill

General

- The plan will need to be completed and approved prior to MSD granting approval for discharge to MSD.
- How will blown ultrafilter membranes be detected and handled?

4.0 Material Inventory & Drain Locations

- There is no containment for the polymer totes. Please explain why this is not necessary, or add containment. Note that containment is designed to address releases to both sanitary and storm sewers.
- There is no containment listed for the defoamer totes in the ultrafilter area. Please explain why this is not necessary, or add containment.

4.1 Equalization Tank

- Please provide the following additional information.
  - Containment volume relative to the 316,000 gallon equalization tank
  - Presence of any drain valve for storm water, along with procedures for release, and methods to insure drain valves are kept closed.

4.2 Leachate Pretreatment Building

- We note that the building has no direct connection to the sewer system, but instead has a sump that goes back to the equalization tank.

4.3 Aeration Tanks

You state, "Each area has secondary containment with drain valves that are normally in the closed position." What methods will be used to insure the drain valves are kept closed?

7.0 Reporting Procedures (and Appendix A Emergency Contacts)

- To clarify, the telephone number listed actually is the MSD 24 hour emergency line (314-768-6260), rather than the number for MSD's Missouri River Treatment Plant. Calling the emergency line allows the dispatcher to notify workers who may be in the sewer system, as well as the MSD Missouri River Treatment Plant
- Please note that a formal, written notification of a problem discharge must be *submitted* to MSD within five days, not just composed by then. Please change your procedures accordingly.

Figure 2 Counter Measures Process

- The figure is unclear regarding "Is the incident serious," "Has a spill occurred into the pretreatment plant?" and when the plant manager and MSD are contacted. Please modify the figure to clarify the progression.

Construction Plans

- Please note that the comments below may apply to more than the single sheets identified.

P-500

- The plans show two sludge thickeners. However, MST-411A is shown is gray rather than the normal black shown for other equipment. Is MST-411A for the future? If so, please label it as "future" like was done for the future screw press.

- It was discussed during meetings between MSD and Bridgeton Landfill that there would be three ultrafilters, to allow complete treatment of all leachate when one ultrafilter is down for repair or membrane replacement. However, only two ultrafilters are shown (MBR-308A and MBR-308B). In addition no space has been allocated for a third ultrafilter, either for the present or the future. Please explain or correct this.

- Chemical unloading shows a square "drain" inside a containment area, with a dotted line leading out from it. The Spill Plan's section 4.2 indicates that this area will be covered to prevent precipitation, along with the statement "Spills are contained and will be pumped to the Equalization Tank." Please correct the drawings to show a sump rather than a drain.

P-505

- The plans show sumps within the containment area for the four 1 million gallon aeration tanks. However, the Spill Plan narrative says there are drain valves in secondary containment. Please clarify if one or both are present, the purpose for the sumps (to pump storm water or spills that cannot be discharged to storm?), and if the drain valves can be removed so that only sumps are used.

General

- Does the existing 316,000 gallon equalization tank have sumps or drain valves in its containment area? As with the aeration tanks, please clarify if one or both are present, the purpose for the sumps (to pump storm water or spills that cannot be discharged to storm?), and if the drain valves can be removed so that only sumps are used.

Thank you for helping us comply with federal and state regulations. If you have any questions, please contact me at 314.436.8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT
Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

cc: John Lodderhose – MSD DEC
Ken Gambaro – MSD Missouri River Treatment Plant

Doug Mendoza

Bridgeton Landfill

From: Doug Mendoza
Sent: Monday, September 09, 2013 3:12 PM
To: Bret A. Berthold; Brian G. Gibson; 'Brian Power'; 'Bryan Sehie'; Catherine Politte; Christopher J. Bulmahn; 'Craig Almanza'; Darin Lewis; Doug Mendoza; 'Ed Galbraith'; 'Jessica Merrigan'; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; 'Michele Boussad'; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; 'Steve Smith'; Todd Heller; Tom Boehm; 'William Beck'
Cc: Margie Irvin; Scott Rehmer; Rebecca Vitelli; Dave Schepers; Jason T. Edwards; Joe Pavlich; Keith Holderle; Dave Kupke; Jason Gill; Martin Blecha; Michael S. Kynion
Subject: RE: Bridgeton Landfill leachate delivery volumes for the week starting Sept. 16?

Bill and Jessie,

Thank you. I will have staffing scheduled for 5:00 am to 4:30 pm for Mon. Sept. 16 through Fri. Sept. 20. Then Sat. Sept. 21 & Sun. Sept. 22 will be scheduled to be open from 5:00 am to 3:00 pm.

Doug Mendoza

From: Bill Abernathy [mailto:babernathy@feezorengineering.com]
Sent: Monday, September 09, 2013 3:06 PM
To: Merrigan, Jessie (LG); Doug Mendoza
Cc: Dan Feezor; Power, Brian (BPower@republicservices.com)
Subject: RE: Bridgeton Landfill leachate delivery volumes for the week starting Sept. 16?

Dan I think we revert back to 150k on Saturday 9/21. I figured we're good thru Friday since we could top off the 96 at the beginning of the week and that would last us 4-5 days if we needed the extra volume to go to Bissell.

Bill Abernathy
Residuals Management Team Member
Feezor Engineering, Inc.
314-502-1299

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Monday, September 9, 2013 3:00 PM
To: Doug Mendoza
Cc: Dan Feezor; Bill Abernathy; Power, Brian (BPower@republicservices.com)
Subject: RE: Bridgeton Landfill leachate delivery volumes for the week starting Sept. 16?

Dan and Bill, please confirm if you would like to revert to 150,000 after Friday or keep at 172,500 through the weekend.

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Monday, September 09, 2013 2:58 PM
To: Merrigan, Jessie
Cc: Dan Feezor; Bill Abernathy (babernathy@feezorengineering.com); Power, Brian (BPower@republicservices.com)
Subject: RE: Bridgeton Landfill leachate delivery volumes for the week starting Sept. 16?

Jessie,

Yes, we have staffing arranged for that week. However, the week normally is scheduled through Sunday. Do you wish to bring 175,000 GPD through Sunday, September 22, or do you want to revert to 150,000 GPD after the Friday, September 20 deliveries?

Doug

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Monday, September 09, 2013 2:54 PM
To: Doug Mendoza
Cc: Dan Feezor; Bill Abernathy (babernathy@feezorengineering.com); Power, Brian (BPower@republicservices.com)
Subject: RE: Bridgeton Landfill leachate delivery volumes for the week starting Sept. 16?

Good afternoon Doug,

I apologize for taking a while to get back to you. I have checked with the team and we would appreciate extending the additional volume through next week – through Friday September 20th – if it is possible for MSD to make arrangements for the additional staffing for next week. Please let us know if that is acceptable.

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

Any U.S. federal tax advice contained in this communication (including any attachments or enclosures) was not intended or written by the author to be used, and cannot be used, for the purpose of (1) avoiding penalties that may be imposed on a taxpayer or (2) promoting, marketing, or recommending to another party any transaction or other matter addressed herein.

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From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Monday, September 09, 2013 11:15 AM
To: Merrigan, Jessie
Subject: FW: Bridgeton Landfill leachate delivery volumes for the week starting Sept. 16?

Jessie,

I know it is still the morning that I sent this email to Dan Feezor (accidently three times, apparently), but he may not necessarily be the one person making this decision. Would you please see that whoever needs to get back to me with the information?

Thanks,
Doug mendoza

From: Doug Mendoza
Sent: Monday, September 09, 2013 8:25 AM
To: Dan Feezor (dfeezor@feezorengineering.com) (dfeezor@feezorengineering.com) (dfeezor@feezorengineering.com)
Subject: Bridgeton Landfill leachate delivery volumes for the week starting Sept. 16?

Dan,

I know it is the first day of the increased volume. However, for scheduling purposes, we need to know if the 175,000 GPD will continue for the week of Sept. 16-22. If you prefer, let us know and we can continue at 175,000 GPD until you tell us otherwise (with one week prior notice, of course.)

---Doug Mendoza

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

September 10, 2013

Brian Power
Environmental Manager
BRIDGETON LANDFILL, LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

Dear Mr. Power:

We have reviewed the "Leachate Pre-Treatment System Plan" and draft "Preliminary Spill and Slug Control Plan" submitted on August 30, 2013. These plans were submitted by Kevin Kamp of Civil & Environmental Consultants for Bridgeton Landfill.

We recognize that your accelerated design and construction schedule means that the pretreatment system essentially is a design-build situation. Thus, we have not objected to construction commencing prior to MSD's approval of the plans, as required under MSD ordinance 12559, Article VII, Section Two. Please note however, that this does not remove the right for MSD to require changes to facilities, whether or not they have already been placed. In addition, discharge from Bridgeton Landfill's pretreatment system to MSD may not commence until MSD gives final approval.

MSD's comments, questions, and notes on the submitted plans are included below. We have correlated them to the specific sections of the plans for your convenience.

Leachate Pre-Treatment System Plan

1.1 Regulatory Background

- Please note that MSD ordinance 12559 does not contain pretreatment limits for surcharge. However, MSD did direct Bridgeton Landfill to have its pretreatment system achieve surcharge pollutant (BOD, COD, TSS) discharge levels consistent with those for which it was certified prior to the change in its leachate characteristics. We understand that it may be difficult to achieve the exact levels for which Bridgeton Landfill was previously certified. MSD can consider other discharge levels, so long as the wastewater system and treatment plant have capacity for and can adequately treat the wastewater, while still properly serving our other customers.

- Note also that while the plan acknowledges and lists the ordinance's numerical pollutant discharge limitations, MSD ordinance 12559 also contains a list of prohibited discharge conditions. <u>Those prohibitions must not be violated by Bridgeton Landfill's discharge, and include exposure limits for gases, vapors, and fumes in the wastewater system's atmosphere.</u>

1.3 Source, Volume and Nature of Leachate

- The leachate volume is characterized as ranging from 150,000 to 300,000 GPD, with the design flow based on 300,000 GPD. However, historical data submitted to MSD shows flows between 300,000 and 400,000 GPD as recently as 2008 – 2010. The plan also characterizes the average leachate volume as 150,000 GPD. Please provide supporting documentation for the figures used in the plan.

- The sizing of equipment also appears to be based on the design flow, without allowance for peak or maximum flows. Please clarify how flows above design flow will be handled for pretreatment.

- Zinc (50 mg/L) and iron (800 mg/L) are listed as the metals used for the design basis. However, arsenic and mercury – other metals that also are present above discharge limits in the untreated leachate – are of equal or greater concern to MSD. Please include these metals as in the treatment evaluation, and include them in the evaluation. Additional comments regarding this are included below.

- MSD also previously informed Bridgeton Landfill that ultraviolet transmittance will be a critical discharge consideration, due to the use of UV disinfection at MSD's Missouri River Treatment Plant. Please include transmittance as part of the treatment evaluation, and include it in the evaluation. Additional comments regarding this are included below.

1.4 Treatability Test Program – Bench Scale

- Should sufficient ultraviolet transmittance not be achieved through the clarification and biological treatment steps, you may wish to further investigate electrocoagulation to help achieve this. A number of studies are cited on the Internet regarding the use of electrocoagulation to remove humic acids, which may assist you in this.

1.5 Treatability Test Program – Pilot Scale

- The pilot membrane bioreactor system consists of two aeration tanks of 3,000 gallons and 1,000 gallons and an ultrafilter module. No information was included regarding the ultrafilter's through rate. However, during meetings between MSD and Bridgeton Landfill, it was mentioned that the pilot MBRs treated only 1.5 GPM. It was unclear if that was limited by the ultrafilter's through rate.

- We have concerns about moving directly from 1.5 GPM to 105–210 GPM (150K–300K GPD), especially concerning fouling rates for the ultrafilters. Please provide information regarding how this will be addressed, as well as data and other information you have regarding the ultrafilters' fouling rates.

2.0 Full Scale Pretreatment Facility Design

- Most items listed above also apply to the full scale design, and therefore will not be repeated here. However, any changes are expected also to be applied to the full scale design.

- Equalization is to occur in the existing 316,000 gallon tank, operated at ½ full level. This will give 12 hour detention based on 300,000 GPD leachate generation.

- Clarification will use an inclined plate clarifier with 0.11 gpm/sf net loading rate (translating to traditional circular clarifier loading of 148 gpd/sf). No information was provided regarding overall sizing of the final clarifiers, rather than the loading rate. At 0.11 gpm/sf, 150,000 GPD would require about 950 sf and 300,000 GPD would require about 1900 sf. <u>However, we need for you to provide actual data from the pilot studies and your planned total size for the clarifiers.</u>

- To reduce the amount of scaling that is expected with pH levels at 10–11, you plan to precipitate metals at a pH of 9. Zinc precipitation is most efficient at pH 10, and degrades quickly as pH lowers. <u>Please provide data showing the continued effectiveness of zinc precipitation at the lower pH level.</u>

- <u>Please also provide data showing the levels of removal achieved for iron and, especially, arsenic and mercury – along with any other metals that have been evaluated.</u>

- Please note that MSD is not requiring that the plant startup meet a date of December 31, 2013. However, Bridgeton Landfill has a strong economic reason to meet as early a date as possible. No additional discharge to MSD will be allowed until the plant is in operation.

- For the biological treatment, you indicate that the expected F/M (food to microorganism) ratio of 0.2 – 0.4 results in MLSS "double the concentration usually seen at complete mixed aeration systems." However, you also state that "this is consistent with the process used at other landfills for an aeration system and membrane separation technology."

- As noted above, no information or data is included for sizing of the ultrafilters.

- As noted above, transmittance and atmospheric exposure limits in the wastewater system also are critical considerations for the pretreatment facility design. <u>Design data you have regarding these items need to be submitted.</u>

- MSD does recognize that design aspects continue to be addressed and adjusted, as implied in the plan's statement: "In addition, other unit processes may be recommended to reduce the leachate concentrations to a level acceptable by MSD, if the proposed processes in the full scale pretreatment plant do not adequately treat the leachate to the level desired, based on the bench and pilot tests described herein."

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- We recognize that silicone based defoamers will be avoided to prevent fouling of the ultrafilters. However, we also caution against excess use of oil based defoamers. Please keep MSD's oil & grease discharge limits in mind when determining application levels.

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Preliminary Spill and Slug Control Plan for the Pretreatment System at the Bridgeton Landfill

General

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- Please provide the following additional information.
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- Please note that a formal, written notification of a problem discharge must be *submitted* to MSD within five days, not just composed by then. Please change your procedures accordingly.

Figure 2 Counter Measures Process

- The figure is unclear regarding "Is the incident serious," "Has a spill occurred into the pretreatment plant?" and when the plant manager and MSD are contacted. Please modify the figure to clarify the progression.

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- Please note that the comments below may apply to more than the single sheets identified.

P-500

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P-505

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Thank you for helping us comply with federal and state regulations. If you have any questions, please contact me at 314.436.8717.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Douglas M. Mendoza, P.E.
Manager of Industrial Pretreatment

cc: John Lodderhose – MSD DEC
Ken Gambaro – MSD Missouri River Treatment Plant

Doug Mendoza

Bridgeton Landfill

From: Darin Lewis
Sent: Monday, September 09, 2013 2:07 PM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Steve Grace; Sara Kammerer
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 9/01/2013 to 9/07/2013.
9/1 – 150,000 gallons
9/2 – 150,000 gallons
9/3 – 150,000 gallons
9/4 – 150,000 gallons
9/5 – 150,000 gallons
9/6 – 150,000 gallons
9/7 – 150,000 gallons
Total = 1,050,000 gallons

2013

Bridgeton Landfill LLC
Monthly Leachate Outfall Report

9/4/2013 Filed in 15.4

MSD 027367

1003803000

Month	Net Meter Reading	Precipitation Inches	Date of Reading	Gallons	Average Daily Discharge (Gal)	Equivalent Cubic Feet	Equivalent 100 Cubic Feet
January	6,297,239	3.12	2/1/2013	3,498,515	112,855	467,715.91	4,677.16
February	6,905,982	3.25	3/1/2013	608,743	21,740	81,382.75	813.83
March	6,906,109*	4.95	4/1/2013	0*	0*	0*	0*
April	6,915,104	5.67	5/1/2103	8,604**	8,604**	1,150.27	11.50
May	81,827	7.13	6/1/2013	373,684***	12,054	49,957.75	499.58
June	284,978	5.86	7/1/2013	203,151	6,771	27,159.22	271.59
July	319,982	3.35	8/1/2013	35,004	1,129	4,679.68	46.80
August	728,556	1.19	9/1/2013	408,574	13,180	54,622.19	546.22
September							
October							
November							
December							

Note:

*Flow represented is due to flow meter error. No discharge to MSD has occurred between 2/7/2013 and 4/30/2013.

** Discharge to MSD was resumed on 4/30/2013 (Net meter reading 6,906,500)

***New flow meter intalled and set to 0, meter was also reset twice during May, see daily logs.

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SEP 05 2013
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ENVIRONMENTAL COMPLIANCE

AUGUST 2013

Civil & Environmental Consultants, Inc.
4848 Park 370 Blvd., Suite F
Hazelwood, MO 63042
Phone: (314) 656-4566 · **Toll Free:** (866) 250-3679
Fax: (314) 656-4595

Letter of Transmittal

Date: *8/30/2013* | Job No.: *130-484*

Attention: *John Lodderhose/Doug Mendoza*

To:
Metropolitan Sewer District (MSD)

RE:
Bridgeton Landfill Pretreatment Plat

We are sending you *attached* via *Package Delivery* the following items:

☐ Shop drawings ☐ Prints ☑ Plans ☐ Samples ☑ Specifications
☐ Copy of letter ☐ Change order ☐ _____

Copies	Date	No.	Description
3	8/30/13		Plan Sets
3	8/30/13		Design Reports
3	8/30/13		Spill/Slug Control Plan

☐ For approval ☐ Approved as submitted ☐ Resubmit _ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit _ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return _ prints
☐ For review and comment ☐ _
☐ For bids due ☐ Prints returned after loan to us

Remarks:

Copy to: -

Signed: _____
Kevin T. Kamp

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BRIDGETON PRETREATMENT FACILITY GLOBAL DRAWING LIST
PERMIT DRAWINGS

Friday, August 30, 2013

Drawing Number	Drawing Title
Civil:	
C-000	TITLE SHEET
C-100	DEMOLITION PLAN
C-200	SITE LAYOUT
C-300	GRADING PLAN
C-800	CONSTRUCTION DETAILS
Architectural:	
A-100	GROUND FLOOR PLAN
A-101	MEZZANINE PLAN
A-102	ROOF PLAN
A-103	SUBSLAB DRAINAGE AND VENTING
A-200	EXTERIOR ELEVATIONS
A-201	EXTERIOR ELEVATIONS
A-300	BUILDING SECTIONS
A-301	BUILDING SECTIONS
Piping & Instrumentation:	
P-100	YARD PIPING
P-200	PP&ID LEGEND
P-300	PFD
P-301	PFD
P-302	PFD
P-304	HYDRAULIC PROFILE
P-305	PFD
P-401	PP&ID COLLECTION SYSTEM
P-402	PP&ID COLLECTION SYSTEM
P-403	PP&ID COLLECTION SYSTEM
P-404	PP&ID COLLECTION SYSTEM
Wastewater Treatment:	
P-500	GEN ARRANGEMENT
P-501	BUILDING PIPING LAYOUT
P-502	CHEMICAL PIPING LAYOUT
P-503	SERVICE WATER LAYOUT
P-504	AIR DUCT LAYOUT
P-505	PLAN AND DETAILS
P-506	AIR DUCT PLAN AND DETAILS
P-600	BUILDING PIPING SECTIONS
P-601	BUILDING SECTIONS & DETAILS
P-603	TANK AERATION SECTIONS & DETAILS
P-604	SERVICE WATER DETAILS AND NOTES
Electrical:	
E-1.02	ELECTRIC PLAN

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ENVIRONMENTAL COMPLIANCE

NOTE: Complete report is

LEACHATE PRE-TREATMENT SYSTEM PLAN

SUBMITTED IN COMPLIANCE WITH AGREED ORDER SECTION 17.D.

Prepared for:

BRIDGETON LANDFILL, LLC
13570 ST. CHARLES ROCK RD.
BRIDGETON, MO 63044

Prepared by:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
ST. LOUIS, MISSOURI

CEC Project 130-484

August 30, 2013
(Rev 6)

STATE OF MISSOURI
IVAN COOPER
NUMBER PE-2003009211
PROFESSIONAL ENGINEER

August 30, 2013

Civil & Environmental Consultants, Inc.

St. Louis 4848 Park 370 Blvd. • Suite F • Hazelwood, MO 63042
Phone 314/656-4566 • Fax 314/656-4595 • Toll Free 866/250-3679 • E-mail stlouis@cecinc.com

Austin Boston Charlotte Chicago Cincinnati Cleveland Columbus Detroit Export Indianapolis Nashville North Central PA Phoenix Pittsburgh

Corporate Web Site http://www.cecinc.com

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NOTE: Complete report and all Maps assoc

DRAFT

PRELIMINARY SPILL AND SLUG CONTROL PLAN FOR PRETREATMENT SYSTEM AT THE BRIDGETON LANDFILL

Prepared For:

BRIDGETON LANDFILL, LLC

Prepared by:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
ST. LOUIS, MISSOURI

CEC Project 130-484

August 30, 2013

Civil & Environmental Consultants, In

St. Louis | 4848 Park 370 Blvd. • Suite F • Hazelwood, MO 63042
Phone 314/656-4566 • Fax 314/656-4595 • Toll Free 866/250-3679 • E-mail stlouis@cecinc.com

Austin Boston Charlotte Chicago Cincinnati Cleveland Columbus Detroit Export Indianapolis Nashville North Central PA Phoenix Pittsburgh

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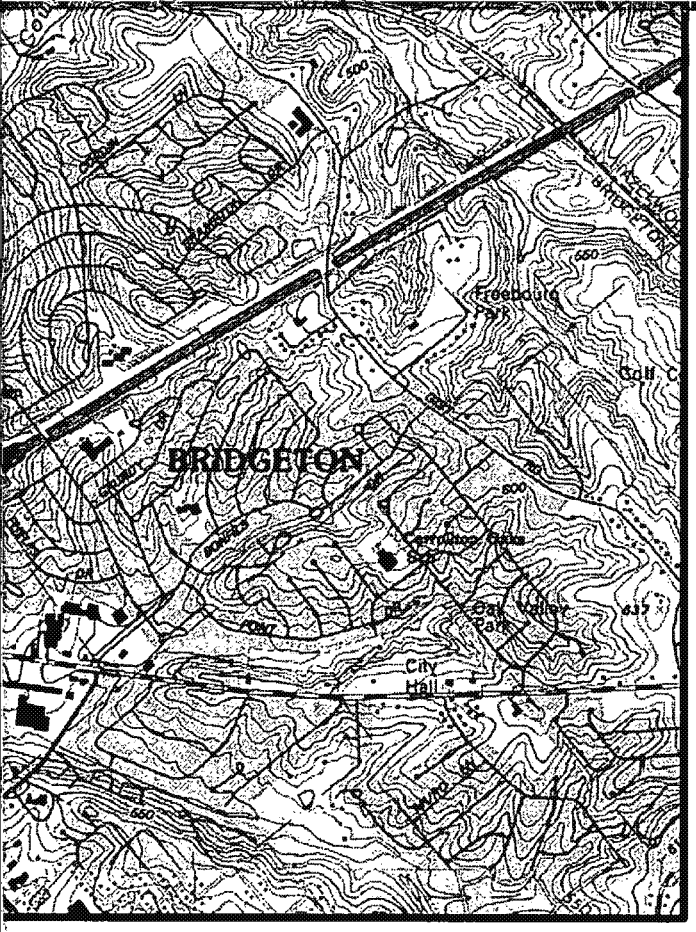
Corporate Web Site http://www.cecinc.



SCALE IN FEET

0 2000 4000

This is the 1st Map that go

RECEIVED

AUG 30 2013

DIVISION OF
ENVIRONMENTAL COMPLIANCE

NOT FOR CONSTRUCTION

KEVIN KAMP, ENGINEER
PE - 2006019670
*HAND SIGNATURE ON INDIVIDUAL SHEETS

STATE OF MISSOURI
KEVIN T. KAMP
NUMBER
PE-2006019670
8/30/13
PROFESSIONAL ENGINEER

BRIDGETON LANDFILL, LLC
13570 ST. CHARLES ROCK ROAD
BRIDGETON, MO 63044
PHONE: (314) 744-8195
FAX: (314) 656-2107

BRIDGETON LANDFILL
13570 ST. CHARLES ROCK ROAD
TREATMENT BLDG CONSTRUCTION PLANS
COVER SHEET

DATE:	AUGUST 2013	DRAWN BY:	CAC
DWG SCALE:	(AS NOTED)	CHECKED BY:	KTK
PROJECT NO:	130-484		
APPROVED BY:	KTK (SIGNED & SEALED)*		

DRAWING NO.:

C000

D C B A

Doug Mendoza

From: Joe Pavlich
Sent: Friday, August 30, 2013 11:38 AM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: Bridgeton landfill

Doug, here is the reading from Bridgeton landfill; 692085, with a flow rate of 780-815 Gals/Hr. on 8/30/13 @ 10:10 a.m.

To: BRIDGETON LANDFILL LLC [1003803000]

From: Doug Mendoza

Date: August 29, 2013

Re: Technical issues meeting on 9/16/13

- Representatives from MSD and Bridgeton Landfill met and discussed several items related to discharges from Bridgeton Landfill.

- Bridgeton Landfill is considering increasing the onsite (to the Missouri River plant) discharge rate slightly, while keeping the total volume at or below 20,000 GPD. This would allow the discharge to be stopped each day between 6 am and 10 am. MSD could then enter the pump station any day during these hours.

- Landfill reps asked for permission to truck up to 200,000 GPD to the Bissell Point plant's hauled waste station. MSD will check with the treatment plant manager to see if that is acceptable.

- Landfill reps agreed that the elevated carbon monoxide readings in the pump station are from the leachate discharge. They asked if the readings were acceptable, considering the other safety controls in place at the pump station.

    - John Lodderhose said that Rob Daly from MSD Operations needed to be part of that discussion. Rob was not able to make this meeting. But the issue also needs further study first, such as the potential effect of adding a fresh air source, studying CO levels with the landfill's discharge line plugged, etc.

    - Landfill reps noted that the discharge had been reading about 500 ppm, and is lowered to about 100 ppm with ventilation. In addition, earlier this summer using 4 gas personal meters, it only took about 10 minutes to get good air inside the pump station if fresh air was blown in.

    - Bryan Sehie will work with MSD Operations to develop an acceptable procedure regarding the carbon monoxide at the pump station.

- For anomalous BOD readings that were noticed in batches from August, lab retests showed more normal BOD readings. However, since the samples were so long past acceptable hold time, the results cannot be considered reliable. Regardless, it is thought the initial readings were a lab issue.

- The recent high iron level, from an MSD sample, appears to correlate to similarly high TSS levels. MSD's lab is retesting the sample, but does not yet have results.

- For the pretreatment system, equipment has been ordered, the million gallon tanks are going up, and the pilot plant continues to run to get more complete sludge wasting data.

- Regarding the questions raised during MSD's review of the system's plans, the pretreatment consultant addressed several items:
    - There actually are two skids for the ultrafilters – with each skid able to hold two ultrafilters, rather than only two ultrafilters. One skid will have two ultrafilters on it, and the other skid will have one ultrafilter and room for a fourth ultrafilter. Each ultrafilter can treat 150,000 GPD by itself.
    - Metals – arsenic, iron, mercury, zinc – all show quite a bit of removal, some to very low levels. Doug Mendoza pointed out that arsenic is bouncing around the discharge limit, and asked them to continue testing for it to gather additional data.
    - They had a transmittance run on a treated sample, with a 50% transmittance on the ultraviolet wavelength. This is a couple of orders of magnitude beyond what MSD measured from a treated sample that was collected the day before the landfill's sample. MSD measured virtually 0% transmittance, with 50% not achieved until 1:100 dilution. The landfill reps will investigate their lab method and results.
    - The consultant noted that phenol tends to absorb at the same ultraviolet wavelength, but is consumed in their biological treatment process. Some cities actually put a phenol limit of about 1 ppm to avoid problems with their ultraviolet disinfection.
- The next update to the pretreatment system plans should be completed by mid-October, and should address the issues MSD raised during its review.

MSD AND BRIDGETON LANDFILL TECHNICAL ISSUES MEETING

September 16,, 2013

AGENDA

1. Introductions
2. Updates
    a. Discharges to Bissell Point and MO River Plants
    b. Pretreatment design and testing
    c. CO issue
    d. BOD issues
    e. Iron NOV
3. Pending requests
    a. Increase 25,000 gpd
4. Other issues

Selected Bridgeton MBR Pilot test Effluent Constituents

MBR Effluent Analyte	Concentration	Daily Average MSD Limit	Instantaneous MSD Limit	8/9/2013	8/13/2013	8/14/2013	8/15/2013	8/19/20133
BOD Sol	mg/l	312	312?	210	530		77	91
BOD Tot	mg/l	312	312?	760	410		92	110
COD	mg/l	953	953?	3200	4300		4100	580
Chloride	mg/l	N/A	N/A	2100	2900		4400	4900
Nitrate - N	mg/l	N/A	N/A	<25	<25		<50	<50
Nitrite - N	mg/l	N/A	N/A	<25	<25		<50	<50
Phosphorus - Ortho as P	mg/l	N/A	N/A	790	1400		520	640
Sulfate	mg/l	N/A	N/A	230	410		<500	<500
TOC	mg/l	N/A	N/A	810	1200		1400	1600
Total Alk. as CaCO3	mg/l	N/A	N/A	1100	1100		900	1100
Cyanide, amenable	mg/l	0.4	0.4	<.005	<.005		<.005	<0.005
O&G	mg/l	200	200	<5.5	<5		<5	<5
Phenol	mg/l	7	21	<2.5	<2.5		<2.5	<1
TDS	mg/l	N/A	N/A	8400	11000		13000	16000
TSS	mg/l	65	65?	8.8	21		13	33
TKN	mg/l	N/A	N/A	290	220		220	300
Ammonia - N	mg/l	N/A	N/A	120	170		110	200
Total Phos. as P	mg/l	N/A	N/A	660	560		470	650
As- tot	mg/l	0.4	1.2	<0.15	0.35		0.22	0.38
Fe-tot	mg/l	150	450	1.4	0.94		0.99	1.6
Hg- tot	mg/l	0.01	0.03	<0.002	<0.002		<0.002	<0.002
Zn- tot	mg/l	3	3	0.22	0.28		0.24	0.34
MLVSS	mg/l	N/A	9	4200	5800	7400	7800	13000
MLSS	mg/l	N/A	N/A	11000	16000	21000	23000	34000

(more results on back)

8/22/2103	8/.26/2013	8/29/2013	8/30/2013	9/5/2013
220	410	58		
220	360	80		
5900	6200	4100		
4900	6000	3900		
<50	<50	<50		
<50	<50	<50		
220	24	18		
1000	2700	2800		
1800	2000	1900		
1400	1400	660		
<0.005	<.005	<0.005		
5.3	1.1	16		
<5	<.2	<.5		
16000	17000	14000		
17	4.8	11		
300	320	260		
170	190	180		
210	25	12		
0.48	<0.15	0.19		
1.1	0.8	0.49		
<0.002	<0.002	<0.002		
0.14	0.19	0.13		
16000		9900	11000	9000
34000		30000	32000	31000

To: BRIDGETON LANDFILL LLC [1003803000]

From: Doug Mendoza

Date: August 29, 2013

Re: Technical issues meeting on 8/29/13

- Representatives from MSD and Bridgeton Landfill met and discussed several items related to discharges from Bridgeton Landfill.

- Two of the 1 million gallon tanks, which will provide aeration in the pretreatment system, are about to be erected at Bridgeton Landfill.

- Bridgeton Landfill intends to submit its pretreatment system plans tomorrow, to include a narrative description as well as a spill & slug control plan. Three copies are to be submitted.

- The recent air sampling results at the Westlake pump station, which MSD already has a copy of, showed low benzene results that were not a health concern. The samples were taken in the wet well, with the doors open. Bridgeton Landfill will submit a summary memo describing the specifics (how and where) of the sampling, along with pictures of it.

- MSD presented graphical information (attached) showing how carbon monoxide levels in the pump station jump above acceptable exposure levels when the landfill discharges its leachate to the pump station. Bridgeton Landfill will look at the data, including more recent data, and investigate the situation.

- For the pretreatment system design and testing
  - Bench testing is finishing up
  - Pilot testing is ongoing
  - Arsenic levels are trending below the 0.4 mg/L ordinance limit (0.3 – 0.38)
  - Other metals are running very low or non-detect.
  - BOD & COD levels are actually getting below the 300/600 mg/L surcharge levels.
  - Ammonia levels are coming in at about 1100 mg/L, going out at about 100 mg/L
  - However, they are generating much more sludge than anticipated
  - They are planning on installing three ultrafilters, with each one designed to handle 50% of the anticipated flow. This will allow one to be down for maintenance, etc.

- MSD agreed to allow Bridgeton Landfill to begin hauling up to 175,000 GPD to the Bissell Point HWRS, starting 9/2/13.
- In addition, loads shall start arriving at 5 am instead of 7 am.
- However, Bridgeton Landfill's leachate generation has been down, probably due to dry conditions, possibly also due to cap on landfill itself
- They already discharge ~20,000 GPD onsite
- They just got approval to start hauling to American Bottoms again, and plan to bring them 3 loads/day to keep that plant acclimated to the loading

- End result is that they currently can stay at 150,000 GPD to the HWRS and meet their needs
- Bridgeton Landfill has some storage capacity onsite
- Should they need to increase the volume up to a max of 175,000 GPD, they will give us 7 days prior notice.

- Missing data, as relayed to Bridgeton Landfill in MSD's response to its last weekly report, was supplied.
- Anomalous BOD readings are still being investigated.

MSD AND BRIDGETON LANDFILL TECHNICAL ISSUES MEETING

August 29, 2013

AGENDA

1. Introductions
2. Updates
    a. Discharges to Bissell Point and MO River Plants
    b. Benzene air sampling results
    c. Pretreatment design and testing
3. Pending requests
    a. Increase 25,000 gpd
4. Other issues
    a. BOD/COD/TSS trends

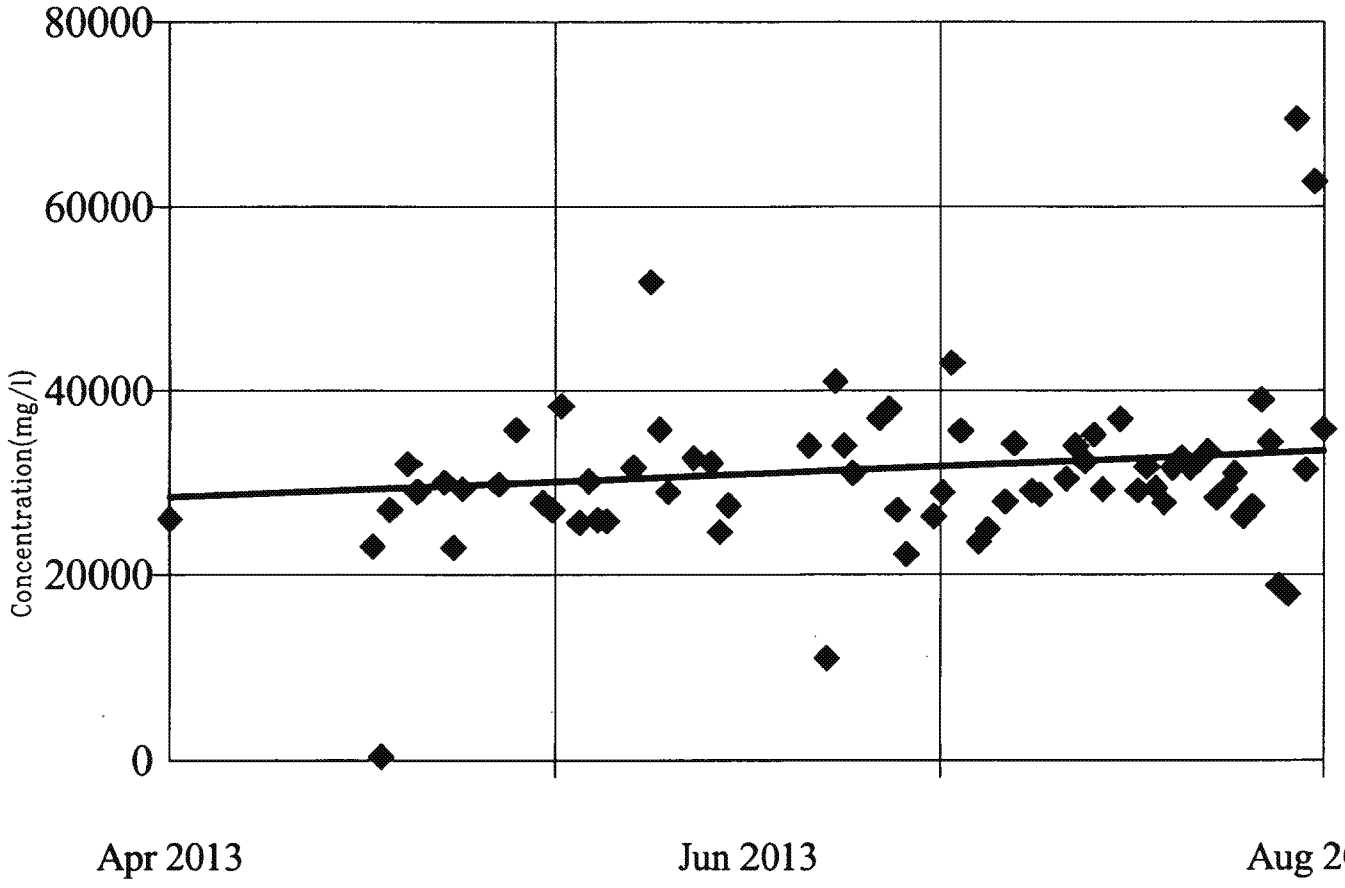
MBR Effluent

Analyte	8/9/2013	8/12/2013	8/15/2013	8/19/20133
BOD Sol	760	410	77	91
BOD Tot	210	530	92	110
COD	3200	4300	4100	580
Chloride	2100	2900		4900
Nitrate - N	25	<25	<50	
Nitrite - N	25	<25	<50	
Phosphorus - Ortho as P	790	1400	520	640
Sulfate	230	410		
TOC	810	1200		1600
Total Alk. as CaCO3	1100	1100	900	1100
Cyanide	0.009	0.009	0.012	0.11
O&G	5.5	<5	5	5
Phenol	2.5	<2.5	2.5	<1
TDS	8400	1100	13000	34000
TSS	8.8	21	13	33
TKN	290	220	230	300
Ammonia - N	120	170	110	200
Total Phos. as P	660	550	470	650
As- tot	<0.15	0.35	0.22	0.38
Fe-tot	1.4	0.94	0.9	1.6
Hg- tot	<0.002	<0.002	<0.002	<0.002
Zn- tot	0.22	0.28	0.24	0.34
MLVSS	4200	5800	7800	13000
MLSS	11000	16000	23000	34000

Table 1
BOD COD Ratios
Bridgeton Landfill
August 1-20, 2013

Location	Date	Lab Name	Data Status	Report	Biochemical Oxygen Demand (5-day) NA mg/l	Chemical Oxygen Demand NA mg/l	BOD:COD Ratio
316-048	8/20/2013	Pace		60151392	37100		0.59
316-048	8/20/2013	Pace		60151393		63100	
316-047	8/19/2013	Pace		60151386	37100		0.71
316-047	8/19/2013	Pace		60151388		52600	
316-046	8/18/2013	Pace	Validated	60151294	35200		0.64
316-046	8/18/2013	Pace		60151296		54700	
316-045	8172013	Pace		60151293	61600		1.07
316-045	8172013	Pace		60152195		57500	
316-044	8/16/2013	Pace		60151248	31900		0.46
316-044	8/16/2013	Pace	Validated	60151250		68700	
316-043	8/15/2013	Pace	Validated	60151163	30500	--	0.43
316-043	8/15/2013	Pace	Validated	60151162	--	70400	
316-042	8/14/2013	Pace	Validated	60151016	35300	--	0.64
316-042	8/14/2013	Pace	Validated	60151017	--	55300	
316-041	8/13/2013	Pace	Validated	60150935	35800	--	0.68
316-041	8/13/2013	Pace	QC pending	60150936	--	52500	
316-040	8/12/2013	Pace	Validated	60150924	62700	--	1.05
316-040	8/12/2013	Pace	Validated	60150925	--	59500	
316-039	8/11/2013	Pace	Validated	60150840	31400	--	0.67
316-039	8/11/2013	Pace	Validated	60150841	--	46700	
316-038	8/10/2013	Pace	Validated	60150839	69500	--	1.46
316-038	8/10/2013	Pace	Validated	60150842	--	47500	
316-037	8/9/2013	Pace	Validated	60150780	17900	--	0.34
316-037	8/9/2013	Pace	Validated	60150779	--	52200	
316-036	8/8/2013	Pace	Validated	60150676	18800	--	0.34
316-036	8/8/2013	Pace	Validated	60150677	--	55800	
316-035	8/7/2013	Pace	Validated	60150554	34400	--	0.82
316-035	8/7/2013	Pace	Validated	60150553	--	41700	
316-034	8/6/2013	Pace	Validated	60150406	39000	--	0.88
316-034	8/6/2013	Pace	Validated	60150422	--	44100	
316-033	8/5/2013	Pace	Validated	60150300	27400	--	0.60
316-033	8/5/2013	Pace	Validated	60150301	--	46000	
316-032	8/4/2013	Pace	Validated	60150298	26300	--	0.59
316-032	8/4/2013	Pace	Validated	60150299	--	44900	
316-031	8/3/2013	Pace	Validated	60150294	31000	--	0.66
316-031	8/3/2013	Pace	Validated	60150295	--	46700	
316-030	8/2/2013	Pace	Validated	60150249	29300	--	0.52
316-030	8/2/2013	Pace	Validated	60150250	--	56400	
316-029	8/1/2013	Pace	Validated	60150122	28300	--	0.41
316-029	8/1/2013	Pace	Validated	60150123	--	69400	

Mann-Kendall Trend Test
Biochemical Oxygen Demand



Alpha	Critical	Signif.
0.01	2.575	No
0.05	1.96	Up
0.1	1.645	Up
0.2	1.282	Up

Constituent: BOD (mg/l) Facility: Bridgeton Landfill Data File: BRIDGTON

Date: 8/28/13 Time: 6:29 PM View: 1

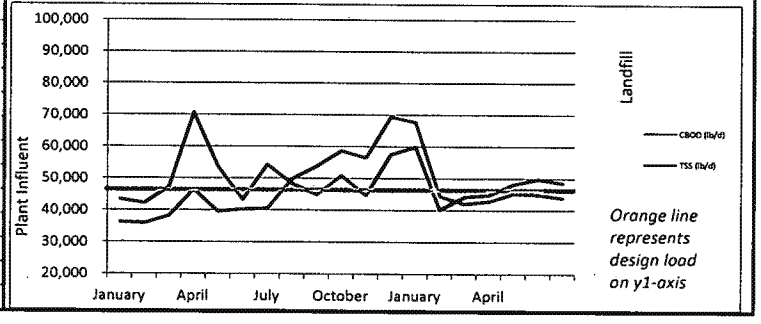
Note: Includes sample runs from 04/05/2013 through 08/13/2013. Most recent sample location was 316-041.

Missouri River - July 2013

	Final Effluent							Primary Effluent		Influent				
	CBOD (mg/L)	Weekly Average (mg/L)	TSS (mg/L)	Weekly Average (mg/L)	COD (mg/L)	CBOD/ COD Ratio	Plant Flow (MGD)	CBOD (mg/L)	Trickling Filter Loading (lb/d/kcf)	CBOD (mg/L)	Influent CBOD Loading (lb/d)	COD (mg/L)	TSS (mg/L)	Influent TSS Loading (lb/d)
1-Jul	13		15		78	0.167	29.8	87	42	151	37,528	383	164	40,759
2-Jul	14		16		88	0.159	35.2	87	50	146	42,861	366	164	48,145
3-Jul	15		15		70	0.214	30.5	81	40	158	40,190	353	144	36,629
4-Jul	19		19		75	0.253	28.3	96	45	153	36,111	336	154	36,347
5-Jul	13		14		75	0.173	27.7	72	33	130	30,032	354	154	35,577
6-Jul		15		16			28.7				-			-
7-Jul							27.1				-			-
8-Jul	15		14		85	0.176	29.2	88	42	206	50,167	487	176	42,861
9-Jul	14		19		80	0.175	29.5	99	48	243	59,785	508	216	53,142
10-Jul	18		27		75	0.240	31.3	104	53	164	42,811	413	184	48,032
11-Jul	16		18		85	0.188	27.3	87	39	180	40,983	427	188	42,804
12-Jul	12		14		89	0.135	27.5	99	45	162	37,155	428	188	43,118
13-Jul		15		18			25.6				-			-
14-Jul							26.2				-			-
15-Jul	12		15		69	0.174	27.0	96	42	216	48,639	476	390	87,820
16-Jul	25		21		97	0.258	26.8	171	75	173	38,668	409	154	34,421
17-Jul	15		14		88	0.170	26.4	128	55	196	43,154	462	170	37,430
18-Jul	13		13		96	0.135	26.8	141	62	165	36,879	472	194	43,361
19-Jul	15		12		91	0.165	27.4	100	45	201	45,932	921	232	53,016
20-Jul		16		15			25.5				-			-
21-Jul							25.8				-			-
22-Jul	15		11		86	0.174	26.3	74	32	165	36,191	473	234	51,326
23-Jul	15		15		89	0.169	27.1	109	48	288	65,092	823	294	66,448
24-Jul	17		10		71	0.239	21.2	114	40	342	60,468	968	462	81,685
25-Jul	17		1		109	0.156	27.7	140	64	220	50,824	562	102	23,564
26-Jul	16		12		80	0.200	27.2	124	55	197	44,689	520	214	48,545
27-Jul		16		10			23.8				-			-
28-Jul							23.2				-			-
29-Jul	15		15		77	0.195	24.4	96	38	172	35,001	482	222	45,176
30-Jul	26		31		105	0.248	37.1	130	79	193	59,717	426	274	84,779
31-Jul	16		25		98	0.163	28.8	100	47	168	40,352	453	186	44,676
Average	**16**		**16**		**85**		**27.6**	**105**	**49**	**191**	**43,966**	**500**	**211**	**48,684**
Design Parameters							**28.0**		**64**	**200**	**46,700**		**200**	**46,700**
Percent Above Design							**-1%**		**-24%**	**-5%**	**-6%**		**6%**	**4%**

Monthly Trends - 2012-13

	Influent Flow (MGD)	CBOD (mg/L)	CBOD (lb/d)	TSS (mg/L)	TSS (lb/d)	Trickling Filter Loading (lb/d/kcf)
January	27.2	159	36,133	192	43,477	57
February	28.1	153	35,817	180	42,226	48
March	27.3	168	38,212	208	47,273	55
April	30.2	184	46,481	280	70,705	54
May	28.1	169	39,507	229	53,669	56
June	25.4	190	40,232	205	43,315	50
July	25.0	194	40,464	260	54,341	54
August	25.7	233	49,813	226	48,380	75
September	27.4	236	53,876	197	44,948	62
October	25.4	277	58,717	240	50,937	80
November	24.0	282	56,466	223	44,726	81
December	24.3	340	69,416	284	57,602	98
January	25.6	317	67,671	281	59,980	107
February	28.0	190	44,410	172	40,183	55
March	33.8	149	42,049	157	44,292	48
April	35.1	146	42,876	153	44,846	51
May	34.7	156	45,218	167	48,267	57
June	35.9	150	44,969	167	49,946	50
July	27.6	191	43,966	211	48,684	49



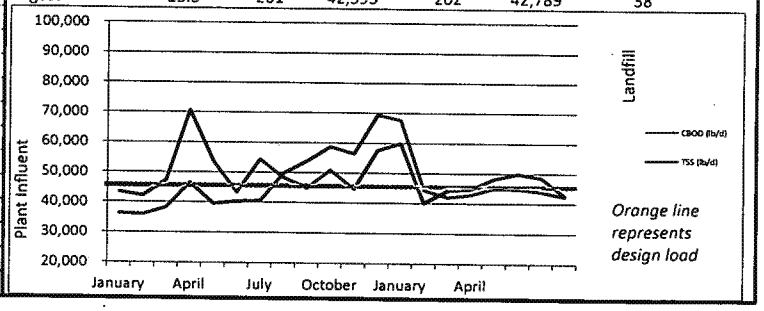
Note: Parameters highlighted in yellow are above design values.

MSD 027386

Missouri River - August 2013

Aug	Final Effluent CBOD (mg/L)	Weekly Average (mg/L)	TSS (mg/L)	Weekly Average (mg/L)	COD (mg/L)	CBOD/ COD Ratio	Plant Flow (MGD)	Primary Effluent CBOD (mg/L)	Trickling Filter Loading (lb/d/kcf)	Influent CBOD (mg/L)	Influent CBOD Loading (lb/d)	COD (mg/L)	TSS (mg/L)	Influent TSS Loading (lb/d)
1-Jul	13		20		84	0.155	26.1	110	47	178	38,746	463	198	43,099
2-Jul	13		15		85	0.153	27.4	121	54	254	58,043	434	200	45,703
3-Jul		17		21			26.8				-			-
4-Jul							24.5				-			-
5-Jul	11		13		62	0.177	26.3	59	25	176	38,604	458	190	41,675
6-Jul	11		13		70	0.157	26.6	108	47	177	39,266	426	222	49,249
7-Jul	15		15		84	0.179	26.6	118	51	223	49,471	505	214	47,475
8-Jul	16		17		76	0.211	29.2	110	53	180	43,835	480	220	53,576
9-Jul	12		11		70	0.171	27.4	104	47	172	39,305	471	186	42,504
10-Jul		13		14			24.9				-			-
11-Jul							24.6				-			-
12-Jul	14		14		89	0.157	26.2	118	51	190	41,517	514	230	50,257
13-Jul	11		17		89	0.124	26.8	129	57	180	40,232	549	206	46,043
14-Jul	20		20		119	0.168	25.3	127	53	204	43,044	485	206	43,466
15-Jul	14		17		94	0.149	25.0	149	61	229	47,747	487	202	42,117
16-Jul	15		15		108	0.139	23.5	135	52	174	34,102	491	204	39,982
17-Jul		15		17			24.4				-			-
18-Jul							23.4				-			-
19-Jul	17		13		88	0.193	25.0			212	44,202	502	170	35,445
20-Jul	17		13		97	0.175	24.8	151	61	232	47,985	514	184	38,057
21-Jul	15		16		85	0.176	24.5	135	54	228	46,587	564	214	43,727
22-Jul	14		20		99	0.141	25.1	182	75		-	542	207	43,332
23-Jul			19		98	0.000	24.4		0		-	534	236	48,025
24-Jul		16		16			23.9				-			-
25-Jul							24.6				-			-
26-Jul			36		111	0.000	25.8		0		-	433	188	40,452
27-Jul			19		102	0.000	24.8		0		-	456	170	35,161
28-Jul						#DIV/0!	21.6		0		-			-
29-Jul						#DIV/0!			0		-			-
30-Jul						#DIV/0!			0		-			-
31-Jul		#DIV/0!		28							-			-
Average	14		17		90		25.3	124	38	201	42,393	490	202	42,789

Monthly Trends - 2012-13	Influent Flow (MGD)	CBOD (mg/L)	CBOD (lb/d)	TSS (mg/L)	TSS (lb/d)	Trickling Filter Loading (lb/d/kcf)
January	27.2	159	36,133	192	43,477	57
February	28.1	153	35,817	180	42,226	48
March	27.3	168	38,212	208	47,273	55
April	30.2	184	46,481	280	70,705	54
May	28.1	169	39,507	229	53,669	56
June	25.4	190	40,232	205	43,315	50
July	25.0	194	40,464	260	54,341	54
August	25.7	233	49,813	226	48,380	75
September	27.4	236	53,876	197	44,948	62
October	25.4	277	58,717	240	50,937	80
November	24.0	282	56,466	223	44,726	81
December	24.3	340	69,416	284	57,602	98
January	25.6	317	67,671	281	59,980	107
February	28.0	190	44,410	172	40,183	55
March	33.8	149	42,049	157	44,292	48
April	35.1	146	42,876	153	44,846	51
May	34.7	156	45,218	167	48,267	57
June	35.9	150	44,969	167	49,946	50
July	27.6	191	43,966	211	48,684	49
August	25.3	201	42,393	202	42,789	38



Design Parameters	28.0	64	200	46,700	200	46,700
Percent Above Design	-10%	-41%	0%	-9%	1%	-8%

Note: Parameters highlighted in yellow are above design values.

MSD 027387

DR

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, August 28, 2013 3:44 PM
To: Doug Mendoza
Subject: Re: Bridgeton Landfill Weekly Report

Thank you, Doug. I will provide this to our team immediately.

On Aug 28, 2013, at 1:12 PM, "Doug Mendoza" <DMENDOZA@stlmsd.com> wrote:

Jessie,

We have reviewed the data posted for last week's deliveries. It seems that unusual results continued from the week before for one more batch, 316-040. The BOD was again reported higher than the COD, which is not possible. (Please note also that for last week's email, batch 316-093 should have been 316-039.) In addition, the BOD result for batch 316-044 is missing, and all results for batch 316-045 are missing.

We need to have the above items rectified as soon as possible.

For your convenience, I have copied pertinent data from the uploaded data below.

Doug Mendoza
MSD Industrial Pretreatment Manager

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Solids, total suspended
					NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l
316-046	8/18/2013	Pace	Validated	60151294	35200	--	--
316-044	8/16/2013	Pace	Validated	60151250	--	68700	3100
316-043	8/15/2013	Pace	Validated	60151162	--	70400	1460
316-043	8/15/2013	Pace	Validated	60151163	30500	--	--
316-042	8/14/2013	Pace	Validated	60151016	35300	--	--
316-042	8/14/2013	Pace	Validated	60151017	--	55300	1260
316-041	8/13/2013	Pace	QC pending	60150936	--	52500	2020
316-041	8/13/2013	Pace	Validated	60150935	35800	--	--
316-040	8/12/2013	Pace	Validated	60150924	62700	--	--
316-040	8/12/2013	Pace	Validated	60150925	--	59500	1720
316-039	8/11/2013	Pace	Validated	60150840	31400	--	--
316-039	8/11/2013	Pace	Validated	60150841	--	46700	2160
316-038	8/10/2013	Pace	Validated	60150839	69500	--	--
316-038	8/10/2013	Pace	Validated	60150842	--	47500	2160
316-037	8/9/2013	Pace	Validated	60150779	--	52200	2620
316-037	8/9/2013	Pace	Validated	60150780	17900	--	--
316-036	8/8/2013	Pace	Validated	60150676	18800	--	--
316-036	8/8/2013	Pace	Validated	60150677	--	55800	1820
316-035	8/7/2013	Pace	Validated	60150553	--	41700	2200

Doug Mendoza

From: Doug Mendoza
Sent: Wednesday, August 28, 2013 3:13 PM
To: 'Merrigan, Jessie (LG)'
Subject: RE: Bridgeton Landfill Weekly Report

Jessie,

We have reviewed the data posted for last week's deliveries. It seems that unusual results continued from the week before for one more batch, 316-040. The BOD was again reported higher than the COD, which is not possible. (Please note also that for last week's email, batch 316-093 should have been 316-039.) In addition, the BOD result for batch 316-044 is missing, and all results for batch 316-045 are missing.

We need to have the above items rectified as soon as possible.

For your convenience, I have copied pertinent data from the uploaded data below.

Doug Mendoza
MSD Industrial Pretreatment Manager

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Solids, total suspended
					NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l
316-046	8/18/2013	Pace	Validated	60151294	35200	--	--
316-044	8/16/2013	Pace	Validated	60151250	--	68700	3100
316-043	8/15/2013	Pace	Validated	60151162	--	70400	1460
316-043	8/15/2013	Pace	Validated	60151163	30500	--	--
316-042	8/14/2013	Pace	Validated	60151016	35300	--	--
316-042	8/14/2013	Pace	Validated	60151017	--	55300	1260
316-041	8/13/2013	Pace	QC pending	60150936	--	52500	2020
316-041	8/13/2013	Pace	Validated	60150935	35800	--	--
316-040	8/12/2013	Pace	Validated	60150924	62700	--	--
316-040	8/12/2013	Pace	Validated	60150925	--	59500	1720
316-039	8/11/2013	Pace	Validated	60150840	31400	--	--
316-039	8/11/2013	Pace	Validated	60150841	--	46700	2160
316-038	8/10/2013	Pace	Validated	60150839	69500	--	--
316-038	8/10/2013	Pace	Validated	60150842	--	47500	2160
316-037	8/9/2013	Pace	Validated	60150779	--	52200	2620
316-037	8/9/2013	Pace	Validated	60150780	17900	--	--
316-036	8/8/2013	Pace	Validated	60150676	18800	--	--
316-036	8/8/2013	Pace	Validated	60150677	--	55800	1820
316-035	8/7/2013	Pace	Validated	60150553	--	41700	2200
316-035	8/7/2013	Pace	Validated	60150554	34400	--	--
316-034	8/6/2013	Pace	Validated	60150406	39000	--	--
316-034	8/6/2013	Pace	Validated	60150422	--	44100	1100
316-033	8/5/2013	Pace	Validated	60150300	27400	--	--
316-033	8/5/2013	Pace	Validated	60150301	--	46000	1520
316-032	8/4/2013	Pace	Validated	60150298	26300	--	--

316-032	8/4/2013	Pace	Validated	60150299	--	44900	1500
316-031	8/3/2013	Pace	Validated	60150294	31000	--	--
316-031	8/3/2013	Pace	Validated	60150295	--	46700	1760
316-030	8/2/2013	Pace	Validated	60150249	29300	--	--
316-030	8/2/2013	Pace	Validated	60150250	--	56400	1420

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, August 28, 2013 10:32 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. Please let us know if you have any questions and we will keep you updated on the ongoing assessment discussed below.

We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

From: Merrigan, Jessie
Sent: Tuesday, August 27, 2013 12:20 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good afternoon,

Thank you for your follow up. Just as an update, we have directed Pace to re-run the recent samples that showed the BOD at 1.46 times the COD. While the BOD cannot be rerun because of hold times, they will rerun the COD and attempt to provide some insight as to why the BOD:COD ratios were so far out of the expected proportion for this sample.

In addition, we are evaluating recent BOD, TSS and COD levels as well as BOD:COD ratios, to determine if there are statistically significant trends over the past four months. We expect to have that analysis completed and to you by Thursday.

Doug Mendoza

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Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
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Jessie

LATHROP & GAGE LLP
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2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
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In addition, we are evaluating recent BOD, TSS and COD levels as well as BOD:COD ratios, to determine if there are statistically significant trends over the past four months. We expect to have that analysis completed and to you by Thursday.

MSD 027392

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH
					NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units
316-043	8/15/2013	Pace	Validated	60151162	30500	70400	748	194	ND	5.6
316-042	8/14/2013	Pace	Validated	60151017	35300	55300	655	46.4	ND	5.7
316-041	8/13/2013	Pace	QC pending	60150936	35800	52500	652	477	ND	5.5
316-040	8/12/2013	Pace	Validated	60150925	62700	59500	663	456	ND	5.6

MSD 027393

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Solids, total suspended	Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium
					NA	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-043	8/15/2013	Pace	Validated	60151162	1460	8.38	0.0408	0.695	ND	0.0170	0.252
316-042	8/14/2013	Pace	Validated	60151017	1260	9.74	0.0509	0.678	ND	ND	0.254
316-041	8/13/2013	Pace	QC pending	60150936	2020	12.4	ND	0.75	ND	ND	0.258
316-040	8/12/2013	Pace	Validated	60150925	1720	5.09	ND	0.614	ND	ND	0.218

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Cobalt	Copper	Iron	Lead	Mercury	Nickel	Selenium
					Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-043	8/15/2013	Pace	Validated	60151162	0.0514	0.0222	814	0.214	0.0041	0.136	0.0956
316-042	8/14/2013	Pace	Validated	60151017	0.0627	0.0357	940	0.209	0.0010	0.144	ND
316-041	8/13/2013	Pace	QC pending	60150936	0.0695	0.0500	929	0.222	0.0015	0.153	ND
316-040	8/12/2013	Pace	Validated	60150925	0.0461	ND	593	0.103	0.00099	0.126	ND

MSD 027394

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Silver	Thallium	Zinc
					Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l
316-043	8/15/2013	Pace	Validated	60151162	ND	ND	**13**
316-042	8/14/2013	Pace	Validated	60151017	ND	ND	**14.6**
316-041	8/13/2013	Pace	QC pending	60150936	ND	ND	**14.7**
316-040	8/12/2013	Pace	Validated	60150925	ND	ND	**12.2**

MSD 027396

Table 3
VOCs and SVOCs
December 2012 - August 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-044	8/16/2013	Pace	Validated	60151250	ND
316-043	8/15/2013	Pace	Validated	60151162	ND
316-042	8/14/2013	Pace	Validated	60151017	ND
316-041	8/13/2013	Pace	QC pending	60150936	ND
316-040	8/12/2013	Pace	Validated	60150925	ND

8-28-13

MSD 027397

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table

Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, August 18, 2013	Batch 316-045	22,500	22,500
	Batch 316-046	127,500	127,500
Monday, August 19, 2013	Batch 316-046	15,000	15,000
	Batch 316-047	135,000	135,000
Tuesday, August 20, 2013	Batch 316-047	15,000	15,000
	Batch 316-048	135,000	135,000
Wednesday, August 21, 2013	Batch 316-048	15,000	15,000
	Batch 316-049	135,000	135,000
Thursday, August 22, 2013	Batch 316-049	15,000	15,000
	Batch 316-050	120,000	120,000
Friday, August 23, 2013	Batch 316-050	22,500	22,500
	Batch 316-051	127,500	127,500
Saturday, August 24, 2013	Batch 316-051	22,500	22,500
	Batch 316-052	127,500	127,500

Starting Date	*8/18/2013 5:00*
Ending Date	*8/25/2013 5:00*

MSD - Missouri River Tracking Table

Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, August 18, 2013	Batch 316-046	19,501	8/18/2013 5:00	8/19/2013 5:00	24.0	854	812.5	5.80
Monday, August 19, 2013	Batch 316-047	19,502	8/19/2013 5:00	8/20/2013 5:00	24.0	840	812.6	5.70
Tuesday, August 20, 2013	Batch 316-048	19,497	8/20/2013 5:00	8/21/2013 5:00	24.0	840	812.4	5.80
Wednesday, August 21, 2013	Batch 316-049	19,506	8/21/2013 5:00	8/22/2013 5:00	24.0	840	812.8	5.72
Thursday, August 22, 2013	Batch 316-050	19,498	8/22/2013 5:00	8/23/2013 5:00	24.0	842	812.4	5.75
Friday, August 23, 2013	Batch 316-051	19,498	8/23/2013 5:00	8/24/2013 5:00	24.0	842	812.4	5.80
Saturday, August 24, 2013	Batch 316-052	19,507	8/24/2013 5:00	8/25/2013 5:00	24.0	849	812.8	5.83

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] Title: Environmental Specialist Date: 8/26/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/19/2013 5:00:00 AM	8/18/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	494,258	474,757	19,501

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,501 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/19/13

MSD Daily Flow Reading, ending 8-19-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	8/20/2013 5:00:00 AM	8/19/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	513,760	494,258	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/20/13

MSD Daily Flow Reading, ending 8-20-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	8/21/2013 5:00:00 AM	8/20/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	533,257	513,760	19,497

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,497 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

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Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/21/13

MSD Daily Flow Reading, ending 8-21-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/22/2013 5:00:00 AM	8/21/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	552,763	533,257	19,506

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,506 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 8/22/13

MSD Daily Flow Reading, ending 8-22-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/23/2013 5:00:00 AM	8/22/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	572,261	552,763	19,498

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,498 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/23/13

MSD Daily Flow Reading, ending 8-23-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/24/2013 5:00:00 AM	8/23/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	591,759	572,261	19,498

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,498 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/24/13

MSD Daily Flow Reading, ending 8-24-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/25/2013 5:00:00 AM	8/24/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	611,266	591,759	19,507

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,507 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/25/13

MSD Daily Flow Reading, ending 8-25-2013

PR
8-28-13

OB-316-045 Bridgeton Landfill

Fill Data

Fill Start Date	8/16/2013
Fill Start Time	18:00
Fill Stop Date	8/16/2013
Fill Stop Time	23:10
Process Battery	316 AST

Processing Data

Process Start Date	8/16/2013
Process Start Time	23:15
Process Stop Date	8/17/2013
Process Stop Time	07:14

Approval Data

Approval Details	NAL13026-600
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Fill level 13 feet.

Monday, August 26, 2013

OB-316-046 Bridgeton Landfill

Fill Data

Fill Start Date	8/17/2013
Fill Start Time	18:05
Fill Stop Date	8/17/2013
Fill Stop Time	23:50
Process Battery	316 AST

Processing Data

Process Start Date	8/17/2013
Process Start Time	23:50
Process Stop Date	8/18/2013
Process Stop Time	06:49

Approval Data

Approval Details	NAL13026-602
Test Results	Benzene 15 ppb
Reprocessed Batch	

Notes

Fill level 13.0 feet.

Monday, August 26, 2013

OB-316-047 Bridgeton Landfill

Fill Data

Fill Start Date	8/18/2013
Fill Start Time	18:00
Fill Stop Date	8/18/2013
Fill Stop Time	22:40
Process Battery	316 AST

Processing Data

Process Start Date	8/18/2013
Process Start Time	22:40
Process Stop Date	8/19/2013
Process Stop Time	06:22

Approval Data

Approval Details	NAL13026-604
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Fill level 12.9 feet.

Monday, August 26, 2013

OB-316-048 Bridgeton Landfill

Fill Data

Fill Start Date	8/19/2013
Fill Start Time	18:00
Fill Stop Date	8/19/2013
Fill Stop Time	22:25
Process Battery	316 AST

Processing Data

Process Start Date	8/19/2013
Process Start Time	22:25
Process Stop Date	8/20/2013
Process Stop Time	06:37

Approval Data

Approval Details	NAL13026-606
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Fill level 14.1 feet.

Monday, August 26, 2013

OB-316-049 Bridgeton Landfill

Fill Data

Fill Start Date	8/20/2013
Fill Start Time	18:05
Fill Stop Date	8/20/2013
Fill Stop Time	23:35
Process Battery	316 AST

Processing Data

Process Start Date	8/20/2013
Process Start Time	23:35
Process Stop Date	8/21/2013
Process Stop Time	07:00

Approval Data

Approval Details	NAL13026-608
Test Results	Benzene 14 ppb
Reprocessed Batch	

Notes

Fill Level 14'-1"

Monday, August 26, 2013

OB-316-050 Bridgeton Landfill

Fill Data

Fill Start Date	8/21/2013
Fill Start Time	18:05
Fill Stop Date	8/21/2013
Fill Stop Time	23:59
Process Battery	316 AST

Processing Data

Process Start Date	8/21/2013
Process Start Time	23:59
Process Stop Date	8/22/2013
Process Stop Time	08:30

Approval Data

Approval Details	NAL13026-610
Test Results	Benzene Non Detect <100 p
Reprocessed Batch	

Notes

Fill level 13.8 feet

Monday, August 26, 2013

OB-316-051 Bridgeton Landfill

Fill Data

Fill Start Date	8/22/2013
Fill Start Time	18:00
Fill Stop Date	8/22/2013
Fill Stop Time	23:59
Process Battery	316 AST

Processing Data

Process Start Date	8/22/2013
Process Start Time	23:59
Process Stop Date	8/23/2013
Process Stop Time	06:19

Approval Data

Approval Details	NAL13026-612
Test Results	Benzene 19 ppb
Reprocessed Batch	

Notes

Fill level 14.3 feet.

Monday, August 26, 2013

OB-316-052

Bridgeton Landfill

Fill Data

Fill Start Date	8/23/2013
Fill Start Time	18:00
Fill Stop Date	8/23/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	8/24/2013
Process Start Time	00:00
Process Stop Date	8/24/2013
Process Stop Time	07:30

Approval Data

Approval Details	NAL13026-614
Test Results	Benzene 18 ppb
Reprocessed Batch	

Notes

Fill level 15 feet.

Monday, August 26, 2013

2013

Bridgeton Landfill LLC
Monthly Leachate Outfall Report

8/28/2013 Filed in 15.4

MSD 027413

CB 8-29

Month	Net Meter Reading	Precipitation Inches	Date of Reading	Gallons	Average Daily Discharge (Gal)	Equivalent Cubic Feet	Equivalent 100 Cubic Feet
January	6,297,239	3.12	2/1/2013	3,498,515	112,855	467,715.91	4,677.16
February	6,905,982	3.25	3/1/2013	608,743	21,740	81,382.75	813.83
March	6,906,109*	4.95	4/1/2013	0*	0*	0*	0*
April	6,915,104	5.67	5/1/2103	8,604**	8,604**	1,150.27	11.50
May	81,827	7.13	6/1/2013	373,684***	12,054	49,957.75	499.58
June	284,978	5.86	7/1/2013	203,151	6,771	27,159.22	271.59
July	319,982	3.35	8/1/2013	35,004	1,129	4,679.68	46.80
August							
September							
October							
November							
December							

Note:

*Flow represented is due to flow meter error. No discharge to MSD has occurred between 2/7/2013 and 4/30/2013.

** Discharge to MSD was resumed on 4/30/2013 (Net meter reading 6,906,500)

***New flow meter intalled and set to 0, meter was also reset twice during May, see daily logs.

RECEIVED
AUG 28 2013
DIVISION OF
ENVIRONMENTAL COMPLIANCE

Doug Mendoza

Bridgeton Landfill

From: Doug Mendoza
Sent: Friday, September 06, 2013 7:50 AM
To: John Lodderhose
Cc: Tom Boehm; Christopher J. Bulmahn; Brian G. Gibson
Subject: RE: Bridgeton Landfill sampling results - more

I just looked up odor thresholds, and this info. is from EPA's air toxics web site:

Benzene has a sweet odor with an ASTDR reported odor threshold of 1.5 ppm (5 mg/m^3).

The odor threshold for phenol is 0.04 parts per million (ppm), with a strong very sweet odor reported.

- Phenol has a much, much lower odor threshold.
- Note also that the leachate benzene levels are much, much less than the threshold, besides being water and not air levels.
    - And phenol levels are much higher than the threshold, albeit well below the fume toxicity screening levels.

From: Doug Mendoza
Sent: Friday, September 06, 2013 7:44 AM
To: John Lodderhose
Cc: Tom Boehm; Christopher J. Bulmahn; Brian G. Gibson
Subject: Bridgeton Landfill sampling results

John,

Just wanted to keep you updated. We have sampling results from 8/16/13 (see attached). We sampled Bridgeton Landfill's discharge into the pump station. The results generally were as expected, and are attached. We continue to sample the discharge into the pump station weekly, but now only for volatile organics.

Results are similar for loads brought to the hauled waste station. Those results can be found under Mr. Bults Inc. (the hauler) in PIMS. We continue to sample them, too – once/week.

- There was an iron level above their variance amount, so we sent a violation notice for that.
    - The level was 2180 mg/L, and the variance is for 270 lb/day or 1619 mg/L for their 20,000 GPD discharge.
- All the organics were fine, with only phenol and naphthalene above the detection levels.
- Detection levels are somewhat elevated, due to the complex matrix of the leachate, but still low enough so that any problems would be detected.
    - Naphthalene was only 0.0879 mg/L, way below the 2.65 mg/L fume toxicity screening level.
    - Phenol was 18.877 mg/L, with total phenols at 61.1 mg/L. However, they have a variance limit of 12.6 lb/day which works out to 75.5 mg/L for their 20,000 GPD discharge. So those were acceptable.
        - FYI, the fume toxicity screening level for phenol is 1024 mg/L, or 50+ times the leachate concentration. It is also used in products like Campho-phenique and other medical preparations.
- Zinc was 27.7 mg/L, and the variance is for 5.4 lb/day or 32.5 mg/L for their 20,000 GPD discharge.
- Oil & Grease was only 25.7 mg/L.

- pH was 5.52, which is close to the limit. However Bridgeton Landfill checks each batch prior to discharge and neutralizes as necessary.
- All other analyzed metals were well below the ordinance limit,

You may also remember that all variance limits were checked against local limits calculations and loadings to make sure they would be acceptable.

One other note regarding the odor:

- Yesterday Jonathon mentioned that some of the Bissell operators had complained that the plant smelled like benzene due to the hauled leachate. I thought about that this morning as I came in the plant. I could smell the leachate, due to its being dumped at the hauled waste station.
    - The odor is not what I remember benzene smelling like, although that is my memories from working with it in my organic chemistry labs in college. I don't really want to snort a fresh vial of benzene to refresh my memory. The leachate odor seems to be similar to benzene, but is "sweeter."
    - The reason I think the odor is similar is because I believe the odor is due to the levels of phenol in the leachate. Both are aromatic hydrocarbons, which have similar profiles.
    - This makes sense based on the phenol levels in the leachate.
    - Plus, it smells like what Elantas PDG (formerly PD George) smells like when the wind is blowing right and you drive along Hall St.

---Doug

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, September 05, 2013 9:26 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good morning,

Brian Power will serve as the primary contact for correspondence and Bryan Sehie will continue to serve as the contact for the field.

Thank you for the follow up,
Jessie

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Wednesday, September 04, 2013 11:03 AM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Thank you, Jessie.

Should Brian Power be the primary contact for both correspondence and field contacts, or only correspondence? Currently we have the same contacts in descending order for correspondence and field: Craig Almanza, Brian Power, Bryan Sehie. We will make changes as you specify in your response.

Regarding deliveries of leachate to the hauled waste station, we understand that the volume will increase (at least temporarily) to 175,000 GPD beginning Monday, September 9. With discharges commencing at 5:00 am, 30 minutes separation between loads, and 23 trucks needed to deliver the volume (actually 172,500 gallons), the last truck should arrive at 4:00 pm. We recognize that there may be delays encountered at times. However, with MSD scheduling additional manpower to staff the station before 7:00 am, after 3:00 pm, and all day on Saturday & Sunday, we must require that the last truck arrive as close to 4:00 pm as possible and no later than 4:30 pm. The additional staff often have other duties or activities scheduled for after the expected end of their coverage time. In addition, should fewer total loads than expected be used on a given day, please let us know as early in that day as possible. At a minimum, we must be informed that the last truck has arrived, if it is for fewer total loads than expected.

Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Mgr.

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, September 04, 2013 11:14 AM
To: Doug Mendoza
Subject: RE: Bridgeton Landfill Weekly Report

Thank, you, Doug. I will confirm with the team on both questions and get back you.

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Wednesday, September 04, 2013 11:03 AM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
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Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

Doug Mendoza

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Sent: Wednesday, September 04, 2013 11:03 AM
To: 'Merrigan, Jessie (LG)'; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
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Subject: Bridgeton Landfill Weekly Report

Good morning,

I wanted to update you that last week's materials are available on Barr's FTP site. Please let us know if you have any questions.

We received the email copy of the iron NOV today and will review and follow up promptly. Also, we would appreciate if you could change the person receiving notice to Brian Power. If you need a formal request by Brian or Craig to effect that change, please let me know.

Ph

Doug Mendoza

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To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
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We appreciate your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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Doug Mendoza

From: Doug Mendoza
Sent: Wednesday, September 04, 2013 7:29 AM
To: Almanza, Craig (CAlmanza@republicservices.com)
Subject: FW: BRIDGETON LANDFILL LLC - Notice of Violations

Craig,

I wanted to make sure you were aware of this as soon as possible. The hard copy is being mailed today.

Doug Mendoza
MSD Industrial Pretreatment Manager

September 4, 2013

Craig Almanza, Area Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

RE: NOTICE OF VIOLATIONS – WASTEWATER DISCHARGE PERMIT NO. 0511559802 - 2
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Mr. Almanza:

As relayed by Doug Mendoza in an email on September 4, 2013, MSD personnel recently collected and analyzed samples of wastewater discharged to the MSD system from the premise above. Unfortunately, we identified the following violations:

VIOLATIONS OF DISCHARGE LIMITATIONS:

DATE	TIME	SAMPLE POINT	SAMPLE TYPE	POLLUTANT	DISCHARGE LIMIT	LIMIT TYPE	VALUE FOUND
08/16/13	0928	007	4 hr. Comp	Iron (T)	270 lb/Day	MASS	355 lb/Day **

The result under the Value Found column was computed using the lab analysis concentration of 2180mg/L and the volume discharged for the day of 19505 gallons.

(X mg/L) (Y MGD) (8.34) = Z pounds/Day
(2180 mg/L) (0.19505 MGD) (8.34) = 355 pounds\Day

lb/Day = Pounds per day
4 hr.Comp = 4 hour Composite
SP007 = 14" pipe into Westlink Pump Station Wetwell, on S side

See the enclosure for an explanation of the asterisks appearing in the Value Found column.

REQUIRED ACTION/RESPONSE:

The result under the Value Found column was computed using the lab analysis concentration of 2180mg/L and volume discharged for the day of 19505 gallons.

1. Submit a report of corrective actions, to ensure compliance with MSD limitations for **Iron (T).**
   In the report:
   a. Include actions addressing all pollutants in violation
   b. Indicate which corrective actions are initiated and which are still to come
   c. Include plans for additional sampling to verify a return to compliance

2. Submit all additional sampling results to MSD. Sample collection must occur as follows:
    a. Sample at the identified sampling points
    b. Collect composite samples for **Iron (T)**
    c. Take samples at times representative of normal operations

3. Refer to the enclosure for additional information on:
    a. Potential enforcement actions should noncompliance continue
    b. The meaning of the asterisks that appear in the Value Found column above
    c. Percentages applicable to Significant Noncompliance, when planning for additional sampling
4. **Please submit your response no later than October 7, 2013**.

Thank you for helping us to comply with state and federal regulations. If you have any questions, please contact me at 314.436.8719.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Tom Boehm
Environmental Engineering Associate

Enclosures: SNC enclosure, SP map

MSD 027422

Table 3
VOCs and SVOCs
December 2012 - August 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-050	8/22/2013	Pace	QC pending	60151616	ND
316-049	8/21/2013	Pace	Validated	60151494	ND
316-048	8/20/2013	Pace	Validated	60151393	ND
316-047	8/19/2013	Pace	Validated	60151388	ND
316-046	8/18/2013	Pace	Validated	60151296	ND
316-045	8/17/2013	Pace	Validated	60151295	ND

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH
					NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-050	8/22/2013	Pace	QC pending	60151616	29000	47900	718	514	5.6	5.9
316-049	8/21/2013	Pace	Validated	60151494	34000	56000	763	274	9.7 *	5.7
316-048	8/20/2013	Pace	Validated	60151393	37100	63100	717	588	9.1	5.6
316-047	8/19/2013	Pace	Validated	60151388	37100	52600	755	414	10.2	5.6
316-046	8/18/2013	Pace	Validated	60151296	35200	54700	752	647	ND	5.5
316-045	8/17/2013	Pace	Validated	60151295	61600 *	57500	770	575	ND	5.5
316-044	8/16/2013	Pace	Validated	60151250	31900	68700	722	558	ND	5.6

MSD 027423

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Solids, total suspended	Aluminum	Antimony	Arsenic	Beryllium	Cadmium
					NA	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-050	8/22/2013	Pace	QC pending	60151616	3040	5.48	0.0489	0.745	ND	ND
316-049	8/21/2013	Pace	Validated	60151494	2780	7.58	0.0407	0.92	ND	0.0147
316-048	8/20/2013	Pace	Validated	60151393	3680	6.05	ND	0.748	ND	ND
316-047	8/19/2013	Pace	Validated	60151388	1860	7.08	ND	0.814	ND	ND
316-046	8/18/2013	Pace	Validated	60151296	3000	5.08	0.0508	0.749	ND	0.0127
316-045	8/17/2013	Pace	Validated	60151295	2560	5.38	0.0420	0.708	ND	0.0143
316-044	8/16/2013	Pace	Validated	60151250	3100	4.86	0.0489	0.793	ND	0.0143

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Chromium	Cobalt	Copper	Iron	Lead	Mercury
					Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-050	8/22/2013	Pace	QC pending	60151616	0.218	0.0505	ND	641	0.143	0.00031
316-049	8/21/2013	Pace	Validated	60151494	0.256	0.0551	ND	716	0.194	0.00045
316-048	8/20/2013	Pace	Validated	60151393	0.252	0.0490	ND	606	0.0862	0.0017
316-047	8/19/2013	Pace	Validated	60151388	0.261	0.0528	ND	752	1.31	0.0019
316-046	8/18/2013	Pace	Validated	60151296	0.242	0.0465	ND	654	0.15	0.00051
316-045	8/17/2013	Pace	Validated	60151295	0.239	0.0477	ND	708	0.171	0.0071
316-044	8/16/2013	Pace	Validated	60151250	0.239	0.0480	ND	685	0.151	0.00049

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l
316-050	8/22/2013	Pace	QC pending	60151616	0.14	ND	ND	ND	10.1
316-049	8/21/2013	Pace	Validated	60151494	0.148	ND	ND	ND	10.5
316-048	8/20/2013	Pace	Validated	60151393	0.14	ND	ND	ND	12
316-047	8/19/2013	Pace	Validated	60151388	0.145	ND	ND	ND	12.3
316-046	8/18/2013	Pace	Validated	60151296	0.121	0.0896	ND	ND	14.3
316-045	8/17/2013	Pace	Validated	60151295	0.124	ND	ND	ND	12.6
316-044	8/16/2013	Pace	Validated	60151250	0.127	0.0806	ND	ND	11.9

9-4-13

MSD 027427

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table

Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, August 25, 2013	Batch 316-052	22,500	22,500
	Batch 316-053	127,500	127,500
Monday, August 26, 2013	Batch 316-053	22,500	22,500
	Batch 316-054	127,500	127,500
Tuesday, August 27, 2013	Batch 316-054	22,500	22,500
	Batch 316-055	127,400	127,500
Wednesday, August 28, 2013	Batch 316-055	22,500	22,500
	Batch 316-056	127,500	127,500
Thursday, August 29, 2013	Batch 316-056	22,500	22,500
	Batch 316-057	127,500	127,500
Friday, August 30, 2013	Batch 316-057	22,500	22,500
	Batch 316-058	127,500	127,500
Saturday, August 31, 2013	Batch 316-058	22,500	22,500
	Batch 316-059	127,500	127,500

Starting Date	*8/25/2013 5:00*
Ending Date	*9/1/2013 7:00*

MSD - Missouri River Tracking Table

Date	Operational Batch Transferred into 97K AST	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	97K AST pH Check
Sunday, August 25, 2013	Batch 316-053	19,498	8/25/2013 5:00	8/26/2013 5:00	24.0	847	812.4	5.88
Monday, August 26, 2013	Batch 316-054	482	8/26/2013 5:00	8/27/2013 5:00	24.0	840	20.1	5.96
Tuesday, August 27, 2013	Accumulated	19,209	8/27/2013 5:00	8/28/2013 7:00	26.0	847	738.8	5.90
Wednesday, August 28, 2013	Batch 316-056	19,596	8/28/2013 7:00	8/29/2013 7:00	24.0	855	816.5	5.84
Thursday, August 29, 2013	Batch 316-057	19,502	8/29/2013 7:00	8/30/2013 7:00	24.0	860	812.6	5.89
Friday, August 30, 2013	Batch 316-058	19,502	8/30/2013 7:00	8/31/2013 7:00	24.0	840	812.6	5.97
Saturday, August 31, 2013	Batch 316-059	19,501	8/31/2013 7:00	9/1/2013 7:00	24.0	840	812.5	5.80

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] Title: Environmental Specialist Date: 9/1/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/26/2013 5:00:00 AM	8/25/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	630,764	611,266	19,498

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,498 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/26/13

MSD Daily Flow Reading, ending 8-26-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	8/27/2013 5:00:00 AM	8/26/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	631,246	630,764	482

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 482 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan K Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/27/13

MSD Daily Flow Reading, ending 8-27-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	8/28/2013 7:00:00 AM	8/27/2013 5:00:00 AM	26.0 hours
Reading (Gallons):	650,455	631,246	19,209

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,209 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/28/13

MSD Daily Flow Reading, ending 8-28-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/29/2013 7:00:00 AM	8/28/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	670,051	650,455	19,596

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,596 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/29/13

MSD Daily Flow Reading, ending 8-29-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/30/2013 7:00:00 AM	8/29/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	689,553	670,051	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/30/13

MSD Daily Flow Reading, ending 8-30-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	8/31/2013 7:00:00 AM	8/30/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	709,055	689,553	19,502

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,502 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/31/13

MSD Daily Flow Reading, ending 8-31-2013

Daily Flow Reading — *Bridgeton Landfill*

	Current	Previous	Difference
Date / Time:	9/1/2013 7:00:00 AM	8/31/2013 7:00:00 AM	24.0 hours
Reading (Gallons):	728,556	709,055	19,501

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,501 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 9/1/13

MSD Daily Flow Reading, ending 9-01-2013

9-4-13

OB-316-052 Bridgeton Landfill

Fill Data

Fill Start Date	8/23/2013
Fill Start Time	18:00
Fill Stop Date	8/23/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	8/24/2013
Process Start Time	00:00
Process Stop Date	8/24/2013
Process Stop Time	07:30

Approval Data

Approval Details	NAL13026-614
Test Results	Benzene 18 ppb
Reprocessed Batch	

Notes

Fill level 15 feet.

Monday, September 02, 2013

OB-316-053 Bridgeton Landfill

Fill Data

Fill Start Date	8/24/2013
Fill Start Time	18:05
Fill Stop Date	8/24/2013
Fill Stop Time	23:05
Process Battery	316 AST

Processing Data

Process Start Date	8/24/2013
Process Start Time	23:05
Process Stop Date	8/25/2013
Process Stop Time	06:40

Approval Data

Approval Details	NAL13026-616
Test Results	Benzene 22 ppb
Reprocessed Batch	

Notes

Fill level 15.2 feet.

Monday, September 02, 2013

OB-316-054 *Bridgeton Landfill*

Fill Data

Fill Start Date	8/25/2013
Fill Start Time	18:12
Fill Stop Date	8/25/2013
Fill Stop Time	22:09
Process Battery	316 AST

Processing Data

Process Start Date	8/26/2013
Process Start Time	00:00
Process Stop Date	8/26/2013
Process Stop Time	07:30

Approval Data

Approval Details	NAL13026-618
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Fill level 15.0 feet.

Monday, September 02, 2013

OB-316-055 Bridgeton Landfill

Fill Data

Fill Start Date	8/26/2013
Fill Start Time	18:18
Fill Stop Date	8/26/2013
Fill Stop Time	22:24
Process Battery	316 AST

Processing Data

Process Start Date	8/26/2013
Process Start Time	22:24
Process Stop Date	8/27/2013
Process Stop Time	07:02

Approval Data

Approval Details	NAL13026-620
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Fill level 12.3 feet.

Monday, September 02, 2013

OB-316-056 *Bridgeton Landfill*

Fill Data

Fill Start Date	8/27/2013
Fill Start Time	18:09
Fill Stop Date	8/27/2013
Fill Stop Time	22:31
Process Battery	316 AST

Processing Data

Process Start Date	8/27/2013
Process Start Time	22:24
Process Stop Date	8/28/2013
Process Stop Time	07:45

Approval Data

Approval Details	NAL13026-622
Test Results	Benzene 34 ppb
Reprocessed Batch	

Notes

Fill level 17.9 feet.

Monday, September 02, 2013

OB-316-057 Bridgeton Landfill

Fill Data

Fill Start Date	8/28/2013
Fill Start Time	18:18
Fill Stop Date	8/28/2013
Fill Stop Time	23:28
Process Battery	316 AST

Processing Data

Process Start Date	8/28/2013
Process Start Time	23:28
Process Stop Date	8/29/2013
Process Stop Time	07:00

Approval Data

Approval Details	NAL13026-624
Test Results	Benzene 17 ppb
Reprocessed Batch	

Notes

Monday, September 02, 2013

OB-316-058 Bridgeton Landfill

Fill Data

Fill Start Date	8/29/2013
Fill Start Time	18:12
Fill Stop Date	8/29/2013
Fill Stop Time	22:05
Process Battery	316 AST

Processing Data

Process Start Date	8/29/2013
Process Start Time	20:38
Process Stop Date	8/30/2013
Process Stop Time	07:07

Approval Data

Approval Details	NAL13026-626
Test Results	Benzene 34 ppb
Reprocessed Batch	

Notes

Mixer & blower on at 14.8 feet.

Monday, September 02, 2013

OB-316-059 Bridgeton Landfill

Fill Data

Fill Start Date	8/30/2013
Fill Start Time	18:05
Fill Stop Date	8/30/2013
Fill Stop Time	21:20
Process Battery	316 AST

Processing Data

Process Start Date	8/30/2013
Process Start Time	17:21
Process Stop Date	8/31/2013
Process Stop Time	07:30

Approval Data

Approval Details	NAL13026-628
Test Results	Benzene 22 ppb
Reprocessed Batch	

Notes

Fill Level 18.0 feet

Monday, September 02, 2013

Metropolitan St. Louis Sewer District
Division of Environmental Compliance
10 East Grand Avenue
St. Louis, MO 63147-2913
Phone: 314.768.6200 www.stlmsd.com

September 4, 2013

Craig Almanza, Area Environmental Manager
BRIDGETON LANDFILL LLC
13570 St. Charles Rock Road
Bridgeton, MO 63044

RE: NOTICE OF VIOLATIONS – WASTEWATER DISCHARGE PERMIT NO. 0511559802 - 2
For premise at: 13570 St. Charles Rock Road, Bridgeton, MO 63044

Dear Mr. Almanza:

As relayed by Doug Mendoza in an email on September 4, 2013, MSD personnel recently collected and analyzed samples of wastewater discharged to the MSD system from the premise above. Unfortunately, we identified the following violations:

VIOLATIONS OF DISCHARGE LIMITATIONS:

DATE	TIME	SAMPLE POINT	SAMPLE TYPE	POLLUTANT	DISCHARGE LIMIT	LIMIT TYPE	VALUE FOUND
08/16/13	0928	007	4 hr. Comp	Iron (T)	270 lb/Day	MASS	355 lb/Day **

The result under the Value Found column was computed using the lab analysis concentration of 2180mg/L and the volume discharged for the day of 19505 gallons.

(X mg/L) (Y MGD) (8.34) = Z pounds/Day
(2180 mg/L) (0.19505 MGD) (8.34) = 355 pounds\Day

lb/Day = Pounds per day
4 hr.Comp = 4 hour Composite
SP007 = 14" pipe into Westlink Pump Station Wetwell, on S side

See the enclosure for an explanation of the asterisks appearing in the Value Found column.

REQUIRED ACTION/RESPONSE:

The result under the Value Found column was computed using the lab analysis concentration of 2180mg/L and volume discharged for the day of 19505 gallons.

1. Submit a report of corrective actions, to ensure compliance with MSD limitations for **Iron (T).**
   In the report:
   a. Include actions addressing all pollutants in violation
   b. Indicate which corrective actions are initiated and which are still to come
   c. Include plans for additional sampling to verify a return to compliance

2. Submit all additional sampling results to MSD. Sample collection must occur as follows:
   a. Sample at the identified sampling points
   b. Collect composite samples for **Iron (T)**
   c. Take samples at times representative of normal operations

3. Refer to the enclosure for additional information on:
   a. Potential enforcement actions should noncompliance continue
   b. The meaning of the asterisks that appear in the Value Found column above
   c. Percentages applicable to Significant Noncompliance, when planning for additional sampling

4. **Please submit your response no later than <u>October 7, 2013</u>.**

Thank you for helping us to comply with state and federal regulations. If you have any questions, please contact me at 314.436.8719.

Sincerely,
METROPOLITAN ST. LOUIS SEWER DISTRICT

Tom Boehm
Environmental Engineering Associate

Enclosures: SNC enclosure, SP map

Doug Mendoza

Bridgeton Landfill

From: Doug Mendoza
Sent: Tuesday, September 03, 2013 7:56 AM
To: 'Dan Feezor'
Cc: Brian Power (bpower@republicservices.com); Steven Smith P.E. (ssmith10 @republicservices.com); Merrigan, Jessie (LG); 'egalbraith@barr.com'; nathan.winton@mrbults.com; Bill Abernathy; David Eastvold; Hunter King; Catherine Politte; Mike Gindler; Darin Lewis; Brian G. Gibson; John Lodderhose
Subject: RE: Bissell - Revised Hours and Increase

Dan,

5 am delivery start time appears to be working fine. The driver this morning was worried because he did not see Darin Lewis's (the normal hauled waste station worker) car. However, we have different personnel who may be covering the early and weekend hours. Please let your drivers know this. Please also remind them that we will not begin the first delivery until 5 am. It is okay if they arrive a few minutes early. But the hauled waste station workers generally will be arriving just before 5 am (due to the early hour), and do not begin work until then.

Regarding the front gate to the MSD Bissell Point plant, we have reminded the plant operators that your trucks are now starting deliveries at 5 am. They should have the front gate open for your drivers from now on. We realize that your drivers have a phone number they can call to reach a plant operator, should the gate not be open when they arrive. However, the hauled waste station worker now has a camera and control to open the gate. Should the gate be closed, your drivers only need to push the call button by the gate to alert the hauled waste station worker.

- Regarding increased delivery volume to 175,000 gallons, we can begin accepting that volume starting Monday, September 9, 2013. (We had already cancelled the arranged late coverage for this week.) If you can commit to a period longer than one week for the increased volume, please let us know. Otherwise, the increased delivery volume is approved only through Sunday, September 15, 2013.

Thank you,
Doug Mendoza
MSD Mgr. Industrial Pretreatment

From: Dan Feezor [mailto:dfeezor@feezorengineering.com]
Sent: Monday, September 02, 2013 4:53 AM
To: Doug Mendoza
Cc: Brian Power (bpower@republicservices.com); Steven Smith P.E. (ssmith10@republicservices.com); Merrigan, Jessie (LG); 'egalbraith@barr.com'; nathan.winton@mrbults.com; Bill Abernathy; David Eastvold; Hunter King
Subject: Bissell - Revised Hours and Increase

Good morning Doug – I see our first trucks left at 4:30 am to arrive at 5 am. Please let us know how this is working.

Also, I would like to officially request to operationally expand to 175,000 gallons, at least temporarily. Our storage in our buffer tank farm is being depleted slowly, and I would like to correct that. Therefore, please let me know when your staff can accommodate the longer hours. As we discussed in the meeting, we will provide you a week's notice.

Thank you,
Dan

Daniel R. Feezor, P.E.

Doug Mendoza

From: Darin Lewis
Sent: Monday, September 02, 2013 5:03 AM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Steve Grace; Sara Kammerer
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 8/25/2013 to 8/31/2013.
8/25 – 150,000 gallons
8/26 – 150,000 gallons
8/27 – 149,900 gallons
8/28 – 150,000 gallons
8/29 – 150,000 gallons
8/30 – 150,000 gallons
8/31 – 150,000 gallons
Total = 1,049,900 gallons

Doug Mendoza

Bridgeton Landfill

From: Dan Feezor <dfeezor@feezorengineering.com>
Sent: Monday, September 02, 2013 4:53 AM
To: Doug Mendoza
Cc: Brian Power (bpower@republicservices.com); Steven Smith P.E. (ssmith10 @republicservices.com); Merrigan, Jessie (LG); 'egalbraith@barr.com'; nathan.winton@mrbults.com; Bill Abernathy; David Eastvold; Hunter King
Subject: Bissell - Revised Hours and Increase

Good morning Doug – I see our first trucks left at 4:30 am to arrive at 5 am. Please let us know how this is working.

Also, I would like to officially request to operationally expand to 175,000 gallons, at least temporarily. Our storage in our buffer tank farm is being depleted slowly, and I would like to correct that. Therefore, please let me know when your staff can accommodate the longer hours. As we discussed in the meeting, we will provide you a week's notice.

Thank you,
Dan

Daniel R. Feezor, P.E.
Residuals Management Team Member
Feezor Engineering, Inc.
406 East Walnut
Chatham, IL 62692
(217) 836-8842

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Tuesday, August 27, 2013 12:20 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Good afternoon,

Thank you for your follow up. Just as an update, we have directed Pace to re-run the recent samples that showed the BOD at 1.46 times the COD. While the BOD cannot be rerun because of hold times, they will rerun the COD and attempt to provide some insight as to why the BOD:COD ratios were so far out of the expected proportion for this sample.

In addition, we are evaluating recent BOD, TSS and COD levels as well as BOD:COD ratios, to determine if there are statistically significant trends over the past four months. We expect to have that analysis completed and to you by Thursday.

We will update you when last week's information is available and will keep you updated on this evaluation. Please let us know if you have any questions or need additional information.

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Thursday, August 22, 2013 10:50 AM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Jessie,

Doug Mendoza

From: Darin Lewis
Sent: Monday, August 26, 2013 7:46 AM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Steve Grace; Sara Kammerer
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 8/18/2013 to 8/24/2013.
8/18 – 150,000 gallons
8/19 – 150,000 gallons
8/20 – 150,000 gallons
8/21 – 150,000 gallons
8/22 – 135,000 gallons
8/23 – 150,000 gallons
8/24 – 150,000 gallons
Total = 1,035,000 gallons

Doug Mendoza

BRIDGETON LANDFILL

From: Joe Pavlich
Sent: Friday, August 23, 2013 2:44 PM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: Landfill reading.

Doug, the reading for 8/23/13 is 579343 with a flow rate of 830 Gals./Hr.

TO: **Chris Verplancke, Finance Department**
Becky Bartholomew, Finance Department
Mary Wimsatt, Finance Department

FROM: **Darin Lewis**

DATE: **August 23, 2013**

SUBJECT: **BRIDGETON LANDFILL LLC**
WASTEWATER USER CHARGE BILLING
ACCOUNT NUMBER 0039145-8

Pursuant to the MSD Industrial Wastewater Discharge Permit for the above referenced facility, please bill this facility for the following volume for the indicated billing period:

VOLUME
On-Site Discharge

35,004 gallons with surcharge applied = $3,242.64

VOLUME
Hauled Waste Discharge

2,924,000 gallons X $0.08/Gal = $233,920.00

Bissell Point Operations Department labor fee is $755.04.
Use Revenue Code "INFO" and utility type Q.
Budget code is 1101-06022-51020 so revenue will be credited back to Bissell Point Operations Department budget.

Department of Environmental Compliance labor fee is $513.24. Use Revenue Code "INFO" and utility type Q.
Budget code is 1101-08050-51020 so revenue will be credited back to Department of Environmental Compliance budget.

Total Bill = $238,430.92

The volume was obtained from the customer's on-site discharge self-monitoring report and hauled waste total truck capacities.
SOURCE OF WASTE: SP 801 Commingled landfill leachate and landfill gas collection system condensate
BILLING PERIOD: July 1, 2013 through July 31, 2013
Other applicable wastewater user charges, as per Ordinance 13402, should be included in this bill.
Please call me at 436-8716 if you have any questions.

ec: Brian Gibson
Doug Mendoza
Laura Joiner

FILE: IU, Bridgeton Landfill LLC, 1003803000
N:\Envcom\EXEC\ENVCOM\DARIN\Special Handling\Bridgeton Landfill LLC July 2013.doc

316-026	Okay	07/29/13	120,000	31,600	1,600	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-027	Okay	07/30/13	120,000	32,400	1,540	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-027	Okay	07/31/13	15,000	32,400	1,540	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-028	Okay	07/31/13	105,000	33,400	1,600	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
		Gallons:	2,924,000	31,890	1,493		Gallons:	35,004		34,000	2,500				$1,268.28	Total labor cost
		Ccf:	3,909			Total	Ccf:	47				Total				
		Rate:	$2.50	$620.14	$231.35		Rate:	$2.50		$620.14	$231.35				$755.04	for BP budget code = 1101-06022-51020
		Charge:	$9,772.73	$238,929.48	$3,365.14	$252,067.35	Charge:	$116.99		$3,051.34	$74.31	$3,242.64			$0.00	for DEC budget code = 1101-08050-51011
						$0.086						$0.093			$513.24	for DEC budget code = 1101-08050-51020
					Actual billing:	$233,920.00										
						$0.08										
316-028	Okay	08/01/13	22,500	33,400	1,600		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-029	Okay	08/01/13	97,500	28,300	2,080		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-029	Okay	08/02/13	22,500	28,300	2,080		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-030	Okay	08/02/13	97,500	29,300	1,420		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-030	Okay	08/03/13	22,500	29,300	1,420		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-031	Okay	08/03/13	97,500	31,000	1,760		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file		
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/28/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/29/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/30/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/31/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	08/01/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	08/02/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	08/03/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
316-031	Okay	08/04/13	22,500	31,000	1,760		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file		
316-032	Okay	08/04/13	97,500	26,300	1,500		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-032	Okay	08/05/13	22,500	26,300	1,500		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-033	Okay	08/05/13	97,500	27,400	1,520		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-033	Okay	08/06/13	22,500	27,400	1,520		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-034	Okay	08/06/13	97,500	39,000	1,100		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-034	Okay	08/07/13	22,500	39,000	1,100		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-035	Okay	08/07/13	97,500	34,400	2,200		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-035	Okay	08/08/13	22,500	34,400	2,200		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-036	Okay	08/08/13	97,500	18,800	1,820		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-036	Okay	08/09/13	22,500	18,800	1,820		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-037	Okay	08/09/13	97,500	17,900	2,620		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-038	Okay	08/10/13	120,000	69,500	2,160		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file		
n/a	n/a	n/a	n/a	n/a	n/a	n/a	08/04/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	08/05/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	08/06/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	08/07/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
n/a	n/a	n/a	n/a	n/a	n/a	n/a	08/08/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	
257	Okay	n/a	n/a	n/a	n/a	n/a	08/09/13	17,201	Yes	34,000	2,500		Printed for file	Printed for file	n/a	
316-038	Okay	n/a	n/a	n/a	n/a	n/a	08/10/13	14,848	Yes	69,500	2,160		Printed for file	Printed for file	n/a	
316-038	Okay	08/11/13	22,500	69,500	2,160		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file		
316-039	Okay	08/11/13	97,500	31,400	2,160		08/11/13	19,061	Yes	31,400	2,160		Printed for file	Printed for file	n/a	
316-039	Okay	08/12/13	22,500	31,400	2,160		n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	
316-040	Okay	08/12/13	127,500				08/12/13	12,447	Yes						n/a	
316-041	Okay	08/13/13	150,000				08/13/13	16,144	Yes						n/a	
316-041	Okay	08/14/13	15,000				n/a	n/a	n/a	n/a	n/a	n/a			n/a	
316-042	Okay	08/14/13	135,000				08/14/13	16,156	Yes						n/a	
316-042	Okay	08/15/13	15,000				n/a	n/a	n/a	n/a	n/a	n/a			n/a	
316-043	Okay	08/15/13	127,500				08/15/13	19,915	Yes						n/a	
316-043	Okay	08/16/13	22,500				n/a	n/a	n/a	n/a	n/a	n/a			n/a	
316-044	Okay	08/16/13	127,500				08/16/13	19,505	Yes						n/a	
316-044	Okay	08/17/13	22,500				n/a	n/a	n/a	n/a	n/a	n/a				
316-045	Okay	08/17/13	127,500				08/17/13	19,498	Yes						n/a	

316-006	Okay	07/01/13	83,000	28,900	171	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
263/264	Okay	07/02/13	37,400	52,300	540	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-007	Okay	07/02/13	60,800	33,700	221	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-007	Okay	07/03/13	15,200	33,700	221	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
263/264	Okay	07/03/13	22,700	52,300	540	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
266	Okay	07/03/13	60,800	35,600	2,190	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-008	Okay	07/04/13	98,200	23,500	1,020	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	$513.24	08/22/13
316-008	Okay	07/05/13	98,200	23,500	1,020	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/01/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/02/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/03/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/04/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/05/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/06/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/07/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/08/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/09/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/10/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/11/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/12/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
316-009	Okay	07/06/13	30,000	24,900	1,530	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-010	Okay	07/08/13	97,000	27,900	1,520	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
272	Okay	07/09/13	15,000	34,100	490	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-011	Okay	07/09/13	82,000	27,700	1,430	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
272	Okay	07/10/13	15,000	34,100	490	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-012	Okay	07/10/13	82,000	28,200	1,480	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
272	Okay	07/11/13	15,000	34,100	490	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-013	Okay	07/11/13	82,000	29,100	730	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
272	Okay	07/12/13	15,000	34,100	490	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-014	Okay	07/12/13	82,000	28,700	1,020	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
278	Okay	07/13/13	45,000	30,400	1,720	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-015	Okay	07/15/13	97,000	27,100	2,110	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
278	Okay	07/16/13	22,500	30,400	1,720	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
282/283	Okay	07/16/13	67,000	34,000	1,260	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-016	Okay	07/17/13	97,000	32,300	2,540	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-017	Okay	07/18/13	97,000	35,200	2,410	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
286/287	Okay	07/19/13	15,000	31,000	1,160	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-018	Okay	07/19/13	82,000	27,500	3,350	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/13/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/14/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/15/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/16/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/17/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/18/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/19/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
316-019	Okay	07/20/13	97,500	36,900	2,920	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-019	Okay	07/21/13	97,500	36,900	2,920	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-020	Okay	07/22/13	120,000	29,100	2,420	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-020	Okay	07/23/13	120,000	29,100	2,420	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-021	Okay	07/24/13	120,000	31,700	2,000	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-022	Okay	07/25/13	120,000	29,400	3,040	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-023	Okay	07/26/13	120,000	27,800	2,660	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	n/a	n/a
316-024	Okay	07/27/13	120,000	31,600	1,720	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	$755.04	08/22/13
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/20/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/21/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/22/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
257	Okay	n/a	n/a	n/a	n/a	n/a	07/23/13	17,502	Yes	34,000	2,500	08/22/13	Printed for file	Printed for file	n/a	n/a
257	Okay	n/a	n/a	n/a	n/a	n/a	07/24/13	17,502	Yes	34,000	2,500	08/22/13	Printed for file	Printed for file	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/25/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/26/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
n/a	n/a	n/a	n/a	n/a	n/a	n/a	07/27/13	0	Yes	n/a	n/a	n/a	n/a	n/a	n/a	n/a
316-025	Okay	07/28/13	120,000	32,700	1,380	08/22/13	n/a	n/a	n/a	n/a	n/a	n/a	Printed for file	Printed for file	see 7/27	08/22/13

Darin Lewis

From: Doug Mendoza
Sent: Thursday, August 22, 2013 9:58 AM
To: Darin Lewis
Cc: Brian G. Gibson; Catherine Politte
Subject: July billing info. for Bridgeton Landfill, to be sent to MSD Finance/Accts Receivable
Attachments: Bridgeton Landfill discharge batches & analytical results tracking.xlsx

Darin,

I have attached the tracking spreadsheet with the data for you to have MSD bill Bridgeton Landfill for its July 2013 discharges and associated expenses. Lines 186 to 192 contain the billing data summary for July.

As you can see, the hauled waste fee is $233,920. We are continuing to bill them at the standard 8¢/gallon rate.

The on-site discharge fee is $3,232.35. They only discharged two days in July, but the high surcharge put it at 9.2¢/gallon.

This is the first month with MSD labor costs. There were both DEC and BP labor expenses. (August will also have a mix of DEC and BP labor expenses. From September on, it should be DEC only.)

The BP labor fee is $755.04. Please instruct MSD Finance to use Revenue Code "INFO" and utility type Q. The budget code to be used should be 1101-06022-51020. This is so that the revenue will be credited back to Bissell's budget.

The DEC labor fee is $513.24. Please instruct MSD Finance to use Revenue Code "INFO" and utility type Q. The budget code to be used should be 1101-08050-51020. This is so that the revenue will be credited back to DEC's budget. (I'm not actually sure if this is the proper Revenue Code and utility type to use for DEC. However, in the absence of a response by MSD Finance to my query, this is what we will go with.)

Finally, please be sure to cc Cathy Politte on the billing memo.

Thanks,
Doug

TO: **Chris Verplancke, Finance Department**
Becky Bartholomew, Finance Department
Mary Wimsatt, Finance Department

FROM: **Darin Lewis**

DATE: **August 23, 2013**

SUBJECT: **BRIDGETON LANDFILL LLC**
WASTEWATER USER CHARGE BILLING
ACCOUNT NUMBER 0039145-8

Pursuant to the MSD Industrial Wastewater Discharge Permit for the above referenced facility, please bill this facility for the following volume for the indicated billing period:

VOLUME
On-Site Discharge

35,004 gallons with surcharge applied = $3,242.64

VOLUME
Hauled Waste Discharge

2,924,000 gallons X $0.08/Gal = $233,920.00

Bissell Point Operations Department labor fee is $755.04. Use Revenue Code "INFO" and utility type Q. Budget code is 1101-06022-51020 so revenue will be credited back to Bissell Point Operations Department budget.

Department of Environmental Compliance labor fee is $513.24. Use Revenue Code "INFO" and utility type Q. Budget code is 1101-08050-51020 so revenue will be credited back to Department of Environmental Compliance budget.

Total Bill = $238,430.92

The volume was obtained from the customer's on-site discharge self-monitoring report and hauled waste total truck capacities.
SOURCE OF WASTE: SP 801 Commingled landfill leachate and landfill gas collection system condensate
BILLING PERIOD: July 1, 2013 through July 31, 2013
Other applicable wastewater user charges, as per Ordinance 13402, should be included in this bill.
Please call me at 436-8716 if you have any questions.

bv

ec: Brian Gibson
Doug Mendoza
Laura Joiner
Cathy Politte

FILE: IU-Bridgeton Landfill LLC, 1003803000

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, August 22, 2013 11:19 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Thank you, Doug. We are pulling the recent COD and BOD data for evaluation, as well as reviewing the reports to ensure there were no errors. We will follow up with you as soon as we have feedback.

Thank you,
Jessie

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Thursday, August 22, 2013 10:50 AM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Jessie,

We have reviewed the submitted data. I have a question regarding the recent BOD and COD results. The data for batches 316-034 through 316-093, i.e. the new data submitted this week, have BOD:COD ratios that vary considerably from the historic ratio of about 0.5 that we have been seeing. In addition, The BOD for 316-038 is significantly higher than the COD.

Please have your team investigate this change and let me know their findings. In addition, please have the data for 316-038 investigated and corrected accordingly.

Thank you,
Doug Mendoza
MSD Industrial Pretreatment Manager

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, August 21, 2013 5:50 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian

Doug Mendoza

From: Doug Mendoza
Sent: Thursday, August 22, 2013 10:50 AM
To: 'Merrigan, Jessie (LG)'; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Jessie,

We have reviewed the submitted data. I have a question regarding the recent BOD and COD results. The data for batches 316-034 through 316-093, i.e. the new data submitted this week, have BOD:COD ratios that vary considerably from the historic ratio of about 0.5 that we have been seeing. In addition, The BOD for 316-038 is significantly higher than the COD.

Please have your team investigate this change and let me know their findings. In addition, please have the data for 316-038 investigated and corrected accordingly.

Thank you,
Doug Mendoza
MSD Industrial Pretreatment Manager

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Wednesday, August 21, 2013 5:50 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good evening,

I am so sorry for my late notice of this, but the weekly materials were loaded on Barr's FTP site last night for MSD's review. I am very sorry that I am late in providing the email confirmation of their availability.

As always, please let me know if you have any questions or need additional information. We appreciate continued assistance.

Thank you,
Jessie

Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	Solids, total suspended
					NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	mg/l
MSD Batch 235/236	6/20/2013	TA	Validated	160-2783-1	34000	60000	730	30	9.7 j	6.00	2500

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
MSD Batch 235/236	6/20/2013	TA	Validated	160-2783-1	9.9 j	ND	0.38 j	ND	ND	0.16 j	0.27 j	ND

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Iron	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
MSD Batch 235/236	6/20/2013	TA	Validated	160-2783-1	1000	0.25 j	0.0051 j	ND	ND	ND	ND	20

D✓

Table 3
VOCs and SVOCs
December 2012 - August 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
MSD Batch 235/236	6/20/2013	TA	Validated	160-2783-1	ND

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	Solids, total suspended
					NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	mg/l
316-039	8/11/2013	Pace	Validated	60150841	31400	46700	684	703	ND	5.6	2160
316-038	8/10/2013	Pace	Validated	60150842	69500	47500	665	520	ND	5.7	2160
316-037	8/9/2013	Pace	Validated	60150779	17900	52200	668	461	ND	5.9	2620
316-036	8/8/2013	Pace	Validated	60150677	18800	55800	699	299	7.1	5.8	1820
316-035	8/7/2013	Pace	Validated	60150553	34400	41700	726	753	ND	5.4	2200
316-034	8/6/2013	Pace	Validated	60150422	39000	44100	654	76.3	ND	5.5	1100

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-039	8/11/2013	Pace	Validated	60150841	10.2	ND	0.74	ND	ND	0.258	0.0606	0.0426
316-038	8/10/2013	Pace	Validated	60150842	5.56	ND	0.633	ND	ND	0.204	0.0490	ND
316-037	8/9/2013	Pace	Validated	60150779	9.46	0.0504	0.674	ND	ND	0.229	0.0609	0.0373
316-036	8/8/2013	Pace	Validated	60150677	5.22	ND	0.62	ND	ND	0.204	0.0492	0.0236
316-035	8/7/2013	Pace	Validated	60150553	13.9	0.0380	0.704	ND	0.0197	0.285	0.0639	0.0843
316-034	8/6/2013	Pace	Validated	60150422	9.01	0.0368	0.656	ND	0.0136	0.247	0.0588	ND

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

					Iron	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-039	8/11/2013	Pace	Validated	60150841	789	0.218	0.0021	0.159	ND	ND	ND	13.7
316-038	8/10/2013	Pace	Validated	60150842	530	0.0994	0.0091	0.162	ND	ND	ND	11.2
316-037	8/9/2013	Pace	Validated	60150779	685	0.162	0.0018	0.216	ND	ND	ND	11.7
316-036	8/8/2013	Pace	Validated	60150677	488	0.0820	0.0088	0.146	ND	ND	ND	11.9
316-035	8/7/2013	Pace	Validated	60150553	874	0.253	0.00092	0.158	ND	ND	ND	14.4
316-034	8/6/2013	Pace	Validated	60150422	849	0.202	ND	0.14	ND	ND	ND	12.7

Table 3
VOCs and SVOCs
December 2012 - August 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-039	8/11/2013	Pace	Validated	60150841	ND
316-038	8/10/2013	Pace	Validated	60150842	ND
316-037	8/9/2013	Pace	Validated	60150779	ND
316-036	8/8/2013	Pace	Validated	60150677	ND
316-035	8/7/2013	Pace	Validated	60150553	ND
316-034	8/6/2013	Pace	Validated	60150422	ND

8-22-13

OB-316-038 Bridgeton Landfill

Fill Data

Fill Start Date	8/9/2013
Fill Start Time	18:50
Fill Stop Date	8/9/2013
Fill Stop Time	23:35
Process Battery	316 AST

Processing Data

Process Start Date	8/9/2013
Process Start Time	23:35
Process Stop Date	8/10/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL13026-586
Test Results	Benzene 53 ppb
Reprocessed Batch	

Notes

Approximately 40,000 gallons available to transfer to 96k AST.

Monday, August 19, 2013

OB-316-039 Bridgeton Landfill

Fill Data

Fill Start Date	8/10/2013
Fill Start Time	18:10
Fill Stop Date	8/11/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	8/11/2013
Process Start Time	00:00
Process Stop Date	8/11/2013
Process Stop Time	07:30

Approval Data

Approval Details	NAL13026-588
Test Results	Benzene 33 ppb
Reprocessed Batch	

Notes

Fill height 15.4 feet.

Monday, August 19, 2013

OB-316-040 Bridgeton Landfill

Fill Data

Fill Start Date	8/11/2013
Fill Start Time	18:20
Fill Stop Date	8/11/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	8/12/2013
Process Start Time	00:00
Process Stop Date	8/12/2013
Process Stop Time	06:45

Approval Data

Approval Details	NAL13026-590
Test Results	Benzene 30 ppb
Reprocessed Batch	

Notes

Fill level 12.6 feet.

Monday, August 19, 2013

OB-316-041 Bridgeton Landfill

Fill Data

Fill Start Date	8/12/2013
Fill Start Time	18:10
Fill Stop Date	8/12/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	8/12/2013
Process Start Time	23:55
Process Stop Date	8/13/2013
Process Stop Time	18:18

Approval Data

Approval Details	NAL13026-592
Test Results	Benzene 17 ppb
Reprocessed Batch	

Notes

Fill level 14.7 feet.

Monday, August 19, 2013

OB-316-042

Bridgeton Landfill

Fill Data

Fill Start Date	8/13/2013
Fill Start Time	18:05
Fill Stop Date	8/13/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	8/14/2013
Process Start Time	00:00
Process Stop Date	8/14/2013
Process Stop Time	06:51

Approval Data

Approval Details	NAL13026-594
Test Results	Benzene 49 ppb
Reprocessed Batch	

Notes

Fill level 14.2 feet.

Monday, August 19, 2013

OB-316-043 Bridgeton Landfill

Fill Data

Fill Start Date	8/14/2013
Fill Start Time	18:05
Fill Stop Date	8/14/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	8/15/2013
Process Start Time	00:00
Process Stop Date	8/15/2013
Process Stop Time	08:30

Approval Data

Approval Details	NAL13026-596
Test Results	Benzene 19 ppb
Reprocessed Batch	

Notes

Fill level 14.6 feet.

Monday, August 19, 2013

OB-316-044 Bridgeton Landfill

Fill Data

Fill Start Date	8/15/2013
Fill Start Time	18:00
Fill Stop Date	8/15/2013
Fill Stop Time	23:55
Process Battery	316 AST

Processing Data

Process Start Date	8/15/2013
Process Start Time	23:55
Process Stop Date	8/16/2013
Process Stop Time	06:18

Approval Data

Approval Details	NAL13026-598
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Fill level 13.0 feet.

Monday, August 19, 2013

OB-316-045 Bridgeton Landfill

Fill Data

Fill Start Date	8/16/2013
Fill Start Time	18:00
Fill Stop Date	8/16/2013
Fill Stop Time	23:10
Process Battery	316 AST

Processing Data

Process Start Date	8/16/2013
Process Start Time	23:15
Process Stop Date	8/17/2013
Process Stop Time	07:14

Approval Data

Approval Details	NAL13026-600
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Fill level 13 feet.

Monday, August 19, 2013

PK
8-27-13

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table

Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, August 11, 2013	Batch 316-038	22,500	22,500
	Batch 316-039	97,500	97,500
Monday, August 12, 2013	Batch 316-039	22,500	22,500
	Batch 316-040	127,500	127,500
Tuesday, August 13, 2013	Batch 316-041	150,000	150,000
Wednesday, August 14, 2013	Batch 316-041	15,000	15,000
	Batch 316-042	135,000	135,000
Thursday, August 15, 2013	Batch 316-042	15,000	15,000
	Batch 316-043	127,500	127,500
Friday, August 16, 2013	Batch 316-043	22,500	22,500
	Batch 316-044	127,500	127,500
Saturday, August 17, 2013	Batch 316-044	22,500	22,500
	Batch 316-045	127,500	127,500

Starting Date	*8/11/2013 5:00*
Ending Date	*8/18/2013 5:00*

MSD - Missouri River Tracking Table

Date	Operational Batch	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	pH
Sunday, August 11, 2013	Batch 316-039	19,061	8/11/2013 5:00	8/12/2013 5:00	24.0	840	794.2	7.53
Monday, August 12, 2013	Batch 316-040	12,447	8/12/2013 5:00	8/13/2013 5:00	24.0	840	518.6	6.55
Tuesday, August 13, 2013	Batch 316-041	16,144	8/13/2013 5:00	8/14/2013 5:00	24.0	843	672.7	5.98
Wednesday, August 14, 2013	Batch 316-042	16,156	8/14/2013 5:00	8/15/2013 5:00	24.0	840	673.2	5.72
Thursday, August 15, 2013	Batch 316-043	19,915	8/15/2013 5:00	8/16/2013 5:00	24.0	849	829.8	5.98
Friday, August 16, 2013	Batch 316-044	19,505	8/16/2013 5:00	8/17/2013 5:00	24.0	840	812.7	6.50
Saturday, August 17, 2013	Batch 316-045	19,498	8/17/2013 5:00	8/18/2013 5:00	24.0	841	812.4	5.74

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: _____ Title: Environmental Specialist Date: 8/19/13

Weekly Volume Summary - Week 16 (8-11-13 through 8-17-13).xlsx

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/12/2013 5:00:00 AM	8/11/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	371,092	352,031	19,061

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,061 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/12/13

MSD Daily Flow Reading, ending 8-12-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/13/2013 5:00:00 AM	8/12/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	383,539	371,092	12,447

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 12,447 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/13/13

MSD Daily Flow Reading, ending 8-13-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/14/2013 5:00:00 AM	8/13/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	399,683	383,539	16,144

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 16,144 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/14/13

MSD Daily Flow Reading, ending 8-14-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/15/2013 5:00:00 AM	8/14/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	415,839	399,683	16,156

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 16,156 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan K Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/15/13

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/16/2013 5:00:00 AM	8/15/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	435,754	415,839	19,915

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,915 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/16/13

MSD Daily Flow Reading, ending 8-16-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/17/2013 5:00:00 AM	8/16/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	455,259	435,754	19,505

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,505 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental specialist *Date:* 8/17/13

MSD Daily Flow Reading, ending 8-17-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/18/2013 5:00:00 AM	8/17/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	474,757	455,259	19,498

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 19,498 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/18/13

MSD Daily Flow Reading, ending 8-18-2013

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, August 21, 2013 5:50 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good evening,

I am so sorry for my late notice of this, but the weekly materials were loaded on Barr's FTP site last night for MSD's review. I am very sorry that I am late in providing the email confirmation of their availability.

As always, please let me know if you have any questions or need additional information. We appreciate continued assistance.

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

Any U.S. federal tax advice contained in this communication (including any attachments or enclosures) was not intended or written by the author to be used, and cannot be used, for the purpose of (1) avoiding penalties that may be imposed on a taxpayer or (2) promoting, marketing, or recommending to another party any transaction or other matter addressed herein.

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Doug Mendoza

From: Darin Lewis
Sent: Monday, August 19, 2013 7:41 AM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Steve Grace; Sara Kammerer
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 8/11/2013 to 8/17/2013.
8/11 – 120,000 gallons
8/12 – 150,000 gallons
8/13 – 150,000 gallons
8/14 – 150,000 gallons
8/15 – 142,500 gallons
8/16 – 150,000 gallons
8/17 – 150,000 gallons
Total = 1,012,500 gallons

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Saturday, August 17, 2013 8:13 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill: Updated Air Sampling Results
Attachments: Enthalpy 0713-181.pdf

Good afternoon,

We received and are submitting the results from recent air monitoring, and these will also be posted on Barr's FTP site. Please note that the benzene air sampling results (71.2 ug/m^3 and 83.7 ug/m^3) are substantially lower than the prior event (570 ug/m^3), which is consistent with the earlier assessment that the elevated benzene air detection resulted from the sporadic elevations in benzene, which have been resolved.

At the August 8, 2013 meeting, MSD requested that Bridgeton Landfill propose a plan for additional lift station air sampling. Air sampling by Bridgeton Landfill will analyze for benzene, which is the only parameter of concern, however we acknowledge that MSD may conduct sampling for additional parameters at MSD's expense.

Bridgeton Landfill proposes to conduct additional summa canister testing for benzene at each major pretreatment implementation milestone. We currently anticipate that the next phase of treatment will be on line by approximately October 1, 2013. The final phase is anticipated to be on line by December 31, 2013. However, we will continue to keep you updated on progress and timing and will specifically confirm testing dates.

As always, please let me know if you have any questions.
Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

Any U.S. federal tax advice contained in this communication (including any attachments or enclosures) was not intended or written by the author to be used, and cannot be used, for the purpose of (1) avoiding penalties that may be imposed on a taxpayer or (2) promoting, marketing, or recommending to another party any transaction or other matter addressed herein.

Barr Engineering Company - Jefferson City

1001 Diamond Ridge, Suite 1100
Jefferson City, MO 65109

Bridgeton Landfill: Bridgeton, MO

Client 25871014 EBG1 001

Analytical Report
(0713-181)

EPA Method TO-15

Benzene

Enthalpy Analytical, Inc.
Phone: (919) 850 - 4392 / Fax: (919) 850 - 9012 / www.enthalpy.com
800-1 Capitola Drive Durham, NC 27713-4385

I certify that to the best of my knowledge all analytical data presented in this report:

- Have been checked for completeness
- Are accurate, error-free, and legible
- Have been conducted in accordance with approved protocol, and that all deviations and analytical problems are summarized in the appropriate narrative(s)

This analytical report was prepared in Portable Document Format (.PDF) and contains 36 pages.

Michael Steven Schapira

QA Review Performed by: Michael Steven Schapira

Report Issued: 8/16/13

Summary of Results

Company	Barr Engineering
Analyst	Company
Parameters	DBS

Client #	25871014 EBG1 001
Job #	0713-181
# Samples	2 canisters

Compound	Sample ID / Concentrations (ppbv)	
	L1301601	***L1301599***
Benzene	22.3	26.2

Results

Sample Name	: L1301601
Sample Info	: 0713-181, 500mL, Can #3898
Data File	: L1302600.D
Dilution	: 1
Pressurization Factor	: 1.966
Acquisition Date	: 2013-08-15 04:27:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	MDL (PPBV)	Concentration (PPBV)	MDL (ug/m3)	Concentration (ug/m3)	Flag *
Benzene	0.393	22.3	1.26	71.2	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
1,4-Difluorobenzene (IS)	2,825,591	14.5	10.5	PASS

(ND) = Not Detected
*** (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration**
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name	: L1301599
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302601.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 05:20:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	MDL (PPBV)	Concentration (PPBV)	MDL (ug/m3)	Concentration (ug/m3)	Flag *
Benzene	0.369	26.2	1.18	83.7	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
1,4-Difluorobenzene (IS)	2,964,665	14.5	10.5	PASS

(ND) = Not Detected
*** (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration**
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Lab QC

Sample Name	: L1301599 LD
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302602.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 06:07:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	MDL (PPBV)	Concentration (PPBV)	MDL (ug/m3)	Concentration (ug/m3)	% Diff	Flag *
Benzene	0.369	26.6	1.18	85.0	1.5	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
1,4-Difluorobenzene (IS)	2,925,389	14.5	10.5	PASS

(ND) = Not Detected
*** (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration**
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name	: Humid Blank
Sample Info	: 500mL, Can #10893
Data File	: L1302599.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 18:46:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	MDL (PPBV)	Concentration (PPBV)	MDL (ug/m3)	Concentration (ug/m3)	Flag *
Benzene	0.200	ND	0.639	ND	

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
1,4-Difluorobenzene (IS)	2,751,088	14.5	10.5	PASS

(ND) = Not Detected
*** (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration**
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name	: 5ppbv TO15 LCS
Sample Info	: 125mL load Can #1423
Data File	: L1302598.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 17:59:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	MDL (PPBV)	Concentration (PPBV)	MDL (ug/m3)	Concentration (ug/m3)	Flag *
Benzene	0.200	4.33	0.639	13.8	m

Internal Standards	Response	Retention Time (min)	Concentration (PPBV)	Flag *
1,4-Difluorobenzene (IS)	2,876,943	14.5	10.5	PASS

(ND) = Not Detected
*** (J) = Below Calibration Range, (E) = Above Calibration Range, (m) = Manual Integration**
IS Acceptance Criteria: RT +/- 20 sec, Response +/- 40%

Sample Name	: 5ppbv TO15 LCS
Sample Info	: 125mL load Can #1423
Data File	: L1302598.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 17:59:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Benzene	780,075	4.33	5.10	84.8	PASS

Company	Barr Engineering Co. - Jefferson City
Analyst	DBS
Parameters	Canister Pressurizations

Client #	25871014 EBG1-001: Bridgeton Landfill
Job #	0713-181
# Samples	2 (3L) Canisters

					Pre-sample			Post-sample			Final		
Sample ID	Can #	Press. Factor	Canister Size	Sample Vol (L) at STP	Temp Field (°F)	P_{bar} Field (mmHg)	Gauge Field (mmHg)	Temp Lab/Field (°F)	P_{bar} Lab/Field (mmHg)	Gauge Lab/Field (mmHg)	Temp Lab (°F)	P_{bar} Lab (mmHg)	Gauge Lab (mmHg)
L1301601	3898	1.966	3.00	2.77	73.5	756	-756	69.5	760	-57	69.5	760	622
L1301599	4015	1.845	3.00	2.93	73.5	756	-756	69.5	760	-15	69.5	760	614

The canister pressurization factors are calculated using the following formula:

$$\frac{\dfrac{GaugeLab + PbarLab}{TempLab + 460}}{\dfrac{GaugeLab\ /\ Field + PbarLab\ /\ Field}{TempLab\ /\ Field + 460} - \dfrac{GaugeField + PbarField}{TempField + 460}}$$

Narrative Summary

Enthalpy Analytical Narrative Summary

Company	Barr Engineering Company
Analyst	TDD
Parameters	EPA Method TO-15

Client #	25871014 EBG1 001
Job #	0713-181
# Samples	2 (3L) Canisters

Custody

Chester Burnett received the samples on 8/13/13 after being relinquished by Barr Engineering Company - Jefferson City. The samples were received at ambient temperature and in good condition. Prior to, during, and after analysis, the samples were kept under lock with access only to authorized personnel by Enthalpy Analytical, Inc.

Analysis

The samples were analyzed for Benzene using the analytical procedures in EPA Method TO-15, *Determination of Volatile Organic Compounds (VOCs) In Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS)*. The samples were analyzed following the procedures in Section 10.0, Sample Analysis.

Both samples were received near ambient pressure and were pressurized with nitrogen prior to sample analysis. The canister pressurization factor was determined and is presented on the Canister Pressurization page in the Results section of this report.

The Hewlett Packard Model 5890, Gas Chromatograph ("Lurch" S/N 2750A15233) was equipped with a 5971A Mass Selective Detector and a Restek Rxi-624 Sil MS, 60 m x 0.32 mm x 1.8 µm (S/N 1035491) capillary column for these analyses. All samples and standards were introduced directly to the analyzer using an Entech 7100A Preconcentrator.

Calibration

All initial calibration % RSD and continuing calibration %D acceptance criteria were met for this analysis. A calibration summary report was included in the calibration section of this report.

Chromatographic Conditions

The acquisition method MM624-L.m has not been included in the Calibration Curve section of this report, but is available at the client's request.

QC Notes

The ICV met % Difference acceptance criteria.

All internal standard area responses and retention time criteria were met.

Sample ***L130159-Can #4015*** was analyzed in duplicate and met the QC criterion of less than 25% Difference.

Enthalpy Analytical Narrative Summary
(continued)

QC Notes (continued)	The method blank associated with this sample analysis did not contain benzene at a concentration greater than the MDL. The sample was analyzed within the 30-day holding time required by the method.
Reporting Notes	These analyses met the requirements of the TNI Standard. Any deviations from the requirements of the reference method and/or the TNI Standard have been previously noted in this narrative. The results presented in this report are representative of the samples as provided to the laboratory.

General Reporting Notes

The following are general reporting notes that are applicable to all Enthalpy Analytical, Inc. data reports, unless specifically noted otherwise.

- Any analysis which referrs to the method as ***"Type"*** represents a planned deviation from the reference method. For instance a Hydrogen Sulfide assay from a Tedlar bag would be labeled as "EPA Method 16-Type" because Tedlar bags are not mentioned as one of the collection options in EPA Method 16.
- The acronym ***MDL*** represents the Minimum Detection Limit. Below this value the laboratory cannot determine the presence of the analyte of interest reliably.
- The acronym ***LOQ*** represents the Limit of Quantification. Below this value the laboratory cannot quantitate the analyte of interest within the criteria of the method.
- The acronym ***ND*** following a value indicates a non-detect or analytical result below the MDL.
- The letter ***J*** in the Qualifier or Flag column in the results indicates that the value is between the MDL and the LOQ. The laboratory can positively identify the analyte of interest as present, but the value should be considered an estimate.
- The letter ***E*** in the Qualifier or Flag column indicates an analytical result exceeding 100% of the highest calibration point. The associated value should be considered as an estimate.
- The acronym ***DF*** represents Dilution Factor. This number represents dilution of the sample during the preparation and/or analysis process. The analytical result taken from a laboratory instrument is multiplied by the DF to determine the final undiluted sample results.
- The addition of ***MS*** to the Sample ID represents a Matrix Spike. An aliquot of an actual sample is spiked with a known amount of analyte so that a percent recovery value can be determined. The MS analysis indicates what effect the sample matrix may have on the target analyte, i.e. whether or not anything in the sample matrix interferes with the analysis of the analyte(s).
- The addition of ***MSD*** to the Sample ID represents a Matrix Spike Duplicate. Prepared in the same manner as an MS, the use of duplicate matrix spikes allows further confirmation of laboratory quality by showing the consistency of results gained by performing the same steps multiple times.
- The addition of ***LD*** to the Sample ID represents a Laboratory Duplicate. The analyst prepares an additional aliquot of sample for testing and the results of the duplicate analysis are compared to the initial result. The result should have a difference value of within 10% of the initial result (if the results of the original analysis are greater than the LOQ).
- The addition of ***AD*** to the Sample ID represents an Alternate Dilution. The analyst prepares an additional aliquot at a different dilution factor (usually double the initial factor). This analysis helps confirm that no additional compound is present and coeluting or sharing absorbance with the analyte of interest, as they would have a different response/absorbance than the analyte of interest.
- The Sample ID ***LCS*** represents a Laboratory Control Sample. Clean matrix, similar to the client sample matrix, prepared and analyzed by the laboratory using the same reagents, spiking standards and procedures used for the client samples. The LCS is used to assess the control of the laboratory's analytical system. Whenever spikes are prepared for our client projects, two spikes are retained as LCSs. The LCSs are labeled with the associated project number and kept in-house at the appropriate temperature conditions. When the project samples are received for analysis, the LCSs are analyzed to confirm that the analyte could be recovered from the media, separate from the samples which were used on the project and which may have been affected by source matrix, sample collection and/or sample transport.

General Reporting Notes

(continued)

- **Significant Figures**: Where the reported value is much greater than unity (1.00) in the units expressed, the number is rounded to a whole number of units, rather than to 3 significant figures. For example, a value of 10,456.45 ug catch is rounded to 10,456 ug. There are five significant digits displayed, but no confidence should be placed on more than two significant digits.
- **Manual Integration**: The data systems used for processing will flag manually integrated peaks with an "M". There are several reasons a peak may be manually integrated. These reasons will be identified by the following two letter designations. The peak was ***not integrated*** by the software **"NI"**, the peak was ***integrated incorrectly*** by the software **"II"** or the ***wrong peak*** was integrated by the software **"WP"**. These codes will accompany the analyst's manual integration stamp placed next to the compound name on the chromatogram.

Sample Custody

ENTHALPY analytical, inc.

Chain of Custody Record

Page 1 of 1

Special Handling:
- ☐ Standard Turn Around Time (10 business days)
- ■ Rush Turn Around Time – Date Needed 8/16/2013
- All TATs Subject to Approval by Enthalpy Analytical, Inc.
- All Bag/Can Samples Disposed of 1 Month from Receipt.
- All Other Samples Disposed of 4 Months from Receipt.

Client Name: Barr Engineering
Project Manager: Ed Galbraith
Report To: Ed Galbraith

Project Number: 25871014 EBG1 001
Site Name: Bridgeton Landfill
Location: Bridgeton, MO

PO#:
Telephone#: 573-638-5024
Email: egailbraith@barr.com

For spiked or duplicate samples: please provide sample volumes for recovery calculations.
For Particulates: please provide tare weights and/or condensed water volumes.

Special Instructions:

A=Air 1=H2SO4 2=NaOH 3= 4=
X=XAD C=Charcoal SG=Silica Gel
G=Grab C=Composite Q=Quality Control

CCB 8-13-13 Can #'s

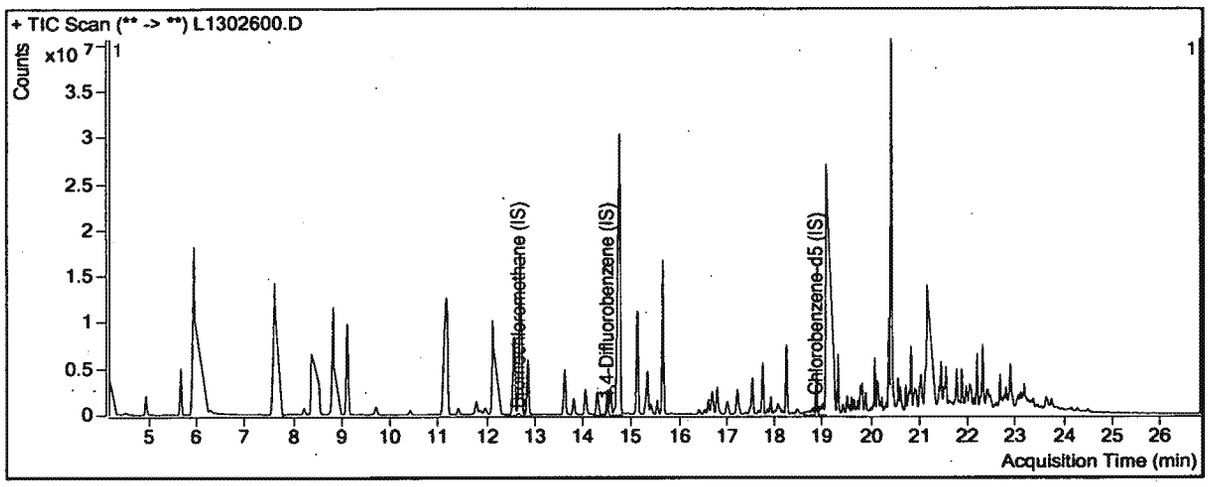
	Sample ID	Date	Time	Sample Volume	Type	Matrix	# of VOA Vials	# of Glass	# of Plastic	# of Bags	# of Canisters	# of Tubes	# Other	TO-15 Benzene								Notes:
3898	L1301601	8/9/2013	14:51	3L	Control	Air					1			1								
4015	L1301599	8/9/2013	14:54	3L	Control	Air					1			1								

Relinquished By	Date	Received By	Date	Time	Sample Condition Upon Receipt
[illegible]	8/9/13				☐ Iced ☒ Ambient ☐ °C
		Chester Brunott	8-13-13	4:35P	☐ Iced ☒ Ambient ☐ °C
					☐ Iced ☐ Ambient ☐ °C

800-1 Capitola Drive • Durham, NC 27713 • (919) 850-4392 • FAX (919) 850-9012 • www.enthalpy.com

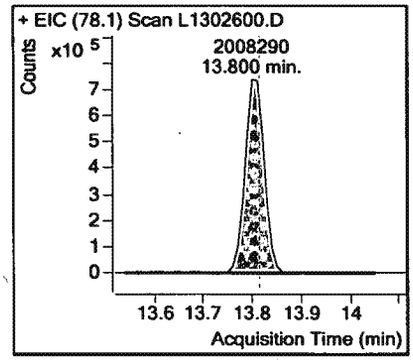
Sample Chromatograms

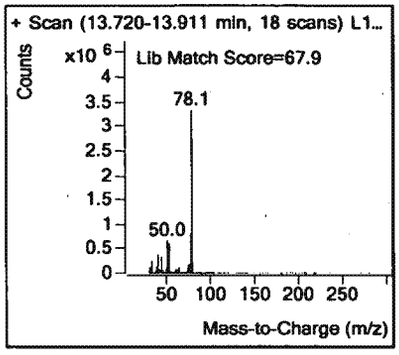
Sample Name	: L1301601
Sample Info	: 0713-181, 500mL, Can #3898
Data File	: L1302600.D
Dilution	: 1
Pressurization Factor	: 1.966
Acquisition Date	: 2013-08-15 04:27:00
Instrument Method	: MM624-L
Matrix	: AIR



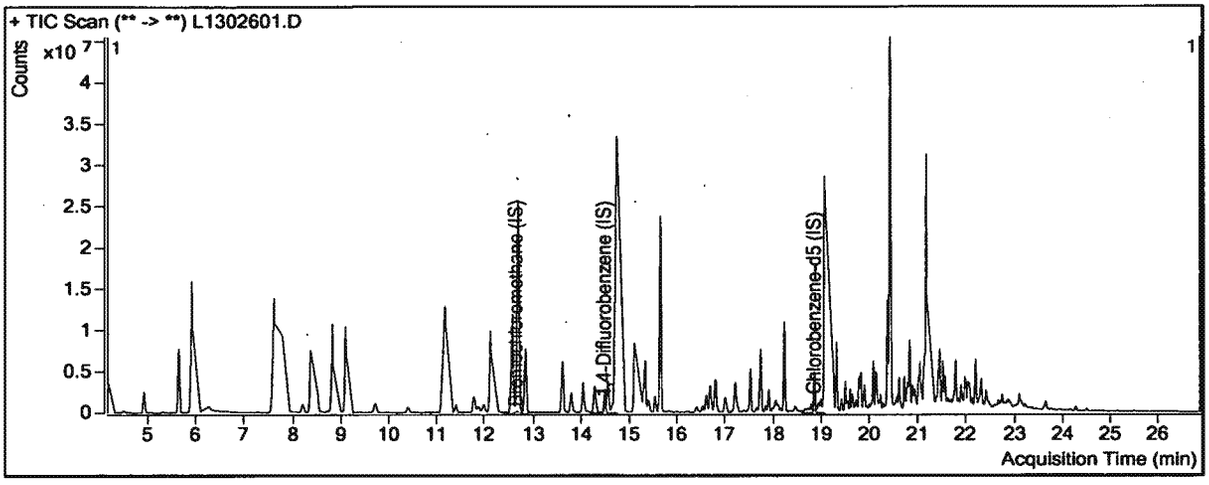
Sample Name	: L1301601
Sample Info	: 0713-181, 500mL, Can #3898
Data File	: L1302600.D
Dilution	: 1
Pressurization Factor	: 1.966
Acquisition Date	: 2013-08-15 04:27:00
Instrument Method	: MM624-L
Matrix	: AIR

Benzene



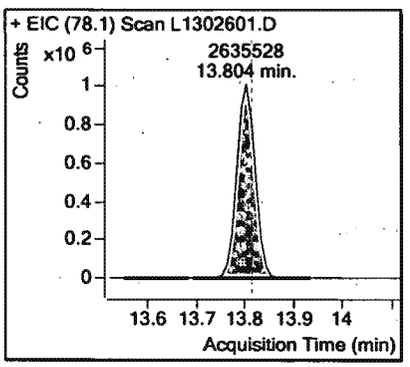


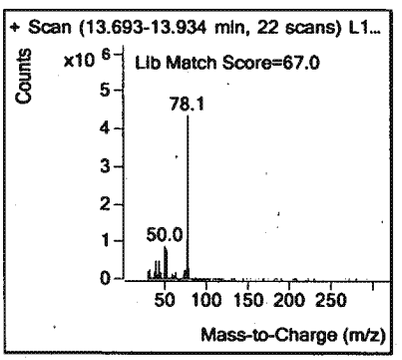
Sample Name	: L1301599
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302601.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 05:20:00
Instrument Method	: MM624-L
Matrix	: AIR



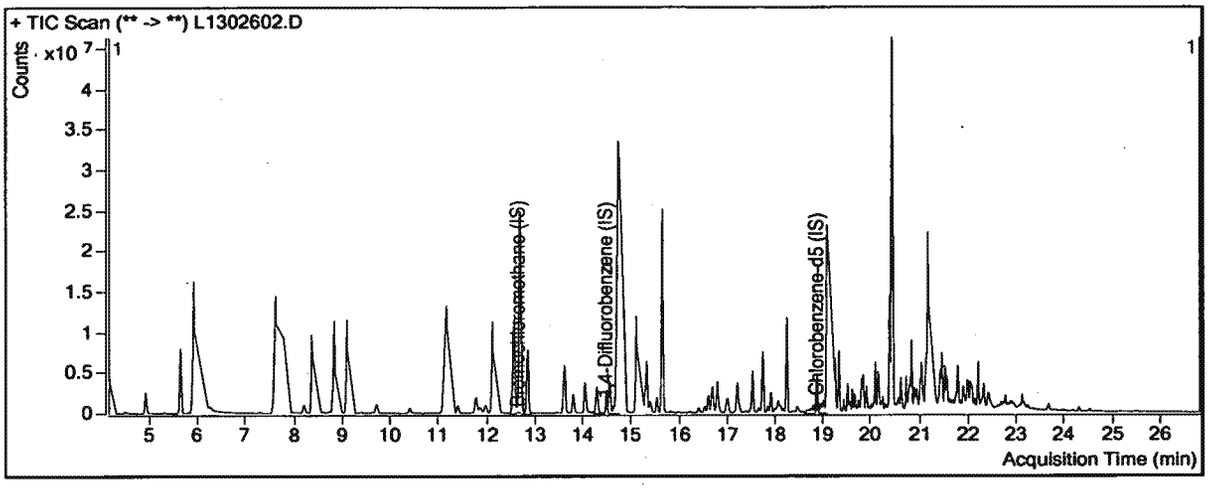
Sample Name	: L1301599
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302601.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 05:20:00
Instrument Method	: MM624-L
Matrix	: AIR

Benzene



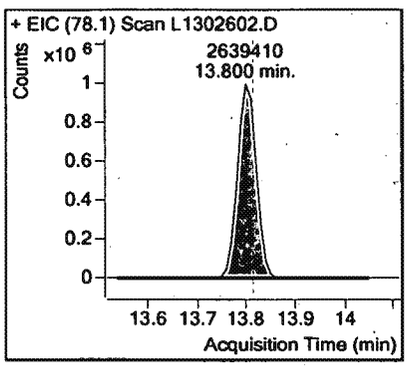


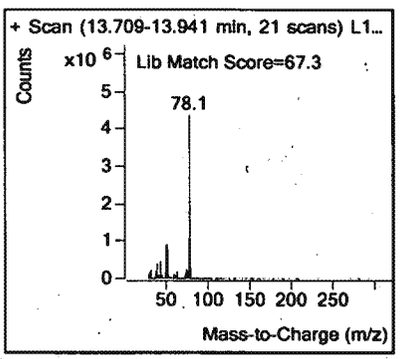
Sample Name	: L1301599 LD
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302602.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 06:07:00
Instrument Method	: MM624-L
Matrix	: AIR



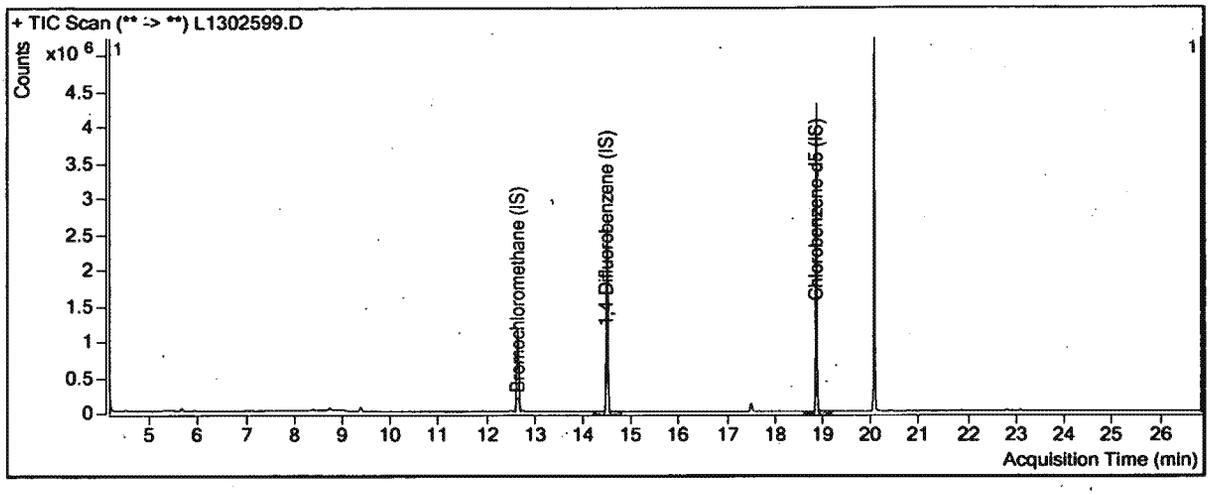
Sample Name	: L1301599 LD
Sample Info	: 0713-181, 500mL, Can #4015
Data File	: L1302602.D
Dilution	: 1
Pressurization Factor	: 1.845
Acquisition Date	: 2013-08-15 06:07:00
Instrument Method	: MM624-L
Matrix	: AIR

Benzene

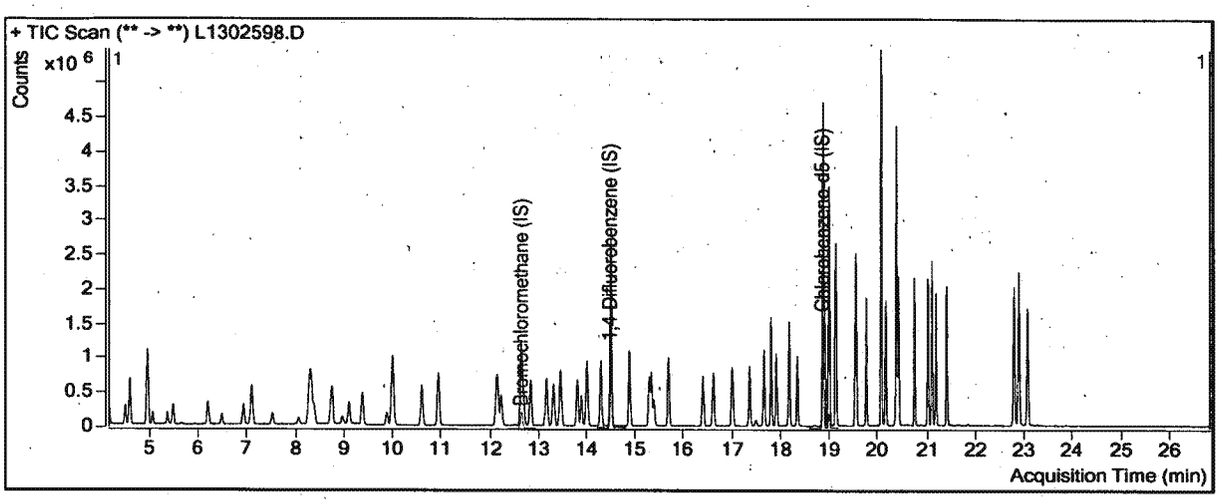




Sample Name	: Humid Blank
Sample Info	: 500mL, Can #10893
Data File	: L1302599.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 18:46:00
Instrument Method	: MM624-L
Matrix	: AIR

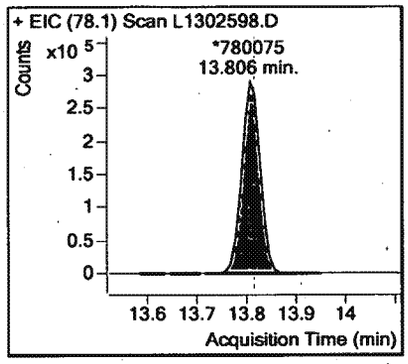


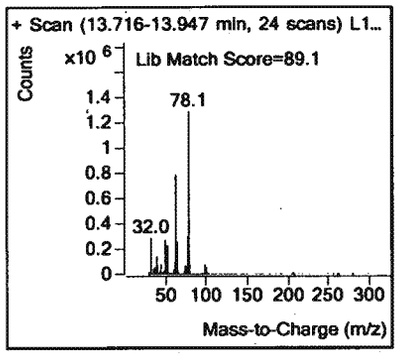
Sample Name	: 5ppbv TO15 LCS
Sample Info	: 125mL load Can #1423
Data File	: L1302598.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 17:59:00
Instrument Method	: MM624-L
Matrix	: AIR



Sample Name	: 5ppbv TO15 LCS
Sample Info	: 125mL load Can #1423
Data File	: L1302598.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 17:59:00
Instrument Method	: MM624-L
Matrix	: AIR

Benzene





Manual Int. "NI" (DBS)

Calibration Curve Chromatograms

Calibration Sequence L081413A
Calibration Date 8/15/2013

Compound	Type	RT	Average RRT	Average RF	%RSD	Flag
Bromochloromethane (IS)	ISTD	12.66				
Propylene	Target	4.51	0.356	0.688	20.8	PASS
Freon 12 (CCl2F2)	Target	4.61	0.364	3.35	15.1	PASS
Freon 114 (C2Cl2F4)	Target	4.96	0.392	3.64	16.4	PASS
Chloromethane	Target	5.08	0.401	0.856	16.1	PASS
Chloroethene (Vinyl chloride)	Target	5.38	0.425	0.909	15.5	PASS
1,3-Butadiene	Target	5.49	0.434	0.798	15.9	PASS
Bromomethane	Target	6.21	0.491	1.30	17.6	PASS
Chloroethane	Target	6.49	0.513	0.490	16.8	PASS
Bromoethene (Vinyl bromide)	Target	6.94	0.548	1.19	15.6	PASS
Freon 11 (CCl3F)	Target	7.11	0.561	2.76	15.3	PASS
Ethanol	Target	7.53	0.595	0.289	19.8	PASS
Acrolein	Target	8.08	0.638	0.364	31.3	FAIL
Freon 113 (C2Cl3F3)	Target	8.33	0.658	1.43	28.0	PASS
1,1-Dichloroethene	Target	8.29	0.655	1.72	21.1	PASS
Acetone	Target	8.39	0.663	1.96	21.0	PASS
Carbon disulfide	Target	8.78	0.693	2.84	26.5	PASS
Isopropyl alcohol	Target	8.75	0.691	1.81	23.8	PASS
Allyl chloride (3-chloropropene)	Target	9.12	0.720	0.409	24.9	PASS
Acetonitrile	Target	8.99	0.710	0.665	28.0	PASS
Methylene chloride	Target	9.40	0.743	1.63	26.8	PASS
trans-1,2-Dichloroethene	Target	10.0	0.791	1.70	16.5	PASS
Methyl tert-butyl ether	Target	10.0	0.792	2.87	15.8	PASS
Acrylonitrile	Target	9.89	0.782	0.775	15.6	PASS
Hexane	Target	10.6	0.839	1.34	17.0	PASS
1,1-Dichloroethane	Target	11.0	0.866	2.01	17.2	PASS
Vinyl acetate	Target	11.0	0.866	3.33	13.7	PASS
cis-1,2-Dichloroethylene	Target	12.2	0.961	1.65	13.1	PASS
Methyl ethyl ketone (2-Butanone)	Target	12.1	0.959	0.468	15.3	PASS
Ethyl acetate	Target	12.2	0.967	0.373	13.0	PASS
Chloroform	Target	12.9	1.02	2.58	15.5	PASS
Tetrahydrofuran	Target	12.7	1.00	0.464	15.9	PASS
1,1,1-Trichloroethane	Target	13.2	1.04	2.53	14.4	PASS
Cyclohexane	Target	13.3	1.05	1.45	16.7	PASS
Carbon tetrachloride	Target	13.5	1.06	2.70	14.1	PASS
1,4-Difluorobenzene (IS)	ISTD	14.5				
Benzene	Target	13.8	0.952	0.659	17.3	PASS
2,2,4-trimethylpentane	Target	14.0	0.966	0.984	17.3	PASS
1,2-Dichloroethane	Target	13.9	0.958	0.407	14.8	PASS
Heptane	Target	14.3	0.986	0.189	19.0	PASS
Trichloroethene	Target	14.9	1.03	0.420	16.6	PASS
1,2-Dichloropropane	Target	15.3	1.05	0.242	16.8	PASS
Methyl methacrylate	Target	15.3	1.06	0.253	17.2	PASS
1,4-Dioxane	Target	15.4	1.06	0.181	16.9	PASS
Bromodichloromethane	Target	15.7	1.08	0.667	15.9	PASS

Calibration Sequence L081413A
Calibration Date 8/15/2013

Compound	Type	RT	Average RRT	Average RF	%RSD	Flag
cis-1,3-Dichloropropene	Target	16.4	1.13	0.415	15.1	PASS
Methyl isobutyl ketone	Target	16.6	1.15	0.670	15.5	PASS
Chlorobenzene-d5 (IS)	ISTD	18.9				
Toluene	Target	17.0	0.901	0.858	16.3	PASS
trans-1,3-Dichloropropene	Target	17.4	0.920	0.479	15.4	PASS
1,1,2-Trichloroethane	Target	17.7	0.936	0.364	16.9	PASS
Tetrachloroethene	Target	17.8	0.944	0.538	17.2	PASS
2-Hexanone (Methyl butyl ketone)	Target	17.9	0.949	0.693	15.8	PASS
Dibromochloromethane	Target	18.2	0.963	0.840	15.6	PASS
1,2-Dibromoethane	Target	18.4	0.972	0.730	16.2	PASS
Chlorobenzene	Target	18.9	1.00	0.828	16.4	PASS
Ethylbenzene	Target	19.0	1.01	1.15	18.7	PASS
1,1,1,2-Tetrachloroethane	Target	19.0	1.01	0.494	19.1	PASS
m-/p-Xylenes	Target	19.1	1.01	0.921	16.6	PASS
o-Xylene	Target	19.5	1.04	0.925	18.3	PASS
Styrene	Target	19.6	1.04	0.811	18.1	PASS
Bromoform	Target	19.8	1.05	0.846	16.6	PASS
1,1,2,2-Tetrachloroethane	Target	20.2	1.07	0.809	17.5	PASS
4-Ethyltoluene	Target	20.4	1.08	1.38	16.3	PASS
2-Chlorotoluene	Target	20.4	1.08	1.03	18.3	PASS
1,3,5-Trimethylbenzene	Target	20.5	1.08	1.15	19.1	PASS
1,2,4-Trimethylbenzene	Target	20.8	1.10	1.13	16.4	PASS
1,3-Dichlorobenzene	Target	21.1	1.12	0.877	16.4	PASS
1,4-Dichlorobenzene	Target	21.1	1.12	0.931	16.2	PASS
Benzyl chloride	Target	21.2	1.12	1.18	14.8	PASS
1,2-Dichlorobenzene	Target	21.5	1.14	0.857	15.8	PASS
1,2,4-Trichlorobenzene	Target	22.8	1.21	0.765	17.2	PASS
Hexachlorobutadiene	Target	22.9	1.22	0.474	19.0	PASS
Naphthalene	Target	23.1	1.23	1.68	16.3	PASS

Sample Name	: 5ppbv TO15 ICV/LCS
Sample Info	: 125mL load Can #1423
Data File	: L1302598.D
Dilution	: 1
Pressurization Factor	: 1.000
Acquisition Date	: 2013-08-14 17:59:00
Instrument Method	: MM624-L
Matrix	: AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Propylene	187,126	4.43	5.40	82.1	PASS
Freon 12 (CCl2F2)	817,861	3.98	4.75	83.8	PASS
Freon 114 (C2Cl2F4)	906,733	4.06	4.80	84.6	PASS
Chloromethane	210,771	4.02	4.80	83.7	PASS
Chloroethene (Vinyl chloride)	228,327	4.10	4.85	84.5	PASS
1,3-Butadiene	206,638	4.22	5.10	82.8	PASS
Bromomethane	332,753	4.17	4.90	85.2	PASS
Chloroethane	122,136	4.06	4.80	84.6	PASS
Bromoethene (Vinyl bromide)	312,981	4.29	5.10	84.0	PASS
Freon 11 (CCl3F)	729,532	4.31	5.05	85.4	PASS
Ethanol	88,408	4.99	5.50	90.7	PASS
Acrolein	89,514	4.01	5.00	80.2	PASS
Freon 113 (C2Cl3F3)	362,630	4.12	5.15	80.0	PASS
1,1-Dichloroethene	452,520	4.28	5.25	81.6	PASS
Acetone	532,995	4.44	5.25	84.5	PASS
Carbon disulfide	742,828	4.26	5.25	81.1	PASS
Isopropyl alcohol	509,261	4.58	5.50	83.3	PASS
Allyl chloride (3-chloropropene)	101,009	4.03	5.40	74.5	PASS
Acetonitrile	150,822	3.70	4.80	77.0	PASS
Methylene chloride	426,623	4.27	5.15	82.9	PASS
trans-1,2-Dichloroethene	455,626	4.36	5.10	85.5	PASS
Methyl tert-butyl ether	771,581	4.39	5.15	85.3	PASS
Acrylonitrile	199,530	4.20	5.05	83.2	PASS
Hexane	370,286	4.51	5.20	86.8	PASS
1,1-Dichloroethane	540,211	4.39	5.10	86.1	PASS
Vinyl acetate	931,944	4.56	5.25	86.9	PASS
cis-1,2-Dichloroethylene	444,128	4.39	5.20	84.4	PASS
Methyl ethyl ketone (2-Butanone)	131,727	4.59	5.20	88.3	PASS
Ethyl acetate	102,655	4.49	5.15	87.2	PASS
Chloroform	687,038	4.34	5.15	84.3	PASS
Tetrahydrofuran	123,835	4.35	5.05	86.2	PASS
1,1,1-Trichloroethane	663,725	4.28	5.05	84.7	PASS
Cyclohexane	387,242	4.34	5.15	84.4	PASS
Carbon tetrachloride	700,810	4.23	5.00	84.7	PASS
Benzene	780,075	4.33	5.10	84.8	PASS
2,2,4-trimethylpentane	1,159,076	4.31	5.15	83.7	PASS
1,2-Dichloroethane	469,623	4.22	5.05	83.6	PASS
Heptane	227,981	4.41	5.20	84.9	PASS
Trichloroethene	487,707	4.24	5.05	84.0	PASS
1,2-Dichloropropane	288,385	4.36	5.10	85.6	PASS

Sample Name : 5ppbv TO15 ICV/LCS
Sample Info : 125mL load Can #1423
Data File : L1302598.D
Dilution : 1
Pressurization Factor : 1.000
Acquisition Date : 2013-08-14 17:59:00
Instrument Method : MM624-L
Matrix : AIR

Target Compound	Response	Concentration (PPBV)	Tag Value (PPBV)	% Recovery	Flag
Methyl methacrylate	296,930	4.29	5.05	84.9	PASS
1,4-Dioxane	219,873	4.45	5.05	88.1	PASS
Bromodichloromethane	789,696	4.33	5.05	85.7	PASS
cis-1,3-Dichloropropene	513,116	4.52	5.25	86.1	PASS
Methyl isobutyl ketone	772,418	4.22	5.00	84.3	PASS
Toluene	913,803	4.25	5.15	82.4	PASS
trans-1,3-Dichloropropene	537,434	4.47	5.40	82.8	PASS
1,1,2-Trichloroethane	393,806	4.31	5.10	84.6	PASS
Tetrachloroethene	566,035	4.19	4.95	84.7	PASS
2-Hexanone (Methyl butyl ketone)	772,432	4.44	5.25	84.6	PASS
Dibromochloromethane	901,046	4.27	5.05	84.6	PASS
1,2-Dibromoethane	782,083	4.27	5.00	85.4	PASS
Chlorobenzene	898,777	4.32	5.15	84.0	PASS
Ethylbenzene	1,292,171	4.46	5.10	87.5	PASS
1,1,1,2-Tetrachloroethane	561,878	4.54	5.20	87.2	PASS
m-/p-Xylenes	1,963,174	8.50	9.90	85.8	PASS
o-Xylene	1,000,195	4.31	5.15	83.6	PASS
Styrene	887,654	4.36	5.10	85.5	PASS
Bromoform	895,565	4.22	4.95	85.2	PASS
1,1,2,2-Tetrachloroethane	886,243	4.37	5.15	84.8	PASS
4-Ethyltoluene	1,564,616	4.51	5.00	90.2	PASS
2-Chlorotoluene	1,163,764	4.52	5.10	88.6	PASS
1,3,5-Trimethylbenzene	1,116,158	3.86	4.95	77.9	PASS
1,2,4-Trimethylbenzene	1,217,713	4.29	5.00	85.8	PASS
1,3-Dichlorobenzene	972,191	4.42	5.15	85.7	PASS
1,4-Dichlorobenzene	998,048	4.27	4.90	87.1	PASS
Benzyl chloride	1,304,637	4.39	5.15	85.3	PASS
1,2-Dichlorobenzene	934,667	4.35	4.95	87.8	PASS
1,2,4-Trichlorobenzene	741,547	3.86	4.50	85.8	PASS
Hexachlorobutadiene	460,990	3.87	4.60	84.2	PASS
Naphthalene	1,777,478	4.21	4.85	86.8	PASS

This Is The Last Page Of This Report.

Doug Mendoza

From: Joe Pavlich
Sent: Friday, August 16, 2013 3:12 PM
To: Doug Mendoza
Cc: Brian G. Gibson

Doug, the reading for Bridgeton landfill was 439309 on 8/16/13 @ 09:58, flow rate 830 gals./hr.

Doug Mendoza

From: Ed Galbraith <EGalbraith@barr.com>
Sent: Friday, August 16, 2013 1:36 PM
To: John Lodderhose; Doug Mendoza
Subject: FW: Bridgeton Landfill VOA/SVOA Compounds List

John, in our discussions about reducing sample reporting, you had asked how long the lab retains data. Our current lab, Pace, keeps data for 7 years.

Ed Galbraith

Senior Environmental Scientist
Jefferson City office: 573.638.5024
cell: 573.418.5562
egalbraith@barr.com
www.barr.com

resourceful. naturally. BARR

From: Angie Brown [mailto:Angie.Brown@pacelabs.com]
Sent: Friday, August 09, 2013 11:49 AM
To: Ed Galbraith
Cc: Bill Abernathy(babernathy@feezorengineering.com); Custer, Anna; Dan Feezor(dfeezor@feezorengineering.com) (dfeezor@feezorengineering.com); Dana L. Baker; Jessie (LG) Merrigan; Kelly Caddy
Subject: Re: Bridgeton Landfill VOA/SVOA Compounds List

Hi Ed,

I'll begin the process to trim down the volatile/semi-volatile parameters for reports going forward.

We keep our data for 7 years.

Thank you

Angie Brown
Pace Analytical Services, Inc./Lenexa, KS
phone: 913-563-1402/fax:913-438-3449
email: angie.brown@pacelabs.com

>>> Ed Galbraith <EGalbraith@barr.com> 8/9/2013 11:07 AM >>>
Angie,

Bridgeton Landfill has received approval to reduce the reporting on about 100 constituents. This will help streamline our data management efforts. We understand that the full 624 and 625 methods will still be required on your part. However, if you could code the system on your end to remove these from the reporting, that would be appreciated. This is for all samples identified "316- ", or "MSD Batch ". Any other sample identifiers should stick to what is requested by the COC.

Two questions:

1. For any analyte not reported, how long is the data retained by Pace, if should be requested?
2. How soon do you think you can implement this?

Thank you!

Ed Galbraith

Senior Environmental Scientist
Jefferson City office: 573.638.5024
cell: 573.418.5562
egalbraith@barr.com
www.barr.com

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For more information please visit http://www.symanteccloud.com

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Thursday, August 15, 2013 1:53 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report
Attachments: Confirmation Sampling for Batch 257

Good afternoon Doug,

Thank you for your follow up. We apologize for the confusion on Batch 257 and I have attached a summary from Ed Galbraith regarding that batch and the relevant data.

We appreciate your feedback on the Bissell Point traffic flow. The increased volume is extremely helpful for leachate management, so we want to continue to make sure we are working with you in a way that is best for your plant operations. Should any concern arise, please let us know so that we can address them.

As an update to the distribution list, the AG's office has confirmed that they do not need to be included in updates moving forward. If anyone else wants off the list, please let me know.

Thank you,
Jessie

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Wednesday, August 14, 2013 3:11 PM
To: Merrigan, Jessie; John Lodderhose; Christopher J. Bulmahn; Ken Goins; Bindbeutel, Joe; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Blome, Jessica; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally; Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Jessie,

We have completed our review of the weekly data submittal. An updated "conditional approval items tracking" spreadsheet is attached. One item of note is that we were unable to locate results for Batch 257 on the Data Reports spreadsheet. Please see the attached tracking spreadsheet for details.

Regarding your timed manifest distribution to assist in flow control, thank you for implementing it. It has helped with traffic flow and congestion at our facility, and is working smoothly for us.

Sincerely,

Doug Mendoza

From: Ed Galbraith <EGalbraith@barr.com>
Sent: Thursday, August 15, 2013 1:53 PM
To: Merrigan, Jessie (LG)
Cc: Bill Abernathy (babernathy@feezorengineering.com); Dan Feezor (dfeezor@feezorengineering.com) (dfeezor@feezorengineering.com); Power, Brian <BPower@republicservices.com> (BPower@republicservices.com); Smith, Steve (ssmith10@republicservices.com)
Subject: Confirmation Sampling for Batch 257
Attachments: Bridgeton Landfill conditional approval items tracking.xlsx

Regarding Doug's question about confirmation sampling for Batch 257. The short answer is that the confirmation sampling for 257-AST can be found at batch 235/236-MSD.

Here's the long story:

- 6/19-20/2013 - Batch 235/236-MSD was sampled for both operational and confirmation sampling.
- 6/20/2013 – Based on the compliant benzene result from the operational sample, 96,800 gallons were delivered to Bissell Point from Batch 235/236-MSD.
- 6/21/2013 – The remainder of Batch 235/236-MSD and Batch 237/238-MSD were transferred to the 96K tank. No liquid was discharged. This was renamed 96-001.
- 06/22/2013 to 06/26/2013 – 96-001 was sampled 3 times to determine source of benzene reoccurring.
- 06/26/2013 – 96-001 was transferred to TB-3 for reprocessing. This was renamed 257-AST.
- 06/29/2013 - 257-AST resampled for operational sampling and was below the threshold for Benzene. 257-AST then routed back to the 96K tank.
- 07/01/2013 to 07/26/2013 – Additional testing was conducted (19 samples) to monitor benzene levels.
- 8/9/2013 – Batch 257-AST was sampled/analyzed again (96-001-D). Once approved, 17,201 gallons were discharged to MoRiver WWTP from the 96K tank.

<u>Operational Sampling for Batch 235/236-MSD:</u>
Sample taken: 6/19/13
Sample Number: 235/236-MSD
Analytical Report: New Age Report NAL13026-372
Update Folder: June 25, 2013

<u>Confirmation Sampling for Batch 235/236-MSD:</u>
Sample taken: 6/20/13
Sample Number: MSD Batch 235/236
Analytical Report: TestAmerica Report #1602783
Update Folder: July 9, 2013

<u>Operational Sampling for 257-AST:</u>
Sample taken: 6/29/13
Sample Number: 257-AST-T1 through -T4
Analytical Report: New Age Report NAL13026-414 through -417
Update Folder: July 9, 2013

Ed Galbraith

Senior Environmental Scientist
Jefferson City office: 573.638.5024
cell: 573.418.5562
egalbraith@barr.com
www.barr.com

resourceful. naturally. BARR

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Wednesday, August 14, 2013 3:11 PM
To: Merrigan, Jessie (LG); John Lodderhose; Christopher J. Bulmahn; Ken Goins; Bindbeutel, Joe; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Blome, Jessica; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: RE: Bridgeton Landfill Weekly Report

Jessie,

We have completed our review of the weekly data submittal. An updated "conditional approval items tracking" spreadsheet is attached. One item of note is that we were unable to locate results for Batch 257 on the Data Reports spreadsheet. Please see the attached tracking spreadsheet for details.

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MSD Industrial Pretreatment Manager

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To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; Bindbeutel, Joe; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Blome, Jessica; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

This serves as the weekly report for Bridgeton Landfill. The materials for August 4th through Saturday August 10th are now available on Barr's FTP site.

In order to provide MSD with the most recent data possible, we are including all lab reports received as of the Monday prior to the Wednesday reporting deadline. We typically receive the greatest number of sample reports on Mondays (5 to 7), so this change will improve timeliness of reporting. Note that the number of verification sample reports is more than double the usual number, because it spans two Mondays. Next week will return to the more typical

Facility ID: 1036497600 | Name: BOEING COMPANY [1036497600] | SIU ☑ (Class: Significant Industrial User) | All Facilities

Results

Start Date: 01/01/2013 End Date: Apply

Events | Inspections | Sampling | Limit Comp | Violations | SMDE | Gen Rpts | **Notifications** | Surcharge | Surcharge Export

Notification Type	Date
Problem Discharge - Immediate Notice	08/15/2013

Text

A telephone call was received on 8/15/13 from Gary Buford at 10:36 AM to report a release of wastewater with a pH of 10.0 SU. Industrial waste water lift pumps at the BOEING lift station off McDonnell Blvd. failed. Untreated industrial waste water is bypassing the BOEING treatment plant and being directed to the MSD system. Industrial waste water consist of rinse water from the tank lines. Possible consituents may include Titanium, Aluminum, Chrome, and Copper. Gary stated that rinse water discharge from the tank lines influent is typically the same as the effluent. Boeing mechanics are currently in the process of repairing one of the pumps. Boeing anticipates one pump to be repaired and running within 24 hours. Gary has collected samples from the discharge and sent the sample off for analysis. Gary will send a letter and analytical results once they have investigated the cause of the pump failure. MK

WEAVER
BOOS
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August 8, 2013

Mr. Chris Bulmahn
Environmental Engineer
Metropolitan St. Louis Sewer District
10 East Grand Avenue
St. Louis, MO 63147-2913

Re: Metropolitan St. Louis Sewer District – Administrative Compliance Order
Action Items #5 and #6
Bridgeton Landfill, LLC.
Discharge Permit No. 0511559802-2

Dear Mr. Bulmahn:

On behalf of the Bridgeton Landfill, in accordance with the Metropolitan St. Louis Sewer District (MSD) Administrative Compliance Order (AO), which was signed by legal representatives of MSD and the Bridgeton Landfill, LLC and entered effect on October 29, 2012, respectfully submits this progress report as outlined in the AO, Action Items' #5 and #6.

As required per Action Items #5 and #6, the Bridgeton Landfill shall submit a schedule, for MSD approval, of actions for the design, installation, and operation of the procedures and pretreatment options identified in AO Finding #8 which states that the Bridgeton Landfill is in the process of investigation for the implementation of the following pretreatment options in which to eliminate the occurrence of future prohibited discharges at Leachate Outfall 008:

a.) Installation and operation of a supplemental "enclosed" flare, as well as a supplemental "candlestick" utility flare within the landfill's gas collection and control system;
b.) Design and operation of air monitoring/moving engineering controls at the landfill's outfall to the MSD sewer system within the Westlake Pump Station, and;

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c.) Installation and operation of a foam suppressing agent. The following table outlines current progress and planned actions to be taken at the Bridgeton Landfill in regard to the aforementioned items.

Finding No.	Proposed Option	Complete (Yes/No)	Completion Date
8a(1)	Installation and Operation of Additional Enclosed Flare	Yes	2-Oct-12
8a(2)	Installation and Operation of Supplemental Candlestick Flare	Yes	18-Jul-12
8b	Design and Operation of Air Monitoring/Moving Engineering Controls within Westlake Pump Station	Yes	6-Jun-13
8c	Installation and Operation of a Foam Suppression Agent	No	Installation Suspended

The Bridgeton Landfill completed the construction and testing phases of the supplemental candlestick flare on July 18, 2012 (Finding 8a(2)). This flare was subsequently replaced with a larger 3,500 scfm candlestick flare that became operational in January 2013. The supplement candlestick flare has been brought back on-line in June 2013.

The second enclosed flare was officially brought online October 2, 2012. The new enclosed flare, similar to the facility's existing enclosed flare, adds additional 3,500 scfm of gas extraction capacity to the landfill's gas collection and control system. A fourth flare with a capacity of 2,500 scfm was brought on-line June 6, 2013 to allow additional capacity as needed. The combined flow of the four operational flares is 13,000 scfm which allows the ability to improve landfill gas collection and odors at the facility and the surrounding environment. Each of the flares are operated and maintained under a site-specific program which is designed to enable landfill personnel to minimize downtime and provide peak system performance efficiency.

In a letter from MSD dated December 4, 2012, it was declared that the Bridgeton Landfill was no longer required to construct and operate a foam suppression system at the facility unless future

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foaming incidents occur. The Bridgeton Landfill will continue to monitor the Westlake Pump Station as well as the Leachate Tank System for indicators of foaming.

The design and development of the air quality engineering controls to be constructed and operated at the Westlake Pump Station (Finding 8b), were completed on December 20, 2012. Prior to finalization of the system design, meetings regarding the development of a plan of action for the preparation and construction of these air quality engineering controls were held at the MSD office on August 21, 2012, and September 24, 2012 between; MSD Environmental Compliance and Operations representatives and Bridgeton Landfill personnel. Additionally, series of on-site meetings were held at the Westlake Pump Station, involving the aforementioned parties, to determine the design of the system and to secure an incoming power supply.

On June 6, 2013 the air monitoring/moving engineering controls within the Westlake pump station became fully operational. Between the dates of June 6-16, 2013 a baseline evaluation of the 4-gas levels within the pump station wet well was conducted using the newly installed monitor. The purpose of this evaluation was to monitor the in-well conditions during discharge operations from the landfill. On June 17, 2013, following the baseline evaluation, the system's drum scrubber was activated. Bryan Sehie of Bridgeton Landfill coordinated this effort with Vince Stollhans of MSD, and both have reviewed MSD 4-gas monitoing data recorded by the system. Since operation of the drum scrubber the 4-gas meter levels within the pump station have decreased as confirmed by the MSD data maintained by Vince Stollhans. However, on June 20, 2013 leachate discharge to the pump station was ceased.

During this reporting period the Bridgeton Landfill only discharged leachate on the days of July 23 and 24, 2013, at the volume of 17,502 gallons per day. The facility is continuing to work on refining the benzene removal process in order to ensure that leachate discharged into the Westlake Pump Station meets the vapor toxicity screening level of 0.14 mg/L. It is anticipated that resumption of the <20,000 gallon per day discharge rate will occur mid-August 2013 as upgrades to the system and new conveyance piping from the 316,000 gallon pre-treatment tank are completed. Further analysis of 4-gas monitoring data during sustained discharge will be performed following that resumption.

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We will continue to provide ongoing updates on leachate and the pretreatment system to comply with the AO agreement as well as MSD ordinances. If there are any questions please contact Bryan Sehie with Bridgeton Landfill at 314-744-8190 or myself at 573-289-3379.

Sincerely,
Weaver Boos Consultants

Michele A Boussad

Michele Boussad
Senior Project Director

Cc: Bryan Sehie, Bridgeton Landfill, LLC.

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Table 3
VOCs and SVOCs
December 2012 - August 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-008	7/5/2013	Pace	Validated	60148306	ND

Doug Mendoza

From: Rob G Daly
Sent: Wednesday, August 14, 2013 9:55 AM
To: Doug Mendoza
Cc: Ryan Sabourin; John Lodderhose; Nora C. Estopare; Michael Grace; Mark Bright; Ken Gambaro; Bill Pietroburgo (bpietroburgo@pe-engrs.com); Jonathon Sprague
Subject: Westlakes PS (Bridgeton Landfill) : Submission of Industrial Hygiene Report and Air Sampling at PS

Doug- a follow up to a voice mail I just left you.

Just a quick update to the group.

1. Status of Industrial Hygienist written report (District Ind Hygienist)

I just spoke with Bill Pietroburgo (Industrial Hygienist) and caught up with him on results of our progress meeting last week with landfill folks.

Bill is committed to getting me the following:

A finalized written summary of his 'peer review' of air sampling events taken in recent months at our facility, pre-discharge, during discharge- but prior to air handling equipment being installed, and during discharge with air handling unit installed and functioning. His goal is to identify the occupational health and safety impacts of site conditions- as revealed by the set of data we made available to him.

I have asked for the final version of this written summary prior to my departure on vacation next week- shooting for Monday the 19th at this point. I will distribute to all parties on receipt.

2. Currently proposed/implemented ongoing air sampling protocol (at Westlakes PS site)

Bill has had a recent meeting with myself, Mike Grace, and Nora to review the current batch by batch sampling protocol and now understands the intent behind how the currently required sampling protocol functions.

I also caught Bill up verbally just now on results of last meeting with landfill personnel- and identified to him that

a). the discharge has resumed to our facility(ies) (effective Friday the 9th of August) and that the landfill personnel will conduct a summa canister sampling event at the pump station- for benzene only (since conducted-same day discharge began) and that results will be made available towards end of August. I Will forward those results to Bill on my return to the office in September- as part of his ongoing review on our behalf of all sampling conducted at the pump station.
b) That landfill personnel agreed- in principle- to conduct additional summa canister testing- at this time focused only on benzene- at agreed upon milestone events during the construction phase of their pre-treatment system (estimated completion date- DEC2013). Current estimate indicated at least 2 more events but Landfill will provide proposed sampling 'milestone events' - by no later than August 21st (per last meeting notes I took).
c) The landfill request to reduce the sampling protocol on the batch by batch basis- and the District response to that request (answer being yes- but with caveats)

In light of the above noted information, what I also asked Bill to review and comment on was- how does the currently implemented and proposed batch by batch basis (plus limited benzene only summa canister sampling events at the pump station) sampling protocol – which does NOT match the more extensive and more frequent air sampling events at our pump station that was originally envisioned on the Ops side- impact the occupational health and safety of our field staff assigned to work at the Westlakes pump station? This is consistent with my comments at our last progress meeting, where I stated our intent to look at this in more detail on our end and that we would provide a more formal response as to our opinion about the adequacy of currently proposed/implemented sampling protocol prior to August 21st (departure for vacation date).

Bill will review results to date, and other information noted above, and will incorporate any comments on how the current sampling plan impacts occupational health and safety of assigned field staff into that final written summary noted above -and I will then use those comments as the basis for my next decision. Right now- I perceive 2 possible paths forward on our end:

1) Status quo- plan as proposed and currently implemented addresses occupational health and safety concerns – in opinion of Bill P- and move forward as noted above, i.e. a few more summa canister events only plus continued batch by batch basis sampling.
2) Bill identifies that he feels that current air sampling- at pump station site- is inadequate to address concerns noted in past- and recommends additional, supplemental sampling events. At that point- my intent is to move forward with whatever testing is required, in consultation first with Nora and Mike Grace and Bill P.

A follow on activity at that point will be a request, by me, for a session with John Lodderhose and John Sprague where I ask how we can potentially shift and reprioritize some of those funds the landfill is moving our way for waste discharge into my budget so we can fund and conduct above noted sampling. This is consistent with a conversation I had with Jon in the last few weeks. At this point-I would probably be asking Bill P to coordinate, initiate, and review any results of any additional sampling we undertake (since we have a Blanket Service Agreement with his firm for these types of issues).

Since I will not be at the next progress meeting on August 29th- just trying to at least get the info out there and 'reserve our options' at this point.

Any questions- please let me know. I will forward other info on receipt.

Many thanks.

Rob Daly, EIT
Division Manager- Pump Stations
Department of Operations
Metropolitan St Louis Sewer District
1025 Grand Glaize Parkway
Valley Park, MO 63088-1952
(636) 861-6706 (Office)

rdaly@stlmsd.com

From: Rob G Daly
Sent: Tuesday, August 13, 2013 6:20 PM
To: Doug Mendoza
Subject: RE: Westlakes PS (Bridgeton Landfill) : Submission of Industrial Hygiene Report

Doug- let me review draft- will forward to all parties once review completed- hopefully by end of this week.

Doug Mendoza

From: Doug Mendoza
Sent: Wednesday, August 14, 2013 3:11 PM
To: 'Merrigan, Jessie (LG)'; John Lodderhose; Christopher J. Bulmahn; Ken Goins; Bindbeutel, Joe; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Blome, Jessica; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
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Subject: RE: Bridgeton Landfill Weekly Report
Attachments: Bridgeton Landfill conditional approval items tracking.xlsx

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The quarterly self-monitoring data reports are also posted under "Other Sampling." The data is not yet incorporated into the spreadsheet, however we hope to have that entered by next week.

Reporting Requirement	MSD 8/14/13
MSD Terms for Emergency and Conditional Approval of Direct Discharge to our Missouri River Wastewater Treatment Plant:	
3. The daily direct discharge rate **shall not exceed 20,000 gallons per day** in any given 24 hour period. The hourly direct discharge rate shall not exceed 1500 gallons per hour. **Records of volumes discharged, including certification that the daily and hourly limits were not exceeded, shall be submitted to MSD on a weekly basis.**	
4. Analytical sampling results that demonstrate treated liquid is verified to have **achieved the appropriate reduction of toxic pollutants** to prevent violation of MSD Ordinance No. 12559, Article V, Section One.A.8 regarding prohibited substances and emission of toxic gases, vapors or fumes, **shall be submitted to MSD on a weekly basis.**	MSD was unable to locate the results for Batch 257, discharged onsite on 7/23/13 and 7/24/14, on the Data Reports spreadsheet. If we have overlooked it, please let us know where it is located. If it is not on the spreadsheet, please add it immediately and inform us of the fact.
5. Each batch shall also be analyzed **for BOD, COD, Total Suspended Solids, pH, Oil & Grease, VOCs** by EPA Method 624, SVOCs by EPA Method 625, Metals by EPA Methods approved under 40 CFR 136. **Analytical sampling results shall be submitted to MSD on a weekly basis.**	MSD was unable to locate the results for Batch 257, discharged onsite on 7/23/13 and 7/24/14, on the Data Reports spreadsheet. If we have overlooked it, please let us know where it is located. If it is not on the spreadsheet, please add it immediately and inform us of the fact.
6. Bridgeton Landfill shall **immediately notify MSD** of any circumstances that may result in a **change of pretreated landfill leachate character**.	
7. The "Data Collection" items specified in the **Bridgeton Landfill SOP shall be submitted to MSD on a weekly basis.**	
8. Bridgeton Landfill shall record discharge meter readings on a daily log sheet, certified as correct and in compliance with the volume and rate restrictions, under signature of a Bridgeton Landfill authorized agent. **The daily log sheets shall be submitted to MSD on a weekly basis**, and Bridgeton Landfill will be billed on the total volume and surcharge strength documented.	
MSD Terms for Special Discharge Approval of Hauled Waste Discharge to our Bissell Point Wastewater Treatment Plant:	
3. Analytical sampling results that demonstrate treated liquid is verified to have **achieved the appropriate reduction of toxic pollutants** to prevent violation of MSD Ordinance No. 12716 **and is not hazardous material, shall be submitted to MSD on a weekly basis.**	

Reporting Requirem ent	MSD 8/14/13
4. The daily discharge **shall not exceed 150,000 gallons per day,** and shall be delivered within the hours of operations as outlined in MSD Ordinance No. 12716, **but also between 7:00 am and 5:30 pm on Saturday and Sunday** . The delivery of hauled waste **shall be evenly spread out throughout the hours of operation of the hauled waste station** to avoid any slugging of the Bissell Point TP. [Approved volume increased from 50,000 GPD to 100,000 GPD on 5/30/13. Approved daily volume increased to 125,000 GPD on 7/18/13. Approved daily volume increased to 150,000 GPD on 8/12/13.]	Requirement updated to reflect approval of increased volume.
5. Analytical sampling results that demonstrate treated liquid is verified to have **achieved the appropriate reduction of toxic pollutants** to prevent violation of MSD Ordinance No. 12559, Article V, Section One.A.8 regarding prohibited substances and emission of toxic gases, vapors or fumes, **shall be submitted to MSD on a weekly basis.**	
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7. Bridgeton Landfill will immediately notify MSD of any circumstances that may result in a change of pretreated landfill leachate character.	
8. The "Data Collection" items specified in the **Bridgeton Landfill SOP shall be subm itted to MSD on a weekly basis.**	
9. MSD will temporarily reduce our hauled waste tipping fee from $0.08 per gallon at the truck capacity to $0.07 per gallon at the truck capacity. The $0.07 per gallon is equal to the billing rate MSD would charge for an onsite discharge as outlined in the attached calculation. MSD reserves the right to return the tipping fee to $0.08 per gallon, or higher, at the truck capacity at any time per our discretion and as allowed under MSD Ordinance No. 12716. [Analytical data for discharges from 4/25/13 - 5/31/13 show higher strength than anticipated from pre-discharge sampling. Tipping fee returned to $0.08/gallon.]	

Table 3
VOCs and SVOCs
December 2012 - August 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-033	8/5/2013	Pace	Validated	60150301	ND
316-032	8/4/2013	Pace	Validated	60150299	ND
316-031	8/3/2013	Pace	Validated	60150295	ND
316-030	8/2/2013	Pace	Validated	60150250	ND
316-029	8/1/2013	Pace	Validated	60150123	ND
316-028	7/31/2013	Pace	Validated	60150019	ND
316-027	7/30/2013	Pace	Validated	60149929	ND
316-026	7/29/2013	Pace	Validated	60149923	ND
316-025	7/28/2013	Pace	Validated	60149811	ND
316-024	7/27/2013	Pace	Validated	60149810	ND
316-023	7/26/2013	Pace	Validated	60149736	ND

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

				Parameter	Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	Solids, total suspended	Aluminum
				Total or Dissolved	NA	NA	NA	NA	NA	NA	NA	Total
				Analysis Location	mg/l	mg/l	mg/l	mg/l	mg/l	pH units	mg/l	mg/l
Location	Date	lab_name_code	Data Status	lab_sdg								
316-033	8/5/2013	Pace	Validated	60150301	27400	46000	686	563	25.9	5.7	1520	15.5
316-032	8/4/2013	Pace	Validated	60150299	26300	44900	597	411	ND	5.7	1500	7.46
316-031	8/3/2013	Pace	Validated	60150295	31000	46700	767	499	5.2	6.0	1760	4.85
316-030	8/2/2013	Pace	Validated	60150250	29300	56400	685	688	ND	5.8	1420	4.03
316-029	8/1/2013	Pace	Validated	60150123	28300	69400	560	115	ND	6.0	2080	6.89
316-028	7/31/2013	Pace	Validated	60150019	33400	55400	597	425	ND	5.5	1600	4.74
316-027	7/30/2013	Pace	Validated	60149922	32400	56800	678	69.6	ND	5.4	1540	7.22
316-026	7/29/2013	Pace	Validated	60149923	31600	54500	913	84.2	ND	5.4	1600	6.38
316-025	7/28/2013	Pace	Validated	60149811	32700	57300	783	510	ND	5.5	1380	6.96
316-024	7/27/2013	Pace	Validated	60149810	31600	59700	816	510	5.9	5.5	1720	6.66
316-023	7/26/2013	Pace	Validated	60149736	27800	59800	763	381	14.3	5.5	2660	8.77

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

				Parameter	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper	Iron
				Total or Dissolved	Total	Total	Total	Total	Total	Total	Total	Total
				Analysis Location	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Location	Date	lab_name_code	Data Status	lab_sdg								
316-033	8/5/2013	Pace	Validated	60150301	0.0304	0.571	ND	ND	0.246	0.0620	0.0205	850
316-032	8/4/2013	Pace	Validated	60150299	0.0294	0.502	ND	ND	0.203	0.0499	ND	572
316-031	8/3/2013	Pace	Validated	60150295	0.0321	0.5	ND	ND	0.198	0.0441	ND	418
316-030	8/2/2013	Pace	Validated	60150250	0.0340	0.577	ND	ND	0.22	0.0504	ND	520
316-029	8/1/2013	Pace	Validated	60150123	0.0374	0.561	ND	ND	0.223	0.0481	ND	697
316-028	7/31/2013	Pace	Validated	60150019	0.0436	0.578	ND	ND	0.217	0.0426	ND	596
316-027	7/30/2013	Pace	Validated	60149922	ND	0.617	ND	ND	0.266	0.0476	ND	922
316-026	7/29/2013	Pace	Validated	60149923	ND	0.594	ND	ND	0.261	0.0422	ND	773
316-025	7/28/2013	Pace	Validated	60149811	0.0418	0.653	ND	0.0136	0.279	0.0484	ND	898
316-024	7/27/2013	Pace	Validated	60149810	0.0467	0.685	ND	0.0128	0.278	0.0457	ND	878
316-023	7/26/2013	Pace	Validated	60149736	0.0408	0.705	ND	0.0158	0.285	0.0517	ND	901

Table 1
General Parameters and Metals
December 2012 - August 2013
Bridgeton Landfill

				Parameter	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
				Total or Dissolved	Total	Total	Total	Total	Total	Total	Total
				Analysis Location	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Location	Date	lab_name_code	Data Status	lab_sdg							
316-033	8/5/2013	Pace	Validated	60150301	0.186	ND	0.138	ND	ND	ND	11.9
316-032	8/4/2013	Pace	Validated	60150299	0.103	0.00047	0.115	ND	ND	ND	9.48
316-031	8/3/2013	Pace	Validated	60150295	0.0667	0.0015	0.114	ND	ND	ND	9.11
316-030	8/2/2013	Pace	Validated	60150250	0.0661	0.0028	0.127	ND	ND	ND	10.2
316-029	8/1/2013	Pace	Validated	60150123	0.148	0.0037	0.12	ND	ND	ND	10.3
316-028	7/31/2013	Pace	Validated	60150019	0.0853	0.0030	0.109	ND	ND	ND	11.6
316-027	7/30/2013	Pace	Validated	60149922	0.194	0.00036	0.13	ND	0.0183	ND	15.1
316-026	7/29/2013	Pace	Validated	60149923	0.131	0.0012	0.124	ND	0.0162	ND	15.8
316-025	7/28/2013	Pace	Validated	60149811	0.156	0.0010	0.124	ND	ND	ND	15.7
316-024	7/27/2013	Pace	Validated	60149810	0.155	0.0010	0.122	ND	ND	ND	14.6
316-023	7/26/2013	Pace	Validated	60149736	0.18	0.0017	0.124	ND	ND	ND	16.1

Dw

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Wednesday, August 14, 2013 9:34 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; Bindbeutel, Joe; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Blome, Jessica; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good morning,

This serves as the weekly report for Bridgeton Landfill. The materials for August 4th through Saturday August 10th are now available on Barr's FTP site.

In order to provide MSD with the most recent data possible, we are including all lab reports received as of the Monday prior to the Wednesday reporting deadline. We typically receive the greatest number of sample reports on Mondays (5 to 7), so this change will improve timeliness of reporting. Note that the number of verification sample reports is more than double the usual number, because it spans two Mondays. Next week will return to the more typical number of reports. We hope that the inclusion of Saturday and of reports received Monday are helpful in getting MSD timely data.

The quarterly self-monitoring data reports are also posted under "Other Sampling." The data is not yet incorporated into the spreadsheet, however we hope to have that entered by next week.

Bridgeton Landfill resumed discharge to the Missouri River Treatment Facility on Friday August 9th and conducted air sampling that day. We will keep you updated on the timing for testing and results. The increased volume to Bissell Point began Monday, August 12th, and we are implementing the timed manifest distribution to assist in flow control. We would appreciate if you count continue to keep us updated on how that is working. We appreciate the increased volume and want to ensure we are able to manage it in the way best for the facility.

As always, please let me know if you have any questions or need additional information. We appreciate continued assistance.

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

Any U.S. federal tax advice contained in this communication (including any attachments or enclosures) was not intended or written by the author to be used, and cannot be used, for the purpose of (1) avoiding penalties that

8-14-13

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table

Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, August 4, 2013	Batch 316-031	22,500	22,500
	Batch 316-032	97,500	97,500
Monday, August 5, 2013	Batch 316-032	22,500	22,500
	Batch 316-033	97,500	97,500
Tuesday, August 6, 2013	Batch 316-033	22,500	22,500
	Batch 316-034	97,500	97,500
Wednesday, August 7, 2013	Batch 316-034	22,500	22,500
	Batch 316-035	97,500	97,500
Thursday, August 8, 2013	Batch 316-035	22,500	22,500
	Batch 316-036	97,500	97,500
Friday, August 9, 2013	Batch 316-036	22,500	22,500
	Batch 316-037	97,500	97,500
Saturday, August 10, 2013	Batch 316-038	120,000	120,000

Starting Date	*8/4/2013 5:00*
Ending Date	*8/11/2013 5:00*

MSD - Missouri River Tracking Table

Date	Operational Batch	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	Adjusted pH
Sunday, August 4, 2013	None	-	8/4/2013 5:00	8/5/2013 5:00	24.0	840	0.0	N/A
Monday, August 5, 2013	None	-	8/5/2013 5:00	8/6/2013 5:00	24.0	840	0.0	N/A
Tuesday, August 6, 2013	None	-	8/6/2013 5:00	8/7/2013 5:00	24.0	840	0.0	N/A
Wednesday, August 7, 2013	None	-	8/7/2013 5:00	8/8/2013 5:00	24.0	840	0.0	N/A
Thursday, August 8, 2013	None	-	8/8/2013 5:00	8/9/2013 5:00	24.0	840	0.0	N/A
Friday, August 9, 2013	Batch 257	17,201	8/9/2013 5:00	8/10/2013 5:00	24.0	844	716.7	7.66
Saturday, August 10, 2013	Batch 316-038 (Combined)	14,848	8/10/2013 5:00	8/11/2013 5:00	24.0	840	618.7	6.36

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Brian Sahie Title: Environmental Specialist Date: 8/12/13

Weekly Volume Summary - Week 16 (8-4-13 through 8-10-13)

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/5/2013 5:00:00 AM	8/4/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 8/5/13

MSD Daily Flow Reading, ending 8-05-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/6/2013 5:00:00 AM	8/5/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 8/6/13

MSD Daily Flow Reading, ending 8-06-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/7/2013 5:00:00 AM	8/6/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/7/13

MSD Daily Flow Reading, ending 8-07-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/8/2013 5:00:00 AM	8/7/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/8/13

MSD Daily Flow Reading, ending 8-08-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/9/2013 5:00:00 AM	8/8/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/9/13

MSD Daily Flow Reading, ending 8-09-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/10/2013 5:00:00 AM	8/9/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	337,183	319,982	17,201

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 17,201 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/10/13

MSD Daily Flow Reading, ending 8-10-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/11/2013 5:00:00 AM	8/10/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	352,031	337,183	14,848

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 14,848 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/11/13

MSD Daily Flow Reading, ending 8-11-2013

OB-257 AST

Bridgeton Landfill

8-14-13

Fill Data

Fill Start Date	6/26/2013
Fill Start Time	19:40
Fill Stop Date	6/27/2013
Fill Stop Time	00:15
Process Battery	Tank Battery 3

Processing Data

Process Start Date	6/27/2013
Process Start Time	00:20
Process Stop Date	6/29/2013
Process Stop Time	10:05

Approval Data

Approval Details	NAL13026-414 thru -417
Test Results	Benzene ND/ND/ND/ND <1
Reprocessed Batch	1st benzene (96-001) = 240 ppb

Notes

Batch 257-AST has been sampled numerous times as 96-001, including before it was transferred from the 96k AST to TB-3, after re-processing in TB-3, and after sending it back to the 96k AST. Approvals are from post-reprocessing samples while still in TB-3.

Monday, August 12, 2013

OB-316-031 Bridgeton Landfill

Fill Data

Fill Start Date	8/2/2013
Fill Start Time	16:30
Fill Stop Date	8/2/2013
Fill Stop Time	20:25
Process Battery	316 AST

Processing Data

Process Start Date	8/2/2013
Process Start Time	20:30
Process Stop Date	8/3/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL13026-576
Test Results	Benzene 19 ppb
Reprocessed Batch	

Notes

Monday, August 12, 2013

OB-316-032 Bridgeton Landfill

Fill Data

Fill Start Date	8/3/2013
Fill Start Time	16:00
Fill Stop Date	8/3/2013
Fill Stop Time	19:05
Process Battery	316 AST

Processing Data

Process Start Date	8/3/2013
Process Start Time	19:10
Process Stop Date	8/4/2013
Process Stop Time	07:40

Approval Data

Approval Details	NAL13026-577
Test Results	Benzene ND <100 ppb
Reprocessed Batch	

Notes

Monday, August 12, 2013

OB-316-033 Bridgeton Landfill

Fill Data

Fill Start Date	8/4/2013
Fill Start Time	17:15
Fill Stop Date	8/4/2013
Fill Stop Time	19:55
Process Battery	316 AST

Processing Data

Process Start Date	8/4/2013
Process Start Time	20:00
Process Stop Date	8/5/2013
Process Stop Time	06:20

Approval Data

Approval Details	NAL13026-578
Test Results	Benzene 17 ppb
Reprocessed Batch	

Notes

Monday, August 12, 2013

OB-316-034

Bridgeton Landfill

Fill Data

Fill Start Date	8/5/2013
Fill Start Time	17:10
Fill Stop Date	8/5/2013
Fill Stop Time	21:05
Process Battery	316 AST

Processing Data

Process Start Date	8/5/2013
Process Start Time	21:10
Process Stop Date	8/6/2013
Process Stop Time	06:20

Approval Data

Approval Details	NAL13026-580
Test Results	Benzene 27 ppb
Reprocessed Batch	

Notes

Monday, August 12, 2013

OB-316-035 Bridgeton Landfill

Fill Data

Fill Start Date	8/6/2013
Fill Start Time	17:50
Fill Stop Date	8/6/2013
Fill Stop Time	22:00
Process Battery	316 AST

Processing Data

Process Start Date	8/6/2013
Process Start Time	22:05
Process Stop Date	8/7/2013
Process Stop Time	06:35

Approval Data

Approval Details	NAL13026-581
Test Results	Benzene 35 ppb
Reprocessed Batch	

Notes

Monday, August 12, 2013

OB-316-036 Bridgeton Landfill

Fill Data

Fill Start Date	8/7/2013
Fill Start Time	18:25
Fill Stop Date	8/7/2013
Fill Stop Time	23:35
Process Battery	316 AST

Processing Data

Process Start Date	8/7/2013
Process Start Time	23:35
Process Stop Date	8/8/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL13026-582
Test Results	Benzene 39 ppb
Reprocessed Batch	

Notes

Monday, August 12, 2013

OB-316-037

Bridgeton Landfill

Fill Data

Fill Start Date	8/8/2013
Fill Start Time	21:00
Fill Stop Date	8/9/2013
Fill Stop Time	00:00
Process Battery	316 AST

Processing Data

Process Start Date	8/9/2013
Process Start Time	00:00
Process Stop Date	8/9/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL13026-583
Test Results	Benzene 26 ppb
Reprocessed Batch	

Notes

Monday, August 12, 2013

OB-316-038 Bridgeton Landfill

Fill Data

Fill Start Date	8/9/2013
Fill Start Time	18:50
Fill Stop Date	8/9/2013
Fill Stop Time	23:35
Process Battery	316 AST

Processing Data

Process Start Date	8/9/2013
Process Start Time	23:35
Process Stop Date	8/10/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL13026-586
Test Results	Benzene 53 ppb
Reprocessed Batch	

Notes

Approximately 40,000 gallons available to transfer to 96k AST.

Monday, August 12, 2013

To: BRIDGETON LANDFILL LLC [1003803000]

From: Doug Mendoza

Date: August 12, 2013

Re: Technical issues meeting on 8/8/13

Representatives from MSD and Bridgeton Landfill met and discussed several items related to discharges from Bridgeton Landfill.

- The landfill has reworked piping so that leachate goes through a clarifier before the storage/equalization tank for onsite discharge. They plan to resume onsite discharge on Friday (8/9/13) at 7 am. The volume of leachate generate is averaging 180K – 200K GPD. The 300K+ GPD generated several weeks ago was short lived.

- Benzene air sampling in the MSD lift station also is set up to commence on Friday (8/9/13) morning. They have 6 hour summa canisters ready to use. There is a two week turnaround for results.

- Rob Daly from MSD said that his group had met with Brian Sehie from the landfill, and they are working out general protocol details for the air monitoring/scrubbing system at the lift station. MSD must have a reliable 24 hour contact's phone number.
- Rob also still wants benzene summa canisters at key milestones when the discharge to the lift station changes.
- Rob wants the landfill to first identify what it believes are milestone events.

- For the onsite pretreatment system, bench scale testing continues.
- Pilot scale testing also has been busy.
- Electrocoagulation is being tested as a clarification method. However, this will require large power feeds, with extra electric lines dropped by Ameren.
- Lamella clarifiers are also being tested, with those able to treat up to 100 GPM.
- MBRs are being investigated for biological treatment, post-clarification. However, each can treat only 1.5 GPM. They are still being brought online.
- The landfill has also developed a sampling plan for the next few weeks on the pilot studies. John Lodderhose said to add transmittance to the parameters. MSD can do the actual testing for the landfill.
- As the four 1 million gallon tanks are being installed, the transition plan is to use the first tank to replace the baker tanks. As for the ultimate plan, the finals plans are currently being determined.
- MSD will want to coordinate its review of and comments for the pretreatment system with MDNR. Charlene with MDNR Solid Waste in Jefferson City has been the landfill's contact.
- MSD and the landfill reps also agreed that they could send non-final plans, with updates to the plans sent later.
- The landfill's goal is to have the pretreatment system operational by 12/31/13.

- MSD gave the landfill verbal approval to increase the volume brought to the Bissell Point hauled waste station to 150,000 GPD, effective Monday 8/12/13. They will be limited to no quicker than ½ hour per truck, but should also try to not go slower, so that loads are brought in during current station operating hours. In addition, trucks should arrive as they are scheduled to discharge, rather than arriving in groups and congesting the plant.
- The landfill will be billed for MSD's labor costs to staff the station during non-normal station hours. Workers are paid time and a half to staff it.
- MSD also informed the landfill that station hours will decrease on September 1 to M – F, 7 am – 3 pm. Coverage costs will increase accordingly.

MSD AND BRIDGETON LANDFILL TECHNICAL ISSUES MEETING

August 8, 2013

AGENDA

1. Introductions
2. Updates
    a. Discharges to Bissell Point and MO River Plants
    b. Benzene air sampling in the lift station
    c. Pretreatment design and testing
3. Pending requests
    a. Increase 25,000 gpd
    b. Reduce scope of sampling

Doug Mendoza

From: Darin Lewis
Sent: Monday, August 12, 2013 8:48 AM
To: Catherine Politte; Mike Townley; Doug Mendoza; Brian G. Gibson; Steve Grace; Sara Kammerer
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 8/04/2013 to 8/10/2013.
8/04 – 120,000 gallons
8/05 – 120,000 gallons
8/06 – 120,000 gallons
8/07 – 120,000 gallons
8/08 – 120,000 gallons
8/09 – 120,000 gallons
8/10 – 120,000 gallons
Total = 840,000 gallons

Doug Mendoza

From: Power, Brian <BPower@republicservices.com>
Sent: Saturday, August 10, 2013 2:05 PM
To: Doug Mendoza
Subject: RE: Bridgeton Landfill Request to Reduce Sampling & Increase in Volume Delivered to MSD Hauled Waste Station

Mr. Mendoza,

Thank you for your review and for working with us. It is greatly appreciated and I will communicate this to the team.

Sincerely,

Brian J. Power
Environmental Manager
Bridgeton Landfill, LLC.
13570 Saint Charles Rock Road
Bridgeton, MO 63044

Phone: (618) 410-0157
Email: bpower@republicservices.com

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Friday, August 09, 2013 10:25 AM
To: Bret A. Berthold; Brian G. Gibson; Power, Brian; Sehie, Bryan; Catherine Politte; Christopher J. Bulmahn; Almanza, Craig; Darin Lewis; Doug Mendoza; Ed Galbraith; Jessica Merrigan; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; Michele Boussad; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; Smith, Steve; Todd Heller; Tom Boehm; William Beck
Subject: RE: Bridgeton Landfill Request to Reduce Sampling & Increase in Volume Delivered to MSD Hauled Waste Station

Ms. Merrigan & Mr. Power,

1. We have completed our review of Bridgeton Landfill's July 31, 2013 request to reduce the scope of reporting for verification sampling for volatile & semi-volatile organic compounds. Recognizing that the analytical data for the complete scans, albeit not completely quantified, will be retained by the laboratory, we approve your request for reduced reporting of the individual toxic organic compounds, with the following exceptions:

    - 1.1.1-Trichloroethane
    - 1,1,2-Trichloroethane
    - 1,2-dichloroethane
    - 1,2-Dichloroethylene, cis
    - 1,2-Dichloroethylene, trans
    - Chloroform
    - Tetrachloroethylene
    - Trichloroethylene

Doug Mendoza

From: Joe Pavlich
Sent: Friday, August 09, 2013 1:34 PM
To: Doug Mendoza
Cc: Brian G. Gibson
Subject: Bridgeton landfill reading

Doug, this is the Bridgeton Landfill discharge reading from 8/9/13; 322528, rate of discharge was 800 gals.

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Friday, August 09, 2013 11:36 AM
To: Doug Mendoza; Bret A. Berthold; Brian G. Gibson; Brian Power; Bryan Sehie; Catherine Politte; Christopher J. Bulmahn; Craig Almanza; Darin Lewis; Ed Galbraith; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; Michele Boussad; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; Steve Smith; Todd Heller; Tom Boehm
Cc: Dan Feezor
Subject: RE: Bridgeton Landfill Request to Reduce Sampling & Increase in Volume Delivered to MSD Hauled Waste Station - corrected

Thanks, Doug, this confirms that Bridgeton Landfill understands the increased volume is not effective until Monday August 12th.

In order to address the flow and traffic concerns you have raised, the leachate manager has directed MBI that leachate manifests will be distributed only every half hour to ensure that the flow from the site is consistent and prevent loading trucks at Bissell too quickly. Please let us know if that addresses the concerns on your end. We appreciate your continued feedback so that we can make adjustments as appropriate to ensure the rate and process for discharge works well for your facility.

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
Sent: Friday, August 09, 2013 11:07 AM
To: Bret A. Berthold; Brian G. Gibson; Brian Power; Bryan Sehie; Catherine Politte; Christopher J. Bulmahn; Craig Almanza; Darin Lewis; Ed Galbraith; Merrigan, Jessie; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; Michele Boussad; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; Steve Smith; Todd Heller; Tom Boehm; Beck, Bill
Subject: RE: Bridgeton Landfill Request to Reduce Sampling & Increase in Volume Delivered to MSD Hauled Waste Station - corrected

150,000 GPD starting 8/12/13.

From: Doug Mendoza
Sent: Friday, August 09, 2013 10:25 AM
To: Bret A. Berthold; Brian G. Gibson; 'Brian Power'; 'Bryan Sehie'; Catherine Politte; Christopher J. Bulmahn; 'Craig Almanza'; Darin Lewis; Doug Mendoza; 'Ed Galbraith'; 'Jessica Merrigan'; John Lodderhose; Jonathon Sprague; Ken Gambaro; Ken Goins; Mark Bright; Michael Grace; 'Michele Boussad'; Mike Townley; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Sara Kammerer; Steve Grace; 'Steve Smith'; Todd Heller; Tom Boehm; 'William Beck'

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Subject: RE: Bridgeton Landfill Request to Reduce Sampling & Increase in Volume Delivered to MSD Hauled Waste Station

Ms. Merrigan & Mr. Power,

1. We have completed our review of Bridgeton Landfill's July 31, 2013 request to reduce the scope of reporting for verification sampling for volatile & semi-volatile organic compounds. Recognizing that the analytical data for the complete scans, albeit not completely quantified, will be retained by the laboratory, we approve your request for reduced reporting of the individual toxic organic compounds, with the following exceptions:

   - 1.1.1-Trichloroethane
   - 1,1,2-Trichloroethane
   - 1,2-dichloroethane
   - 1,2-Dichloroethylene, cis
   - 1,2-Dichloroethylene, trans
   - Chloroform
   - Tetrachloroethylene
   - Trichloroethylene

   These compounds must continue to be quantified and reported with your verification sampling results, along with all the other non-requested toxic organic compounds and the other compounds not part of the toxic organics list.
   We note that while the above-listed compounds may not have exceeded the fume toxicity screening levels, they were at times present in quantities above negligible levels. The purpose of monitoring is not only to verify that limits have not been exceeded for 'problem' pollutants, but also to verify that controls are working as designed for all pollutants that could potentially have an adverse impact.

2. As we discussed in during the August 8, 2013 meeting between MSD and Bridgeton Landfill representatives, MSD approves an increase in the volume of leachate delivered to MSD's Bissell Point Hauled Waste Station. The increase is for 25,000 GPD, bringing the total daily delivery volume from 125,000 gallons to 150,000 gallons. This approval is subject to the following conditions:

- **The increased discharge volume of 150,000 GPD shall not commence before Monday, August 12, 2013.**
- Only one truck from Bridgeton Landfill shall discharge at a time.
    - Other, non-Bridgeton Landfill trucks may be discharging at the same time.
- Landfill trucks shall not discharge more frequently than once every 30 minutes.
- Landfill trucks should also discharge as closely as possible to every 30 minutes, to insure that the discharge occurs within current Hauled Waste Station M-F operating hours, and the same hours on Saturday and Sunday.
- Landfill trucks are not to commence discharge until the Station opens at 7 am, and the same time on Saturday and Sunday.
    - If discharge hours are to change in the future, the change shall first be agreed between MSD and Bridgeton Landfill.
- Landfill trucks are to arrive at the Station as close as possible to when they are to discharge, rather than arriving in groups waiting to discharge.
    - This will reduce congestion within MSD's Bissell Point plant.
- Bridgeton Landfill will be billed for MSD labor costs to staff the Station outside normal operating hours.
    - Current normal operating hours are M-F from 7:00 am – 5:30 pm, and Sat. from 7:00 am to 12:00 noon.
    - Effective September 1, 2013, normal operating hours will be M-F 7:00 am – 3:00 pm only.
- All prior conditions also continue to apply

If you have any questions, please let me know.

Sincerely,
Doug Mendoza
MSD Industrial Pretreatment Manager

From: Merrigan, Jessie (LG) [mailto:JMerrigan@LATHROPGAGE.COM]
Sent: Monday, August 05, 2013 4:26 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; Bindbeutel, Joe; 'chris.nagel@dnr.mo.gov'; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Blome, Jessica; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Request to Reduce Sampling

Good afternoon,

I am forwarding for Bridgeton Landfill a request to reduce the scope of sampling. Our team looks forward to Thursday's meeting and will be happy to answer questions and discuss this request at that time.

Thank you for your continued assistance,

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Subject: RE: Bridgeton Landfill Request to Reduce Sampling & Increase in Volume Delivered to MSD Hauled Waste Station

Thank you, Doug. We appreciate your help and will communicate this to our team.

From: Doug Mendoza [mailto:DMENDOZA@stlmsd.com]
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    These compounds must continue to be quantified and reported with your verification sampling results, along with all the other non-requested toxic organic compounds and the other compounds not part of the toxic organics list.
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Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Request to Reduce Sampling

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Thank you for your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Friday, August 09, 2013 7:57 AM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; Bindbeutel, Joe; 'chris.nagel@dnr.mo.gov'; Mike Townley; Catherine Politte; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Blome, Jessica; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill: Resuming Discharge to MRWWTF

Good morning,

We wanted to update you that Bridgeton Landfill will resume discharge to the Missouri River Treatment Facility at 8:00 this morning. The liquid in the tank has been verified to be within benzene and pH limits (72 ppb benzene and 7.66pH). As discussed, air sampling for ambient benzene levels at the lift station will be conducted today. We will keep you updated on timing for results.

Please let us know if you have any questions.

Thank you for your continued assistance,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
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Table 1
General Parameters and Metals
December 2012 - July 2013
Bridgeton Landfill

					Biochemical Oxygen Demand (5-day)	Chemical Oxygen Demand	Nitrogen, ammonia as N	Oil and Grease	Oil and Grease - Silica gel cleanup	pH	Solids, total suspended
					NA	NA	NA	NA	NA	NA	NA
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-022	7/25/2013	Pace	Validated	60149631	29400	53900	714	368	6.5	5.5	3040
316-021	7/24/2013	Pace	Validated	60149528	31700	56500	695	426	ND	5.4	2000
316-020	7/23/2013	Pace	Validated	60149424	29100	54300	677	376	ND	5.3	2420
316-019	7/21/2013	Pace	Validated	60149332	36900	60800	690	459	7.1	5.3	2920
316-018	7/19/2013	Pace	Validated	60149283	27500	63700	685	409	5.0	5.4	3350
MSD Batch 286/287	7/19/2013	Pace	Validated	60149282	31000	66600	715	334	5.7 *	5.4	1160

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General Parameters and Metals
December 2012 - July 2013
Bridgeton Landfill

					Aluminum	Antimony	Arsenic	Beryllium	Cadmium	Chromium	Cobalt	Copper
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-022	7/25/2013	Pace	Validated	60149631	8.93	ND	0.758	ND	ND	0.268	0.0366	ND
316-021	7/24/2013	Pace	Validated	60149528	7.96	0.0616	0.838	ND	ND	0.283	0.0355	ND
316-020	7/23/2013	Pace	Validated	60149424	4.38	ND	0.625	ND	ND	0.213	0.0263	ND
316-019	7/21/2013	Pace	Validated	60149332	6.81	0.0617	0.732	ND	ND	0.272	0.0407	ND
316-018	7/19/2013	Pace	Validated	60149283	7.5	0.0620	0.79	ND	ND	0.293	0.0514	ND
MSD Batch 286/287	7/19/2013	Pace	Validated	60149282	12.9	ND	0.738	ND	ND	0.31	0.0531	ND

Table 1
General Parameters and Metals
December 2012 - July 2013
Bridgeton Landfill

					Iron	Lead	Mercury	Nickel	Selenium	Silver	Thallium	Zinc
					Total	Total	Total	Total	Total	Total	Total	Total
Location	Date	Lab Name	Data Status	Report	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
316-022	7/25/2013	Pace	Validated	60149631	711	0.132	0.00045	0.151	0.0854	ND	ND	13.8
316-021	7/24/2013	Pace	Validated	60149528	883	0.237	0.0010	0.146	0.112	ND	ND	16.8
316-020	7/23/2013	Pace	Validated	60149424	511	ND	0.0022	0.113	0.0902	ND	ND	16.6
316-019	7/21/2013	Pace	Validated	60149332	836	0.148	0.00081	0.128	0.11	ND	ND	16.8
316-018	7/19/2013	Pace	Validated	60149283	1070	0.214	0.00057	0.135	ND	ND	ND	16.8
MSD Batch 286/287	7/19/2013	Pace	Validated	60149282	1080	0.263	0.00050	0.14	ND	ND	ND	15.5

Table 3
VOCs and SVOCs
December 2012 - July 2013
Bridgeton Landfill

					Benzene
Location	Date	Lab Name	Data Status	Lab Report	ug/l
316-022	7/25/2013	Pace	Validated	60149631	ND
316-021	7/24/2013	Pace	Validated	60149528	ND
316-020	7/23/2013	Pace	Validated	60149424	ND
316-019	7/21/2013	Pace	Validated	60149332	ND
316-018	7/19/2013	Pace	Validated	60149283	ND
MSD Batch 286/287	7/19/2013	Pace	Validated	60149282	ND

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Subject: Bridgeton Landfill Request to Reduce Sampling
Attachments: Bridgeton LF Request to Reduce Sampling.pdf

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Bridgeton Landfill, LLC

July 31, 2013

John Lodderhose
Assistant Director of Engineering
Metropolitan St. Louis Sewer District
10 E. Grand Avenue, St. Louis, MO 63147-2913

RE: Request to Reduce Scope of Reporting for Verification Sampling for VOA and SVOA Compounds

Dear Mr. Lodderhose:

Since April 25, 2013, Bridgeton Landfill has been acquiring analytical data on all batches of treated leachate discharged or hauled to an MSD facility. This data collection is in accordance with MSD's conditional approval of April 24, 2013. Since that time, a large amount of data has been collected including many parameters for which there are no detects or very low percentage of detects where the concentrations are below threshold values. The cost of analyzing and managing this information is substantial; therefore Bridgeton Landfill is requesting a reduction in the scope of required analytes. Attached is a table of VOA and SVOA compounds for which the detection rate is less than 10% and where the maximum level detected and the maximum Method Detection Limit are less than MSD's Fume Toxicity Levels. The actual data will always be available from the laboratory; this change means only that we will discontinue reporting these parameters on a routine basis.

A separate request for a reduction in reporting of metals and other general parameters is being prepared and will be provided in the near future.

We are grateful for your consideration of this request and would be happy to work with you on any questions or concerns. If you have any questions about this request, feel free to contact me at (618) 410- 0157 or Ed Galbraith with Barr Engineering at (573) 638-5024.

Sincerely,

Brian J. Power

Brian Power
Environmental Manager

Bridgeton Landfill
Raw and Treated Leachate 3/28/2013
Detects are less than 10%
Max Result and Max RDL are less than MSD Fume Tox Value

Chemical Name	CAS RN	Units	Count Results (03/28/2013 to 07/10/2013)	Count Detects	Max Result	Max RDL	MSD Fume Tox Value (ug/L)	Detects/ Count
1,1,1,2-Tetrachloroethane	630-20-6	ug/l	444	7	270	250	0	1.6%
1,1,1-Trichloroethane	71-55-6	ug/l	517	6	220	250	1550	1.2%
1,1,2-Trichloroethane	79-00-5	ug/l	516	35	460	250	1150	6.8%
1,1-Dichloro-1-propene	563-58-6	ug/l	54	0		250	0	0.0%
1,1-Dichloroethane	75-34-3	ug/l	516	5	290	250	2320	1.0%
1,1-Dichloroethylene	75-35-4	ug/l	543	5	430	500	0	0.9%
1,2,3-Trichlorobenzene	87-61-6	ug/l	445	41	700	250	0	9.2%
1,2,3-Trichloropropane	96-18-4	ug/l	445	20	430	500	0	4.5%
1,2-Dibromoethane	106-93-4	ug/l	444	9	250	250	0	2.0%
1,2-Dichlorobenzene	95-50-1	ug/l	584	52	360	5,000	3750	8.9%
1,2-Dichloroethane	107-06-2	ug/l	543	10	260	500	1050	1.8%
1,2-Dichloroethylene	540-59-0	ug/l	53	0		500	0	0.0%
1,2-Dichloroethylene, cis	156-59-2	ug/l	501	5	260	250	520	1.0%
1,2-Dichloroethylene, trans	156-60-5	ug/l	517	3	180	250	280	0.6%
1,2-Dichloropropane	78-87-5	ug/l	516	6	370	250	3620	1.2%
1,3-Dichloro-1-propene, cis	10061-01-5	ug/l	516	17	110	250	0	3.3%
1,3-Dichloro-1-propene, trans	10061-02-6	ug/l	516	22	150	250	0	4.3%
1,3-Dichlorobenzene	541-73-1	ug/l	584	48	310	5,000	0	8.2%
1,3-Dichloropropane	142-28-9	ug/l	54	0		250	0	0.0%
1,4-Dichloro-2-butene, trans	110-57-6	ug/l	38	0		250	0	0.0%
1,4-Dioxane	123-91-1	ug/l	38	1	6400	1,500	0	2.6%
2,2-Dichloropropane	594-20-7	ug/l	54	0		250	0	0.0%
2,2-oxybis (1-chloropropane)	108-60-1	ug/l	16	0		10	0	0.0%
2,4,5-Trichlorophenol	95-95-4	ug/l	73	0		25,000	0	0.0%
2,4-Dichlorophenol	120-83-2	ug/l	125	0		5,000	0	0.0%
2,4-Dimethylphenol	105-67-9	ug/l	125	1	95	5,000	0	0.8%
2,4-Dinitrophenol	51-28-5	ug/l	125	0		25,000	0	0.0%
2,4-Dinitrotoluene	121-14-2	ug/l	130	0		5,000	0	0.0%
2,6-Dimethylaniline	87-62-7	ug/l	51	0		500	97040	0.0%
2,6-Dinitrotoluene	606-20-2	ug/l	124	0		5,000	0	0.0%
2-Chloroethyl vinyl ether	110-75-8	ug/l	109	0		2,000	0	0.0%
2-Chloronaphthalene	91-58-7	ug/l	125	0		5,000	0	0.0%
2-Chlorophenol	95-57-8	ug/l	125	0		5,000	0	0.0%
2-Methylnaphthalene	91-57-6	ug/l	54	0		5,000	0	0.0%
2-Nitroaniline	88-74-4	ug/l	54	0		25,000	0	0.0%
2-Nitrophenol	88-75-5	ug/l	125	0		5,000	0	0.0%
2-Nitropropane	79-46-9	ug/l	38	0		500	0	0.0%
3,3`-Dichlorobenzidine	91-94-1	ug/l	125	0		10,000	0	0.0%
3-Nitroaniline	99-09-2	ug/l	53	0		25,000	0	0.0%
4-Bromophenyl phenyl ether	101-55-3	ug/l	125	0		5,000	0	0.0%
4-Chloro-3-methylphenol	59-50-7	ug/l	125	0		10,000	0	0.0%
4-Chloroaniline	106-47-8	ug/l	54	0		10,000	0	0.0%
4-Chlorophenyl phenyl ether	7005-72-3	ug/l	125	0		5,000	0	0.0%
4-Nitroaniline	100-01-6	ug/l	54	0		25,000	0	0.0%
4-Nitrophenol	100-02-7	ug/l	125	0		25,000	0	0.0%
Acenaphthene	83-32-9	ug/l	125	4	37	5,000	0	3.2%
Acenaphthylene	208-96-8	ug/l	125	0		5,000	0	0.0%
Acetonitrile	75-05-8	ug/l	37	0		1,200	0	0.0%
Acrolein	107-02-8	ug/l	52	0		1,200	0	0.0%
Acrylonitrile	107-13-1	ug/l	52	0		500	1190	0.0%
Allyl Chloride	107-05-1	ug/l	38	0		250	0	0.0%
Aniline	62-53-3	ug/l	37	0		1,000	0	0.0%
Anthracene	120-12-7	ug/l	125	7	61	5,000	0	5.6%
Azobenzene	103-33-3	ug/l	51	0		1,000	0	0.0%
Benzidine	92-87-5	ug/l	109	0		25,000	0	0.0%
Benzo(a)anthracene	56-55-3	ug/l	125	0		5,000	0	0.0%
Benzo(a)pyrene	50-32-8	ug/l	125	0		5,000	0	0.0%
Benzo(b&k)fluoranthene	BBKF	ug/l	51	0		1,000	0	0.0%
Benzo(b)fluoranthene	205-99-2	ug/l	125	0		5,000	0	0.0%
Benzo(g,h,i)perylene	191-24-2	ug/l	125	0		5,000	0	0.0%
Benzo(k)fluoranthene	207-08-9	ug/l	125	0		5,000	0	0.0%
Bis(2-chloroethoxy)methane	111-91-1	ug/l	125	0		5,000	0	0.0%
Bis(2-chloroethyl)ether	111-44-4	ug/l	125	0		5,000	0	0.0%

Chemical Name	CAS RN	Units	Count Results (03/28/2013 to 07/10/2013)	Count Detects	Max Result	Max RDL	MSD Fume Tox Value (ug/L)	Detects/ Count
Bis(2-chloroisopropyl)ether	39638-32-9	ug/l	109	1	106	5,000	0	0.9%
Bis(2-ethylhexyl)phthalate	117-81-7	ug/l	126	1	21	5,000	1198000	0.8%
Bromobenzene	108-86-1	ug/l	54	0		250	0	0.0%
Bromochloromethane	74-97-5	ug/l	445	3	180	250	0	0.7%
Butyl benzyl phthalate	85-68-7	ug/l	126	0		5,000	0	0.0%
Butylbenzene, tert	98-06-6	ug/l	445	26	260	250	0	5.8%
Carbazole	86-74-8	ug/l	153	0		5,000	0	0.0%
Chlorobenzene	108-90-7	ug/l	543	39	260	500	2310	7.2%
Chlorodibromomethane	124-48-1	ug/l	516	5	240	250	0	1.0%
Chloroform	67-66-3	ug/l	544	6	280	1,000	410	1.1%
Chloromethane	74-87-3	ug/l	516	4	200	500	0	0.8%
Chlorotoluene, o	95-49-8	ug/l	54	0		250	0	0.0%
Chlorotoluene, p	106-43-4	ug/l	54	0		250	0	0.0%
Chrysene	218-01-9	ug/l	125	0		5,000	0	0.0%
Dibenz(a,h)anthracene	53-70-3	ug/l	125	0		5,000	0	0.0%
Dibenzofuran	132-64-9	ug/l	53	0		5,000	0	0.0%
Dibromomethane (methylene brom	74-95-3	ug/l	445	3	250	250	0	0.7%
Diethyl phthalate	84-66-2	ug/l	126	0		5,000	107000	0.0%
Dimethyl phthalate	131-11-3	ug/l	126	3	140	5,000	0	2.4%
Di-n-butyl phthalate	84-74-2	ug/l	126	0		5,000	0	0.0%
Di-n-octyl phthalate	117-84-0	ug/l	126	0		5,000	0	0.0%
Diphenylamine	122-39-4	ug/l	51	0		1,000	0	0.0%
Ethyl methacrylate	97-63-2	ug/l	38	0		250	0	0.0%
Fluoranthene	206-44-0	ug/l	125	2	19	5,000	0	1.6%
Fluorene	86-73-7	ug/l	125	1	32	5,000	0	0.8%
Hexachlorobenzene	118-74-1	ug/l	130	0		5,000	0	0.0%
Indeno(1,2,3-cd)pyrene	193-39-5	ug/l	125	0		5,000	0	0.0%
Iodomethane	74-88-4	ug/l	38	0		500	0	0.0%
Isophorone	78-59-1	ug/l	125	0		5,000	97000	0.0%
Methacrylonitrile	126-98-7	ug/l	38	0		250	0	0.0%
Methyl methacrylate	80-62-6	ug/l	38	0		250	0	0.0%
Methyl tertiary butyl ether (MTBE)	1634-04-4	ug/l	444	6	310	250	0	1.4%
N-Nitrosodimethylamine	62-75-9	ug/l	109	0		2,500	0	0.0%
N-Nitrosodi-n-propylamine	621-64-7	ug/l	125	0		5,000	0	0.0%
N-Nitrosodiphenylamine	86-30-6	ug/l	74	0		5,000	0	0.0%
Phenanthrene	85-01-8	ug/l	125	12	66	5,000	0	9.6%
Propionitrile	107-12-0	ug/l	38	0		500	0	0.0%
Pyrene	129-00-0	ug/l	125	1	12	5,000	0	0.8%
Pyridine	110-86-1	ug/l	59	5	143	5,000	0	8.5%
Tetrachloroethylene	127-18-4	ug/l	544	17	350	500	530	3.1%
Trichloroethylene	79-01-6	ug/l	544	12	510	500	710	2.2%
Trichlorofluoromethane	75-69-4	ug/l	516	4	170	250	1230	0.8%
Trichlorotrifluoroethane (Freon 113	76-13-1	ug/l	38	0		250	0	0.0%
Vinyl acetate	108-05-4	ug/l	37	0		500	0	0.0%

Doug Mendoza

From: Merrigan, Jessie (LG) <JMerrigan@LATHROPGAGE.COM>
Sent: Tuesday, August 06, 2013 5:19 PM
To: Doug Mendoza; John Lodderhose; Christopher J. Bulmahn; Ken Goins; Bindbeutel, Joe; 'chris.nagel@dnr.mo.gov'; Bret A. Berthold; Jonathon Sprague; Tippett Mosby, Leanne; Blome, Jessica; Ken Gambaro; Mark Bright; Michael Grace; Nora C. Estopare; Rob G Daly; Ryan Sabourin; Todd Heller; Tom Boehm; Susan Myers; Lance LeComb; Steve Grace; Darin Lewis; Sara Kammerer; Brian G. Gibson
Cc: Smith, Steve (ssmith10@republicservices.com); Craig Almanza; Ed Galbraith; Sehie, Bryan; Power, Brian (BPower@republicservices.com); Cunningham, Ally (LG); Dan Feezor
Subject: Bridgeton Landfill Weekly Report

Good afternoon,

This serves as the weekly report for Bridgeton Landfill. The materials for Sunday July 28th through Saturday August 3rd are now available on Barr's FTP site. This will be the future period covered by each weekly report – the prior Sunday through Saturday.

The facility has not yet resumed discharge to the Missouri River Treatment Facility. However, the connection from the 316,000 gallon tank to the 96,000 discharge tank should be completed later this week and possibly allow discharge to resume on Friday. We know that MSD will be conducting lift station repairs on Thursday and will not be discharging during that time. Prior to discharge, the facility will confirm that pH and benzene are within the permissible limits. Air sampling equipment has been purchased and is ready for follow up benzene sampling at the lift station once discharge resumes. We will keep you updated on the progress, the resumption of discharge and the timing for testing and results.

As always, please let me know if you have any questions or need additional information.

Thank you,
Jessie

LATHROP & GAGE LLP
Jessica E. Merrigan
2345 Grand Boulevard; Suite 2200 | Kansas City, MO 64108
P: 816-460-5706 | F: 816-292-2001 | jmerrigan@lathropgage.com
www.lathropgage.com

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8-7-13 DR

OB-316-025

Bridgeton Landfill

Fill Data

Fill Start Date	7/27/2013
Fill Start Time	18:00
Fill Stop Date	7/27/2013
Fill Stop Time	21:15
Process Battery	316 AST

Processing Data

Process Start Date	7/27/2013
Process Start Time	21:15
Process Stop Date	7/28/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL13026-566
Test Results	Benzene 21 ppb
Reprocessed Batch	

Notes

Monday, August 05, 2013

OB-316-026 Bridgeton Landfill

Fill Data

Fill Start Date	7/28/2013
Fill Start Time	14:50
Fill Stop Date	7/28/2013
Fill Stop Time	17:35
Process Battery	316 AST

Processing Data

Process Start Date	7/28/2013
Process Start Time	17:35
Process Stop Date	7/29/2013
Process Stop Time	06:40

Approval Data

Approval Details	NAL13026-571
Test Results	Benzene 34 ppb
Reprocessed Batch	

Notes

Monday, August 05, 2013

OB-316-027 Bridgeton Landfill

Fill Data

Fill Start Date	7/29/2013
Fill Start Time	18:15
Fill Stop Date	7/29/2013
Fill Stop Time	22:18
Process Battery	316 AST

Processing Data

Process Start Date	7/29/2013
Process Start Time	22:20
Process Stop Date	7/30/2013
Process Stop Time	06:20

Approval Data

Approval Details	NAL13026-572
Test Results	Benzene 25 ppb
Reprocessed Batch	

Notes

Monday, August 05, 2013

OB-316-028

Bridgeton Landfill

Fill Data

Fill Start Date	7/30/2013
Fill Start Time	18:05
Fill Stop Date	7/30/2013
Fill Stop Time	22:00
Process Battery	316 AST

Processing Data

Process Start Date	7/30/2013
Process Start Time	22:00
Process Stop Date	7/31/2013
Process Stop Time	07:00

Approval Data

Approval Details	NAL13026-573
Test Results	Benzene 72 ppb
Reprocessed Batch	

Notes

Monday, August 05, 2013

Fill Data

Fill Start Date	7/31/2013
Fill Start Time	17:40
Fill Stop Date	7/31/2013
Fill Stop Time	23:20
Process Battery	316 AST

Processing Data

Process Start Date	7/31/2013
Process Start Time	23:20
Process Stop Date	8/1/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL13026-574
Test Results	Benzene 36 ppb
Reprocessed Batch	

Notes

Monday, August 05, 2013

OB-316-030

Bridgeton Landfill

Fill Data

Fill Start Date	8/1/2013
Fill Start Time	17:30
Fill Stop Date	8/1/2013
Fill Stop Time	23:10
Process Battery	316 AST

Processing Data

Process Start Date	8/1/2013
Process Start Time	23:15
Process Stop Date	8/2/2013
Process Stop Time	06:45

Approval Data

Approval Details	NAL13026-575
Test Results	Benzene 54 ppb
Reprocessed Batch	

Notes

Monday, August 05, 2013

OB-316-031 Bridgeton Landfill

Fill Data

Fill Start Date	8/2/2013
Fill Start Time	16:30
Fill Stop Date	8/2/2013
Fill Stop Time	20:25
Process Battery	316 AST

Processing Data

Process Start Date	8/2/2013
Process Start Time	20:30
Process Stop Date	8/3/2013
Process Stop Time	06:30

Approval Data

Approval Details	NAL13026-576
Test Results	Benzene 19 ppb
Reprocessed Batch	

Notes

Monday, August 05, 2013

8-7-13

Bridgeton Landfill, LLC
Metropolitan St. Louis Sewer District
Weekly Disposal Summary

MSD - Bissell Point Tracking Table

Date	Operational Batch	Gallons Delivered	Truck Gallons Capacity
Sunday, July 28, 2013	Batch 316-025	120,000	120,000
Monday, July 29, 2013	Batch 316-026	120,000	120,000
Tuesday, July 30, 2013	Batch 316-027	119,900	120,000
Wednesday, July 31, 2013	Batch 316-027	15,000	15,000
	Batch 316-028	105,000	105,000
Thursday, August 01, 2013	Batch 316-028	22,500	22,500
	Batch 316-029	97,500	97,500
Friday, August 02, 2013	Batch 316-029	22,500	22,500
	Batch 316-030	97,500	97,500
Saturday, August 03, 2013	Batch 316-030	22,500	22,500
	Batch 316-031	97,400	97,500

Starting Date	*7/28/2013 5:00*
Ending Date	*8/4/2013 5:00*

MSD - Missouri River Tracking Table

Date	Operational Batch	Gallons Delivered	Batch Start Date and Time	Batch End Date and Time	Interval Hours	Maximum Hourly Flow (gph)	Average Hourly Flow (gph)	Adjusted pH
Sunday, July 28, 2013	None	-	7/28/2013 5:00	7/29/2013 5:00	24.0	840	0.0	N/A
Monday, July 29, 2013	None	-	7/29/2013 5:00	7/30/2013 5:00	24.0	840	0.0	N/A
Tuesday, July 30, 2013	None	-	7/30/2013 5:00	7/31/2013 5:00	24.0	840	0.0	N/A
Wednesday, July 31, 2013	None	-	7/31/2013 5:00	8/1/2013 5:00	24.0	840	0.0	N/A
Thursday, August 01, 2013	None	-	8/1/2013 5:00	8/2/2013 5:00	24.0	840	0.0	N/A
Friday, August 02, 2013	None	-	8/2/2013 5:00	8/3/2013 5:00	24.0	840	0.0	N/A
Saturday, August 03, 2013	None	-	8/3/2013 5:00	8/4/2013 5:00	24.0	840	0.0	N/A

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie Title: Environmental Specialist Date: 8/5/13

Bryan Schie

Weekly Volume Summary - Week 15 (7-28-13 through 8-3-13).xlsx

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	7/29/2013 5:00:00 AM	7/28/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 7/29/13

MSD Daily Flow Reading, ending 7-29-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	7/30/2013 5:00:00 AM	7/29/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 7/30/13

MSD Daily Flow Reading, ending 7-30-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	7/31/2013 5:00:00 AM	7/30/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

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Signed: [signature] *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 7/31/13

MSD Daily Flow Reading, ending 7-31-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/1/2013 5:00:00 AM	7/31/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 8/1/13

MSD Daily Flow Reading, ending 8-01-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/2/2013 5:00:00 AM	8/1/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Schie *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 8/2/13

MSD Daily Flow Reading, ending 8-02-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/3/2013 5:00:00 AM	8/2/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Sehie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: Bryan Sehie *Name:* Bryan Sehie

Title: Environmental Specialist *Date:* 8/3/13

MSD Daily Flow Reading, ending 8-03-2013

Daily Flow Reading

Bridgeton Landfill

	Current	Previous	Difference
Date / Time:	8/4/2013 5:00:00 AM	8/3/2013 5:00:00 AM	24.0 hours
Reading (Gallons):	319,982	319,982	0

Flow Meter Adjustment		Comments
Reading Adjustment:	0	
Flow During Adjustment:	0	

Total Flow: 0 gallons

Bridgeton Landfill, LLC representative: Bryan Schie

I certify that the readings are correct and in compliance with the volume and rate restrictions established by MSD.

I further certify under penalty of Law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signed: [signature] *Name:* Bryan Schie

Title: Environmental Specialist *Date:* 8/4/13

MSD Daily Flow Reading, ending 8-04-2013

Doug Mendoza

From: Darin Lewis
Sent: Tuesday, August 06, 2013 1:06 PM
To: Catherine Politte; Mike Townley; Brian G. Gibson; Steve Grace; Sara Kammerer; Doug Mendoza
Subject: Bridgeton Landfill Leachate weekly volume summary.

Total Bridgeton Landfill leachate volume hauled to Bissell Point Treatment Plant from 7/28/2013 to 8/3/2013.
7/28 – 120,000 gallons
7/29 – 120,000 gallons
7/30 – 119,900 gallons
7/31 – 120,000 gallons
8/01 – 120,000 gallons
8/02 – 120,000 gallons
8/03 – 120,000 gallons
Total = 839,900 gallons