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KHALIL M. GHARIOS, DIVISION MANAGER
1149 SOUTH BROADWAY, 5TH FLOOR
LOS ANGELES, CA 90015
TEL: (213) 485-3002
FAX: (213) 485-2959

February 15, 2016

Ms. Lauren Fondahl, Sludge Coordinator
U.S. EPA – Region IX (WTR-7)
75 Hawthorne Street
San Francisco, CA 91405

2015 GRIFFITH PARK COMPOST FACILITY 40 CFR 503 REPORTING REQUIREMENTS

On November 25, 1992, the U.S. Environmental Protection Agency promulgated standards for the Use or Disposal of Sewage Sludge. 40 CFR 503 establishes requirements for the final use or disposal of sewage sludge and is applicable to any person who prepares sewage sludge that is applied to the land. The Griffith Park Compost Facility (GPCF) prepares sewage sludge for land use; thus, GPCF must comply with the 503 regulations.

Enclosed is the GPCF 503 sewage sludge report as requested. The City's 503 reports related to its entire management of bio-solids were submitted under separate cover. Feedstock of 1,590 wet tons of bio-solids, 497 tons of green trimmings and 328 tons of zoo manure was processed in 2015. The finished compost was used throughout city parks, schools, or sold to large private users. A total of 983 tons of compost were produced in 2015.

Whenever a pile fails fecal coliform it is held back until it passes, so that no failed piles are distributed.

If you have any questions or comments regarding this report, please contact Constantin Pano at (213) 485-3025.

Sincerely,

Khalil M. Gharios, P.E., Division Manager
Solid Resources Processing and Construction Division

KG:cp

Attachment

c: Diane Gilbert, LA SAN
Dan Denering, LA SAN
David Thompson, EAD/LEA
Rosalia Rojo, LA SAN

U.S. EPA
40 CFR 503
SEWAGE SLUDGE REPORT

Griffith Park Compost Facility
5400 Griffith Park Drive
Los Angeles, CA 90027

February 17, 2016

City of Los Angeles
Bureau of Sanitation
Solid Resources Processing and Construction Division

Introduction

The Griffith Park Composting Facility (GPCF) occupies 1.5 acres within Griffith Park and is the first City owned and operated composting facility developed by LA Sanition and the Department of Recreation and Parks. The GPCF is located at 5400 Griffith Park Drive, one mile north of the Wilson-Harding Municipal Golf Course and one mile south of Travel Town.

Green trimmings generated within Park, zoo manure generated by animals at the L.A. Zoo, and biosolids from the WWTP, are combined and the composted to produce in the herbivore exhibit of finished compost that is reused as a nutrientrich, organic soil amendment. Approximately 4 wet tons of zoo manure and 15 wet tons of biosolids are combined with 60-90 cubic yards of yard trimmings for each pile. After approximately 28 days of composting and 17 days of curing, the compost is tested for fecal coliform or Salmonella. Once the results are received and confirmed to be clear of coliform and Salmonella, the finished product is distributed or sold to large users.

Feedstock of 1,590 wet tons of biosolids 497 tons of green trimmings, and 328 tons of zoo manure were processed in 2015. The finished compost was used throughout City parks, schools, or sold to large private users. A total of 983 tons of compost were produced in 2015.

Applicability

Subpart Land Application 40 CFR 503.10 (f)

Any person who prepares sewage sludge that is sold or given away in a bag or other container for application to the land need not comply with the general requirements in 503.12 and the management practices in 503.14 if the sewage sludge meets the pollutant concentrations in 503.13 (b) the Class A pathogen requirements in 503.32 (a), and one of the vector attraction reduction requirements in 503.33 (b) (1) through (b) (8).

The sale and distribution of compost occurs at the GPCF; consequently, the GPCF is required to report information in Section 503.17 through (iv) directly to EPA Region 9.

Recordkeeping

503.17 (a) (2) (i)

Any person who prepares sewage sludge that is sold or given away in a bag or other container for application to the land shall monitor the concentration of each pollutant listed in Table 3 of 503.13, The limits of these pollutants could be found in the Table The GPCF is therefore required to monitor the finished product four times per year. Table 1 of 503.13 contains the metal constituents and their allowed concentration limits. Composite analyses of the sample events of finished compost for piles built in 2008 are shown in the Appendix.

TABLE

Constituents and Pollutant Limits for Griffith Park Compost Analyses (Dry weight basis).

Constituents	Pollutant Limit
Arsenic	41 mg/kg
Cadmium 39	39 mg/kg
Chromium	N/A
Copper	1,500 mg/kg
Lead	300 mg/kg
Mercury	17 mg/kg
Molybdenum	75 mg/kg
Nickel	420 mg/kg
Selenium	100 mg/kg
Zinc	2,800 mg/kg

503.17 (a) (2) (iii)

Any person who prepares sewage sludge that is sold or given away in a bag or other container for application to the land shall provide a description of how the Class A pathogen requirements in 503.32 (a) 5, 6, 7, or 8) are met. Furthermore, the requirements shall be met prior to meeting or at the same time the vector attraction reduction requirements in 503.33 are met.

Section 503.32 (a) (7) (i)

This section states that either the density of fecal coliforms in the sewage sludge shall be less than 1,000 MPN per gram of total solids (dry weight basis) or the density of Salmonella species bacteria in the sewage sludge shall be less than three MPN per four grams of total solids (dry weight basis) at the time the sewage sludge is prepared for sale or given away in a bag or other container for application to the land.

Description of how the Class A pathogen requirements are met 1503.32 (a) (7) (i)
Twelve grabs from finished curing piles are composited and analyzed for fecal coliforms by the City of Los Environmental Monitoring Division lab once a quarter. If the fecal coliforms are less than 1.000 per gram of total solids (dry weight basis), the compost is deemed ready for distribution. If the sample does not pass, the curing piles are mechanically aerated and put back on the curing pad for a minimum of seven more days before retesting.

503.17 (a) (2) (ii)

This section states that sewage sludge shall be treated in one of the processes to further reduce pathogens.

Description of how the Class A pathogen requirements are met 503.17 (a) (2) (ii)
The static aerated pile composting method, a process that further reduces pathogens, is the procedure used. The temperature of the compost mix is maintained at 55 degrees Celsius (131 degrees F) or higher for three consecutive days. All temperatures are monitored daily and are recorded in a temperature log book which is kept at the facility.

503.17 (a) (2) (iv)

Any person who prepares sewage sludge that is sold or given away in a bag or other container for application to the land shall provide a description of how one of the vector attraction reduction requirements in 503.33 (b) (I) through (b) (8) are met.

503.17 (a) (2)

This section states that sewage sludge must be treated in an aerobic process for 14 days or longer. During that time, the temperature of the sewage sludge shall be higher than 40 degrees Celsius (104 degrees F) and the average temperature of the sewage sludge shall be higher than 45 degrees Celsius (1 13 degrees F).

Description of how the vector attraction reduction requirements are met
Static aerated pile composting, an aerobic process, is the process used to reduce vectors. The temperature of the sewage sludge is maintained higher than 40 degrees Celsius (104 degrees F) for 14 days or longer, and the average temperature of the sewage sludge is higher than 45 degrees Celsius (113 degrees F). All temperatures are monitored daily and are recorded in a temperature log book which is kept at the facility.

ENVIRONMENTAL MONITORING DIVISION
BIOLOGY SECTION - MICROBIOLOGY UNIT

GRIFFITH PARK COMPOST FACILITY
FECAL COLIFORM ANALYSIS
2015

LOG-IN #	SAMPLE DATE/ ANALYSIS START DATE	ANALYSIS COMPLETE DATE	ANALYST	COMPOST PILE	DILUTION FACTOR	RAW VALUE MPN TABLE	% TOTAL SOLIDS	FECAL COLIFORMS MPN/GDW	PASS/FAIL (<1000 MPN/GDW = PASS)
4111-13	21-Jan	23-Jan	Nic Arzadon	GPBC-B5-150121	100	< 1.8	62.2	< 3	PASS
4164-02	15-Apr	18-Apr	Jacinda Cher	GPBC-B2-150415	100	< 1.8	60.9	< 3	PASS
4175-01	15-Jul	18-Jul	Pravin Patel	GPBC-B8-150715	100	< 1.8	66.9	< 3	PASS
4212-01	18-Nov	21-Nov	.in/ M. Rashe	GPBC-B4-151118	100	13	51.8	25	PASS
4228-05	23-Dec	26-Dec	M. Rashedar	GPBC-B9-151223	100	2	65.5	3	PASS

Note: Samples analyzed by Standard Methods 9221 E.1. (APHA. 22nd Ed. 2012)

Discharger:	GRIFFITH PARK	Name of Laboratory: Environmental Monitoring Division
Site:	GPBC-B5-150121	

						411113 GPBC-B5-150121 1/21/2015
	Parameter	**Analysis Date**	**MDL**	**ML**	**Unit**	**Value**
METALS	Arsenic	5/18/2015	0.25	1.00	mg/kg dry wt.	ND
	Cadmium	5/18/2015	0.03	1.00	mg/kg dry wt.	7.14
	Chromium	5/18/2015	0.54	1.00	mg/kg dry wt.	36.2
	Copper	5/18/2015	0.04	1.00	mg/kg dry wt.	597
	Mercury	1/28/2015	0.00025	0.0200	mg/kg dry wt.	1.05
	Molybdenum	5/18/2015	0.09	1.00	mg/kg dry wt.	15.3
	Nickel	5/18/2015	0.57	2.00	mg/kg dry wt.	30.3
	Lead	5/18/2015	0.19	0.50	mg/kg dry wt.	18.6
	Selenium	5/18/2015	0.25	1.00	mg/kg dry wt.	3.14
	Zinc	5/18/2015	0.61	2.00	mg/kg dry wt.	838
Conventional Chemistry	Total solids (TS)	1/21/2015	0.1		%	62.2

Note:

ND = Not detected; values below MDL

MDL = Method Detection Limit is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR Part 136 Appendix B.

ML = Minimum Level is the concentration of a substance equivalent to the lowest calibration standard.

Results that fall between MDL and ML are estimated values.

Discharger:	GRIFFITH PARK	Name of Laboratory:	Environmental Monitoring Division
Sample Number:	411113		

QUALITY CONTROL DATA

	ANALYTE	Blank (mg/L)	MS (%Rec)	MSD (%Rec)	MS Dup (%RPD)	LCS (%Rec)
METALS	Arsenic	ND	93.0	94.0	1.07	87.0
	Cadmium	ND	88.0	88.0	0.00	91.0
ICP 1442	Chromium	ND	92.0	94.0	2.15	95.0
Hg 1429	Copper	ND	90.0	90.0	0.00	93.0
	Mercury	ND	108	106	1.87	99.0
	Molybdenum	ND	94.0	93.0	1.07	99.0
	Nickel	ND	89.0	89.0	0.00	92.0
	Lead	ND	79.0	80.0	1.26	85.0
	Selenium	ND	91.0	92.0	1.09	87.0
	Zinc	ND	88.0	86.0	2.30	90.0

Discharger:	GRIFFITH PARK	Name of Laboratory: Environmental Monitoring Division
Site:	GPBC-B2-150415	

						416402 GPBC-B2-150415 4/15/2015
	Parameter	**Analysis Date**	**MDL**	**ML**	**Unit**	**Value**
METALS	Arsenic	6/9/2015	0.33	1.64	mg/kg dry wt.	ND
	Cadmium	6/9/2015	0.03	1.64	mg/kg dry wt.	12.1
	Chromium	6/9/2015	0.082	1.64	mg/kg dry wt.	45.5
	Copper	6/9/2015	0.30	1.00	mg/kg dry wt.	667
	Mercury	5/26/2015	0.00041	0.0332	mg/kg dry wt.	1.03
	Molybdenum	6/9/2015	0.09	1.34	mg/kg dry wt.	17.1
	Nickel	6/9/2015	0.16	3.28	mg/kg dry wt.	38.9
	Lead	6/9/2015	0.16	0.82	mg/kg dry wt.	18.8
	Selenium	6/9/2015	0.49	1.64	mg/kg dry wt.	ND
	Zinc	6/9/2015	3.28	0.16	mg/kg dry wt.	1010
Conventional Chemistry	Total solids (TS)	4/15/2015	0.1		%	60.9

Note:

ND = Not detected; values below MDL

MDL = Method Detection Limit is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR Part 136 Appendix B.

ML = Minimum Level is the concentration of a substance equivalent to the lowest calibration standard.

Results that fall between MDL and ML are estimated values.

Discharger:	GRIFFITH PARK	Name of Laboratory: Environmental Monitoring Division
Sample Number:	416402	

QUALITY CONTROL DATA

	ANALYTE	Blank (mg/L)	MS (%Rec)	MSD (%Rec)	MS Dup (%RPD)	LCS (%Rec)
METALS	Arsenic	0.0100	92.0	94.0	2.15	105
	Cadmium	ND	87.0	88.0	1.14	103
ICP 1448	Chromium	ND	89.0	91.0	2.22	103
Hg 1443	Copper	0.0200	88.0	91.0	3.35	107
	Mercury	ND	100	100	0.00	90.0
	Molybdenum	ND	89.8	91.6	1.98	102
	Nickel	ND	87.0	88.0	1.14	106
	Lead	ND	89.0	86.0	3.43	106
	Selenium	ND	93.0	93.0	0.00	106
	Zinc	ND	80.0	86.0	7.23	103

Discharger:	GRIFFITH PARK	Name of Laboratory: Environmental Monitoring Division
Site:	GPBC-B5-150715	

						417501 GPBC-B5-150715 7/15/2015
	Parameter	**Analysis Date**	**MDL**	**ML**	**Unit**	**Value**
METALS	Arsenic	9/2/2015	0.30	1.49	mg/kg dry wt.	ND
	Cadmium	9/2/2015	0.03	1.49	mg/kg dry wt.	10.9
	Chromium	9/2/2015	0.075	1.49	mg/kg dry wt.	62.9
	Copper	9/2/2015	0.3	1.49	mg/kg dry wt.	672
	Mercury	7/16/2015	0.00034	0.0272	mg/kg dry wt.	0.728
	Nickel	9/2/2015	0.15	2.99	mg/kg dry wt.	37.7
	Lead	9/2/2015	0.15	0.75	mg/kg dry wt.	20.8
	Selenium	9/2/2015	0.45	1.49	mg/kg dry wt.	ND
	Zinc	9/2/2015	0.15	2.99	mg/kg dry wt.	1060
Conventional Chemistry	Total solids (TS)	7/15/2015	0.1		%	66.9

Note:

ND = Not detected; values below MDL

MDL = Method Detection Limit is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR Part 136 Appendix B.

ML = Minimum Level is the concentration of a substance equivalent to the lowest calibration standard.

Results that fall between MDL and ML are estimated values.

Discharger:	GRIFFITH PARK	Name of Laboratory:	Environmental Monitoring Division
Sample Number:	417501		

QUALITY CONTROL DATA

	ANALYTE	Blank (mg/L)	MS (%Rec)	MSD (%Rec)	MS Dup (%RPD)	LCS (%Rec)
METALS	Arsenic	0.0046	84.0	86.0	2.35	94.0
	Cadmium	0.00022	81.0	82.0	1.23	93.0
ICP 1329	Chromium	ND	87.0	89.0	2.27	97.0
Hg 1327	Copper	0.00633	93.0	89.0	4.40	99.0
	Mercury	ND	90.0	91.0	1.10	100
	Nickel	ND	82.0	86.0	4.76	96.0
	Lead	ND	82.0	83.0	1.21	96.0
	Selenium	ND	77.0	78.0	1.29	87.0
	Zinc	0.0009	88.0	87.0	1.14	91.0

Discharger:	GRIFFITH PARK	Name of Laboratory: Environmental Monitoring Division
Site:	GPBC-B4-151118	

						421201 GPBC-B4-151118 11/18/2015
	Parameter	**Analysis Date**	**MDL**	**ML**	**Unit**	**Value**
METALS	Arsenic	12/23/2015	0.47	1.90	mg/kg dry wt.	ND
	Cadmium	12/23/2015	0.06	1.90	mg/kg dry wt.	9.90
	Chromium	12/23/2015	1.00	1.90	mg/kg dry wt.	64.4
	Copper	12/23/2015	0.08	1.90	mg/kg dry wt.	1030
	Mercury	12/3/2015	0.00180	0.1480	mg/kg dry wt.	3.08
	Molybdenum	12/23/2015	0.2	1.90	mg/kg dry wt.	33.70
	Nickel	12/23/2015	1.10	3.80	mg/kg dry wt.	52.1
	Lead	12/23/2015	0.36	0.95	mg/kg dry wt.	29.6
	Selenium	12/23/2015	0.47	1.90	mg/kg dry wt.	ND
	Zinc	12/23/2015	1.20	3.80	mg/kg dry wt.	1580
Conventional Chemistry	Total solids (TS)	11/19/2015	0.1		%	51.8

Note:

ND = Not detected; values below MDL

MDL = Method Detection Limit is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR Part 136 Appendix B.

ML = Minimum Level is the concentration of a substance equivalent to the lowest calibration standard.

Results that fall between MDL and ML are estimated values.

Discharger:	GRIFFITH PARK	Name of Laboratory:	Environmental Monitoring Division
Sample Number:	421201		

QUALITY CONTROL DATA

	ANALYTE	Blank (mg/L)	MS (%Rec)	MSD (%Rec)	MS Dup (%RPD)	LCS (%Rec)
METALS	Arsenic	0.0148	84.0	83.0	1.20	91.0
	Cadmium	0.0170	80.0	78.0	2.53	89.0
ICP 1352	Chromium	0.0169	88.0	86.0	2.30	95.0
Hg 1344	Copper	0.0272	89.0	86.0	3.43	100
	Mercury	ND	110.0	109.0	0.91	102
	Molybdenum	0.0400	86.0	84.0	2.35	95.0
	Nickel	0.0170	82.0	80.0	2.47	94.0
	Lead	0.0164	80.0	77.0	3.82	94.0
	Selenium	0.0196	76.0	74.0	2.67	86.0
	Zinc	0.0176	84.0	78.0	7.41	87.0

Discharger:	GRIFFITH PARK	Name of Laboratory: Environmental Monitoring Division
Site:	GPBC-B9-151223	

						422805 GPBC-B9-151223 12/23/2015
	Parameter	**Analysis Date**	**MDL**	**ML**	**Unit**	**Value**
METALS	Arsenic	2/9/2016	0.30	1.51	mg/kg dry wt.	ND
	Cadmium	2/9/2016	0.03	1.51	mg/kg dry wt.	9.31
	Chromium	2/9/2016	0.076	1.51	mg/kg dry wt.	42.5
	Copper	2/9/2016	0.3	1.51	mg/kg dry wt.	722
	Mercury	1/5/2016	0.00180	0.146	mg/kg dry wt.	1.29
	Molybdenum	2/9/2016	0.3	1.51	mg/kg dry wt.	22.1
	Nickel	2/9/2016	0.15	3.03	mg/kg dry wt.	38.2
	Lead	2/9/2016	0.15	0.76	mg/kg dry wt.	22.9
	Selenium	2/9/2016	0.45	1.51	mg/kg dry wt.	ND
	Zinc	2/9/2016	0.15	3.03	mg/kg dry wt.	1180
Conventional Chemistry	Total solids (TS)	12/29/2015	0.1		%	65.5

Note:

ND = Not detected; values below MDL

MDL = Method Detection Limit is the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero, as defined in 40 CFR Part 136 Appendix B.

ML = Minimum Level is the concentration of a substance equivalent to the lowest calibration standard.

Results that fall between MDL and ML are estimated values.

Discharger:	GRIFFITH PARK	Name of Laboratory:	Environmental Monitoring Division
Sample Number:	422805		

QUALITY CONTROL DATA

	ANALYTE	Blank (mg/L)	MS (%Rec)	MSD (%Rec)	MS Dup (%RPD)	LCS (%Rec)
METALS	Arsenic	ND	93.0	93.0	0.00	88.0
	Cadmium	0.00020	91.0	91.0	0.00	88.0
ICP 1352	Chromium	ND	92.0	91.0	1.09	102
Hg 1344	Copper	0.00325	89.0	85.0	4.60	94.0
	Mercury	ND	104.0	94.0	10.10	98.0
	Molybdenum	0.0115	91.0	91.0	0.00	92.0
	Nickel	ND	90.0	89.0	1.12	95.0
	Lead	ND	91.0	90.0	1.10	97.0
	Selenium	ND	85.0	85.0	0.00	80.0
	Zinc	0.0009	85.0	80.0	6.06	83.0