CITY OF SAN DIEGO

Public Utilities Department

Wastewater Treatment and Disposal Division

Operation Support Group

Biosolids Certification Package
July 1, 2019 – July 31, 2019

Contents:

Title 22 analysis page.

40 CFR 503 certification for inorganic pollutant concentrations and limits.

Metropolitan Biosolids Center "Class B" Certification statement as per U.S. EPA 40 CFR Part 503 Standards For the Use and Disposal of Bulk Sewage Sludge.

Point Loma Wastewater Treatment Plant "Class B" Certification statement as per U.S. EPA 40 CFR Part 503 Standards For the Use and Disposal of Bulk Sewage Sludge.

Fractional Volatile Solids Reduction (FVSR) and VAR Certification statement.
- FVSR calculations page
- Raw and digested TVS data page

CITY OF SAN DIEGO
PUBLIC UTITLITIES DEPARTMENT

BIOSOLIDS CERTIFICATION STATEMENT
for
MEETING PATHOGEN REDUCTION REQUIREMENTS
July 1, 2019 – July 31, 2019

The following pathogens reduction requirement has been prepared in accordance with U.S. Environmental Protection Agency 40 CFR Part 503 Standards for the use and disposal of bulk sewage sludge from the Metro Biosolids Center Operated by the City of San Diego, Public Utilities Department.

503.17 (a)(4)(i)(C) - A description of how the Class B pathogens requirement in 503.32 (b) (3) is met.

At the City of San Diego Metropolitan Biosolids Center sludge undergoes anaerobic, high rate, mesophilic digestion that meets 503 regulations for detention time and temperature.

503.17 (a)(4)(i)(B) - Certification statement for meeting pathogens reduction requirements.

I certify, under penalty of law, that the Class B pathogen requirements in 503.32 (b)(3) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

For The City of San Diego
Public Utilities Department

By: _____ Date 9/5/19

Richard Pitchford
Superintendent
Wastewater Treatment and Disposal Division
Metropolitan Biosolids Center

CITY OF SAN DIEGO
PUBLIC UTILITIES DEPARTMENT

BIOSOLIDS CERTIFICATION STATEMENT
for
MEETING PATHOGEN REDUCTION REQUIREMENTS
July 1, 2019 – July 31, 2019

The following pathogens reduction requirement has been prepared in accordance with U.S. Environmental Protection Agency 40 CFR Part 503 Standards for the use and disposal of bulk sewage sludge from the Metro Biosolids Center Operated by the City of San Diego, CA, Public Utilities Department.

503.17 (a)(4)(i)(C) - A description of how the Class B pathogens requirement in 503.32 (b) (3) is met.

At the City of San Diego Point Loma Wastewater Treatment Plant sludge undergoes anaerobic, high rate, mesophilic digestion that meets 503 regulations for detention time and temperature.

503.17 (a)(4)(i)(B) - Certification statement for meeting pathogens reduction requirements.

I certify, under penalty of law, that the Class B pathogen requirements in 503.32 (b)(3) have been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

For The City of San Diego
Public Utilities Department

By:_____ Date 9-5-19

David Marlow
Superintendent
Wastewater Treatment and Disposal Division
Point Loma Wastewater Treatment Plant

CITY OF SAN DIEGO
PUBLIC UTILITIES DEPARTMENT
CERTIFICATION STATEMENT

In Compliance with
U.S. Environmental Protection Agency 40 CFR Part 503 Standards
For the Use and Disposal of Bulk Sewage Sludge from the
Metro Biosolids Center
Operated by the City of San Diego Public Utilities Department

VECTOR ATTRACTION REDUCTION

The daily fractional volatile solids reduction (FVSR) values were calculated using the Van Kleck Equation and raw and digested sludge volatile solids for the month of JUL 2019 from locations based on the following information from Operations staff:

All sludge sent to Metro Biosolids Center (MBC) from the Pt. Loma WWTP is pumped from Digester 7.
Only North City Water Reclamation Plant (NCWRP) raw sludge is going to MBC digesters.
The MBC thickened sludge samples are representative of the raw sludge from NCWRP.
MBC is using Digester No.1 for sludge processing.

The following determinations of volatile solids were done using approved methods by a laboratory certified by the State of Arizona (Cert. No. AZ0783)

57.6 % Average Volatile Solids Reduction for the Pt. Loma WTP sludge digestion process.
60.2 % Average Volatile Solids Reduction for the sludge MBC treats from the NCWRP.

Both streams **do** / ~~do not~~ meet 38% FVSR criteria.

Environmental Chemistry Laboratory Senior Chemist — Date 8/27/19

I certify that the sludge samples taken and used in these determinations were taken and handled under my direction and supervision using approved methods and are representative samples of actual operational conditions.

Wastewater Treatment Superintendent, Metro Biosolids Center (MBC) — Date 9/5/19
Wastewater Treatment Superintendent, Pt. Loma Wastewater Treatment Plant — Date 9-5-19

CERTIFICATION STATEMENT
VECTOR ATTRACTION REQUIREMENTS

I certify, under penalty of law, the vector attraction reduction requirement in Paragraph 503.33 (b) (1) which states that:
The mass of volatile solids in the sewage sludge shall be reduced by a minimum of 38 percent, has been met. This determination has been made under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the vector reduction requirements have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

By:

Chief Plant Operator
Wastewater Treatment and Disposal — Date 9/5/19

Y:\EMTS\41.SECTIONS\WCS\REPORTS\MBC\VAR\2019\FVSR JUL 2019.DOCX

FVSR (Fractional Volatile Solids Reduction)

$$FVSR = \frac{VS_p - VS_b}{VS_p - (VS_p * VS_b)} = \frac{Vol.solidsRaw - Vol.solids\ Digested}{Vol.solids\ Raw - (Vol.solids\ Raw * Vol.solids\ Digested)}$$

Where: VS_p = Volatile Solids Feed Sludge (RAW SLUDGE),
VS_b = Volatile Solids Digested Sludge (DIG SLUDGE), currently only digester 7 is used for the calculation.

Volatile Solids (VS) is expressed as fractional numbers.

Average Volatile Solids for JUL 2019

Average %TVS Digested Sludge (Digester 7) for the month.	Average Raw (feed) sludge %TVS for the month	Calculated FVSR (%)
CA Lab data used	CA Lab data used	CA Lab data used
60.9	78.6	57.6%

Average Volatile Solids for JUL 2019

Average %TVS Digested Sludge (MBC Dig 1) for the month.	Average Raw (feed) sludge (MBC_TSBTC) %TVS for the month	Calculated FVSR (%)
CA Lab data used	CA Lab data used	CA Lab data used
67.8	84.1	60.2%

ALVARADO WASTEWATER CHEMISTRY LAB.
ARIZONA DH No. AZ0783
Total and Volatile Solids

BATCH ID: 19184TS90
ANALYSIS: TS/VS_SLDG
ANALYST: TJCANNON

ANALYSIS DATE: 7/3/2019

PROTOCOL: SM2540G/EPA160.4
MDL(%): 0.24
LCS TRUE VALUE: 3.9

SAMPLE ID	SAMPLE DATE	SOURCE	TEST TYPE	DISH ID	TARE WT grams	WET WT grams	INITIAL WT (g)	HOUR	FINAL WT (g)	HOUR	% TS	COMMENTS
Standard Methods 2540B for the Determination of Residue (%TS)												
P1105270	7/3/2019	LAB	BLNK	DIG7	72.84	106.1400	72.84	9:25 AM	72.84	12:22 PM	ND	
P1105271	7/3/2019	LAB	LCS	XL	80.6	110.3300	81.75	9:25 AM	81.76	12:22 PM	3.9	%REC= 100
P1103692	7/2/2019	MBC_DIG1		O	70.46	105.5500	71.11	9:25 AM	71.1	12:22 PM	1.8	
P1103692	7/2/2019	MBC_DIG1	DUP	THE	74.83	107.8100	75.43	9:25 AM	75.43	12:22 PM	1.8	%RPD =0
P1103691	7/2/2019	MBC_TSBTC		CR	80.45	118.0100	81.77	9:25 AM	81.77	12:22 PM	3.5	
P1103690	7/2/2019	PLDIG7		RJ	75.74	108.2700	76.43	9:25 AM	76.43	12:22 PM	2.1	
P1103689	7/2/2019	RAW COMP		7	79.36	120.1300	81.09	9:25 AM	81.09	12:22 PM	4.2	
EPA Method 160.4 for %TVS at 550°C					TARE WT (g)	FINAL WT (g) Total Solids	INITIAL WT (g)	HOUR	FINAL WT (g)	HOUR	% TVS	
P1105270	7/3/2019	LAB	BLNK	DIG7	72.84	72.84						
P1105271	7/3/2019	LAB	LCS	XL	80.6	81.76						
P1103692	7/2/2019	MBC_DIG1		O	70.46	71.1	70.67	7:01 AM	70.67	10:46 AM	67.2	
P1103692	7/2/2019	MBC_DIG1	DUP	THE	74.83	75.43	75.03	7:01 AM	75.02	10:46 AM	68.3	%RPD =1.6
P1103691	7/2/2019	MBC_TSBTC		CR	80.45	81.77	80.67	7:01 AM	80.66	10:46 AM	84.1	
P1103690	7/2/2019	PLDIG7		RJ	75.74	76.43	76.01	7:01 AM	76.01	10:46 AM	60.9	
P1103689	7/2/2019	RAW COMP		7	79.36	81.09	79.73	7:01 AM	79.73	10:46 AM	78.6	

1st Entry_____ 2nd Entry_____ Final Entry_____

POINT LOMA WASTEWATER TREATMENT PLANT
CALIFORNIA HAZARDOUS WASTE IDENTIFICATION TESTS (Title 22)
Metro Biosolids Center Dewatered Sludge
From 01-JUL-2019 to 31-JUL-2019

Source: MBCDEWCN
Sample ID: P1104072
Sample Date: 31-JUL-19

Constituent	MDL.	Units	Total Dry Wt. mg/Kg	Total Wet Wt. mg/Kg	TTLC Wet Wt. mg/Kg	W.E.T. Wet Wt. mg/L	STLC Wet Wt. mg/L	40 CFR 503 Limits ** mg/Kg	CA Health & Safety code Limits *** mg/Kg
Antimony	0.3	MG/KG	5.64	1.57	500	*	15.00		
Arsenic	0.31	MG/KG	2.29	0.64	500	*	5.00	41	
Barium	0.31	MG/KG	263	73.2	10000	*	100.00		
Beryllium	0.01	MG/KG	0.043	0.012	75	*	0.75		
Cadmium	0.04	MG/KG	0.971	0.271	100	*	1.00	39	
Chromium (VI)			NA	NA	500	NA	5.00		
Chromium	0.1	MG/KG	48.0	13.4	2500	*	560.00	1,200	
Cobalt	0.1	MG/KG	3.19	0.89	8000	*	80.00		
Copper	2.4	MG/KG	641	179	2500	*	25.00	1,500	2,500
Lead	0.2	MG/KG	12.4	3.5	1000	*	5.00	300	350
Mercury	0.059	MG/KG	0.989	0.275	20	*	0.20	17	
Molybdenum	0.1	MG/KG	17.9	4.99	3500	*	350.00		
Nickel	0.6	MG/KG	20.1	5.61	2000	*	20.00	420	2,000
Selenium	0.43	MG/KG	1.32	0.367	100	*	1.00	100	
Silver	0.27	MG/KG	3.59	1.00	500	*	5.00		
Thallium	0.2	MG/KG	DNQ.372	DNQ.104	700	*	7.00		
Vanadium	0.1	MG/KG	18.8	5.23	2400	*	24.00		
Zinc	0.8	MG/KG	888	248	5000	*	250.00	2,800	
Fluoride	1	MG/KG	29.7	8.29	18000	*	180.00		
Sulfides-Reactive	11	MG/KG	63.0	17.6					
Sulfides-Total	500	MG/KG	10700	2990					
Total Solids		WT%	27.9						
Total Volatile Solids		WT%	62.3						
pH		PH	7.84		>2 - <12				
Ammonia-N	28	MG/KG	7530						
Nitrite Nitrate Calc		MG/KG	28.8						
Organic Nitrogen Calc.		MG/KG	43300						
Total Kjeldahl Nitrogen		MG/KG	50800						
Aldrin	0.0006	MG/KG	ND	ND	1.4	*	0.14		
Chlordanes	0.0016	MG/KG	ND	ND	2.5	*	0.25		
DDT, DDE, DDD	0.0011	MG/KG	ND	ND	1.0	*	0.10		
Dieldrin	0.0006	MG/KG	ND	ND	8.0	*	0.80		
2,4-D		MG/KG	NA	NA	100	NA	10.00		
Endrin	0.0011	MG/KG	ND	ND	0.2	*	0.02		
Heptachlor	0.0005	MG/KG	ND	ND	4.7	*	0.47		
Kepone			NA	NA	21	NA	2.10		
Lindane	0.952	MG/KG	ND	ND	4.0	*	0.40		
BHC, Total	0.001	MG/KG	ND	ND	4.0	*	0.40		
Methoxychlor	0.0008	MG/KG	ND	ND	100	*	10.00		
Mirex	0.0012	MG/KG	ND	ND	21	*	2.10		
Pentachlorophenol			NA	NA	17	NA	1.70		
PCBs (Arochlors)	2.38	MG/KG	ND	ND	50	*	5.00		
Toxaphene	0.17	MG/KG	ND	ND	5	*	0.50		
Trichloroethene	0.0218	MG/KG	ND	ND	2040	*	204.00		
2,4,5-TP			NA	NA	10	NA	1.00		

On the basis of these analyses, I certify that this dried sludge is non-hazardous as defined by California Code, Title 22, Section 66699.

Elvira Mercado, Senior Chemist, Environmental Chemistry Laboratory

TTLC = Total Threshold Limit Concentration.
STLC = Soluble Threshold Limit Concentration.
W.E.T. = Waste Extraction Technique.
* = The total wet concentration is less than 10 times the STLC. Therefore, by definition, this substance is present in concentration that is less than the limit for hazardous wastes.
** = Limits are in mg/Kg (dry weight) based on 40 CFR part 503.13 Table 3 "Limits for Land Application".
*** = The California State Health and Safety Code 25157.8 established a lower limit for Lead.
NA = Not Analyzed, ND= Not Detected, NS= Not Sampled, NR= Not Required
MDL = Method Detection Limit (mg/Kg per dry weight; except for pH and Total and Volatile Solids)
MBCDEWCN = Metro Biosolids Center Dewatered Centrifuged Sludge.

CERTIFICATION STATEMENT
In Compliance With
U.S. Environmental Protection Agency 40 CFR Part 503 Standards
For the Use and Disposal of Bulk Sewage Sludge from the
Metro Biosolids Center
Operated by the
City of San Diego Public Utilities Department

Monthly Sludge Composite Certification - *Centrifuge Dewatered Sludge*

I. INORGANIC POLLUTANT CONCENTRATIONS: The results of analyses below are for a composite sample of daily centrifuged dewatered sludge samples taken from the centrifuges over the calendar month of July 2019.

Metals from Table 3 of Paragraph 503.13†
(All concentrations in dry weight)

Parameter	Value	Units	503 Limit	Units
Arsenic	2.29	mg/Kg	41	mg/Kg
Cadmium	0.971	mg/Kg	39	mg/Kg
Chromium	48.0	mg/Kg	1,200	mg/Kg
Copper	641	mg/Kg	1,500	mg/Kg
Lead	12.4	mg/Kg	300	mg/Kg
Mercury	0.989	mg/Kg	17	mg/Kg
Molybdenum	17.9	mg/Kg	75	mg/Kg^
Nickel	20.1	mg/Kg	420	mg/Kg
Selenium	1.32	mg/Kg	100	mg/Kg
Zinc	888	mg/Kg	2,800	mg/Kg
Total Nitrogen#	5.08	Wt %		
Date of Sample	31-Jul-2019			
Total Solids	27.9	Wt %		
Volatile Solids	62.3	Wt %		

† Also conforms to Table 2-Monthly Average Pollutant Concentration of the Arizona Administrative Code Title 18, Chapter 9.
^ Limits for Molybdenum taken from 2009 version of 40 CFR part 503.13 Table 1, Ceiling Concentrations
* Value is a sum calculation of Total kjeldahl nitrogen, Nitrate as N and Nitrite as N.

Based on this month's analysis and the results of analyses of monthly sludge composite samples for the previous year, no parameter in the described sludge stream exceeds 40 CFR Part 503 Standards for land application.

Senior Chemist
Environmental Chemistry Laboratory,
California State ELAP Cert. No. 1609

Date 8/28/19

VAR CERT. Form
Revised 7/6/2000

Y:\EMTS\41.SECTIONS\WCS\REPORTS\PLWWTP\MONTHS\2019\07.JUL\MBC_503RPT_CA.DOCX

ALVARADO WASTEWATER CHEMISTRY LAB
Cert. No. 1609 / ARIZONA Cert. No. AZ0783
TOTAL KJELDAH NITROGEN SOLIDS

BATCH ID: 19232TKN16
ANALYSIS: TKN_TIT_SLDG
MATRIX TYPE: DEWATERED_SLDG

ANALYSIS DATE: 8/20/2019

MDL: 0.04

ANALYST: KDANG

PROTOCOL: 4500-Norg B

pH STANDARDS: Y:\EMTS\41.Sections\WCS\GROUPS\PUBLIC\SB\pH buffer standards -exp date, lot, source.xlsm

Buffer # 7	Fisher cat. #	SB107-4	Exp. Date:	9/30/2019	Lot#	176363
Buffer # 4	Fisher cat. #	SB101-4	Exp. Date:	2/1/2020	Lot#	180709
Buffer # 7	FISHER	SB107-4	Exp. Date:	10/31/2020	Lot #	186926

pH check 6.972

Vendor	Exp.	Lot #	Concentration	Conc. units	Volume used, ml	COMMENTS
Lab Chem	1/10/2020	H003-17	1000	mg/L	2.50	LCS/SPK tv =1.25
PHENOVA	10/31/2019	7066-09	0.281	%		SOIL; Acceptance 57.3-144%
HACH	11/302022	A7334	100 mg/L	mg/L	2.50	MDL check, tv=0.125

Slope: 99.7 Acceptable % range: 95 to 105 Calibration result: PASS

H2SO4 Lot # 4703M86 EXP: 3/20 **Normality of H2SO4 =** 0.02

**Ml from 1000 mg/L NH3N used for SPK = 2.5

SAMPLE ID	SOURCE	SAMPLE TYPE	TEST #	SAMPLE SIZE	UNIT	TS %	ML of H2SO4 used for end point	ANALYTE	UNITS	RESULT WT%	TRUE VALUE WT%	COMMENTS	
P1117204	LAB	BLNK	1	0.2	ml	100	0.025	TKN	WT%	0.0035		ND	
P1117205	PHENOVA	CHK	1	0.2061	grams	100	2.094	TKN	WT%	0.28	0.281		%REC = 100.0%
P1117206	LAB	CHK	1	0.2	grams	100	8.955	TKN	WT%	1.25	1.25		%REC = 100.0%
P1104072	MBCDEWCN	SAMP	1	0.206	grams	27.9	10.47	TKN	WT%	5.1			
P1104072	MBCDEWCN	SAMP	2	0.2081	grams	27.9	10.50	TKN	WT%	5.06			%RPD= 0.8%
P1104072	MBCDEWCN	SPK	1	0.2345	grams	27.9	21.47	TKN	WT%	9.19	3.82		%REC = 107.6%
P1104072	MBCDEWCN	SPK	2	0.2201	grams	27.9	19.85	TKN	WT%	9.05	4.07		%RPD= 1.5%
P1107672	DIG COMP	SAMP	1	1.089	grams	2.2	5.766	TKN	WT%	6.74			
P1107658	RAW COMP	SAMP	1	1.0328	grams	4.1	5.113	TKN	WT%	3.38			
P1117207	LAB	CHK	1	0.2	grams	100	1.005	TKN	WT%	0.14	0.125		%REC = 110.0%
													MDL

P1117206	MBCDEWCN	SAMP		Analyte:	TOTKN	MG/KG	51000
P1117206	MBCDEWCN	SAMP	DUP	Analyte:	TOTKN	MG/KG	50600

P1117206	MBCDEWCN	SAMP		Analyte:	AMMONIA_N	MG/KG	7500
P1117206	MBCDEWCN	SAMP	DUP	Analyte:	AMMONIA_N	MG/KG	7550

P1117206	MBCDEWCN	SAMP		Analyte: **	NITROGEN_ORG	MG/KG	43500
P1117206	MBCDEWCN	SAMP	DUP	Analyte: **	NITROGEN_ORG	MG/KG	43100

** NITROGEN_ORG (MG/KG) = (TOTKN MG/KG) - (AMMONIA_N MG/KG)

1st Entry_____ 2nd Entry_____ Final Entry_____

POINT LOMA WASTEWATER TREATMENT PLANT
CALIFORNIA HAZARDOUS WASTE IDENTIFICATION TESTS (Title 22)
Metro Biosolids Center Dewatered Sludge
From 01-JUL-2019 to 31-JUL-2019

Source: MBCDEWCN
Sample ID: P1104072
Sample Date: 31-JUL-19

Constituent	MDL.	Units	Total Dry Wt. mg/Kg	Total Wet Wt. mg/Kg	TTLC Wet Wt. mg/Kg	W.E.T. Wet Wt. mg/L	STLC Wet Wt. mg/L	40 CFR 503 Limits ** mg/Kg	CA Health & Safety code Limits *** mg/Kg
Antimony	0.3	MG/KG	5.64	1.57	500	*	15.00		
Arsenic	0.31	MG/KG	2.29	0.64	500	*	5.00	41	
Barium	0.31	MG/KG	263	73.2	10000	*	100.00		
Beryllium	0.01	MG/KG	0.043	0.012	75	*	0.75		
Cadmium	0.04	MG/KG	0.971	0.271	100	*	1.00	39	
Chromium (VI)			NA	NA	500	NA	5.00		
Chromium	0.1	MG/KG	48.0	13.4	2500	*	560.00	1,200	
Cobalt	0.1	MG/KG	3.19	0.89	8000	*	80.00		
Copper	2.4	MG/KG	641	179	2500	*	25.00	1,500	2,500
Lead	0.2	MG/KG	12.4	3.5	1000	*	5.00	300	350
Mercury	0.059	MG/KG	0.989	0.275	20	*	0.20	17	
Molybdenum	0.1	MG/KG	17.9	4.99	3500	*	350.00		
Nickel	0.6	MG/KG	20.1	5.61	2000	*	20.00	420	2,000
Selenium	0.43	MG/KG	1.32	0.367	100	*	1.00	100	
Silver	0.27	MG/KG	3.59	1.00	500	*	5.00		
Thallium	0.2	MG/KG	DNQ.372	DNQ.104	700	*	7.00		
Vanadium	0.1	MG/KG	18.8	5.23	2400	*	24.00		
Zinc	0.8	MG/KG	888	248	5000	*	250.00	2,800	
Fluoride	1	MG/KG	29.7	8.29	18000	*	180.00		
Sulfides-Reactive	11	MG/KG	63.0	17.6					
Sulfides-Total	500	MG/KG	10700	2990					
Total Solids		WT%	27.9						
Total Volatile Solids		WT%	62.3						
pH		PH	7.84		>2 - <12				
Ammonia-N	28	MG/KG	7530						
Nitrite Nitrate Calc		MG/KG	28.8						
Organic Nitrogen Calc.		MG/KG	43300						
Total Kjeldahl Nitrogen		MG/KG	50800						
Aldrin	0.0006	MG/KG	ND	ND	1.4	*	0.14		
Chlordanes	0.0016	MG/KG	ND	ND	2.5	*	0.25		
DDT, DDE, DDD	0.0011	MG/KG	ND	ND	1.0	*	0.10		
Dieldrin	0.0006	MG/KG	ND	ND	8.0	*	0.80		
2,4-D		MG/KG	NA	NA	100	NA	10.00		
Endrin	0.0011	MG/KG	ND	ND	0.2	*	0.02		
Heptachlor	0.0005	MG/KG	ND	ND	4.7	*	0.47		
Kepone			NA	NA	21	NA	2.10		
Lindane	0.952	MG/KG	ND	ND	4.0	*	0.40		
BHC, Total	0.001	MG/KG	ND	ND	4.0	*	0.40		
Methoxychlor	0.0008	MG/KG	ND	ND	100	*	10.00		
Mirex	0.0012	MG/KG	ND	ND	21	*	2.10		
Pentachlorophenol			NA	NA	17	NA	1.70		
PCBs (Arochlors)	2.38	MG/KG	ND	ND	50	*	5.00		
Toxaphene	0.17	MG/KG	ND	ND	5	*	0.50		
Trichloroethene	0.0218	MG/KG	ND	ND	2040	*	204.00		
2,4,5-TP			NA	NA	10	NA	1.00		

On the basis of these analyses, I certify that this dried sludge is non-hazardous as defined by California Code, Title 22, Section 66699. All determinations were done using approved methods by laboratories certified by the State of Arizona (Cert. No. AZ0783).

Elvira Mercado, Senior Chemist, Environmental Chemistry Laboratory

TTLC = Total Threshold Limit Concentration.
STLC = Soluble Threshold Limit Concentration.
W.E.T. = Waste Extraction Technique.
* = The total wet concentration is less than 10 times the STLC. Therefore, by definition, this substance is present in concentration that is less than the limit for hazardous wastes.
** = Limits are in mg/Kg (dry weight) based on 40 CFR part 503.13 Table 3 "Limits for Land Application".
*** = The California State Health and Safety Code 25157.8 established a lower limit for Lead.
NA = Not Analyzed, ND= Not Detected, NS= Not Sampled, NR= Not Required
MDL = Method Detection Limit (mg/Kg per dry weight; except for pH and Total and Volatile Solids)
MBCDEWCN = Metro Biosolids Center Dewatered Centrifuged Sludge.

CERTIFICATION STATEMENT
In Compliance With
U.S. Environmental Protection Agency 40 CFR Part 503 Standards
For the Use and Disposal of Bulk Sewage Sludge from the
Metro Biosolids Center
Operated by the
City of San Diego Public Utilities Department

Monthly Sludge Composite Certification - *Centrifuge Dewatered Sludge*

I. INORGANIC POLLUTANT CONCENTRATIONS: The results of analyses below are for a composite sample of daily centrifuged dewatered sludge samples taken from the centrifuges over the calendar month of July 2019. All analyses were performed by the City of San Diego's Environmental Chemistry Services Laboratory using methods certified by the State of Arizona (Cert. No. AZ0783).

Metals from Table 3 of Paragraph 503.13†
(All concentrations in dry weight)

Parameter	Value	Units	503 Limit	Units
Arsenic	2.29	mg/Kg	41	mg/Kg
Cadmium	0.971	mg/Kg	39	mg/Kg
Chromium	48.0	mg/Kg	1,200	mg/Kg
Copper	641	mg/Kg	1,500	mg/Kg
Lead	12.4	mg/Kg	300	mg/Kg
Mercury	0.989	mg/Kg	17	mg/Kg
Molybdenum	17.9	mg/Kg	75	mg/Kg^
Nickel	20.1	mg/Kg	420	mg/Kg
Selenium	1.32	mg/Kg	100	mg/Kg
Zinc	888	mg/Kg	2,800	mg/Kg
Total Nitrogen#	5.08	Wt %		
Date of Sample	31-Jul-2019			
Total Solids	27.9	Wt %		
Volatile Solids	62.3	Wt %		

† Also conforms to Table 2-Monthly Average Pollutant Concentration of the Arizona Administrative Code Title 18, Chapter 9.
^ Limits for Molybdenum taken from 2009 version of 40 CFR part 503.13 Table 1, Ceiling Concentrations
# Value is a sum calculation of Total kjeldahl nitrogen, Nitrate as N and Nitrite as N.

Based on this month's analysis and the results of analyses of monthly sludge composite samples for the previous year, no parameter in the described sludge stream exceeds 40 CFR Part 503 Standards for land application.

Senior Chemist
Environmental Chemistry Laboratory,
Arizona State Cert. No. AZ0783

Date 8/28/19

VAR CERT. Form
Revised 7/6/2000

Y:\EMTS\41.SECTIONS\WCS\REPORTS\PLWWTP\MONTHS\2019\07.JUL\MBC_503RPT_AZ.DOCX