NOTICE AND NECESSARY INFORMATION (NANI)

This form is to assist compliance with the bulk sewage (biosolids) notification requirements [503.12(f)]. Please note, however, that if the biosolids meet the exceptional quality criteria, then the notification requirements do not apply. This form can be used by preparers of biosolids to transmit information to land appliers and also by land appliers to transmit information to land owners or lease holders.

Facility and Biosolids Type:: GWRP Compliance

Monitoring Period: 7/1/19 To: 8/31/19

Name	Concentration (mg/Kg) Dry Weight	Pollutant Concentrations (Table 3, 40 CFR 503.13) Monthly Average	Ceiling Concentrations* (Table I, 40 CFR 503.13) Daily Maximum
Arsenic	< 18.5	41	75
Cadmium	< 3.71	39	85
Chromium	53.3	N/A**	3000
Copper	301	1500	4300
Lead	< 9.26	300	840
Mercury	0.833	17	57
Molybdenum	13.6	N/A**	75
Nickel	24.4	420	420
Nitrogen Concen	55200	N/A**	N/A**
Selenium	< 18.5	100	100
Zinc	779	2800	7500

* Biosolids may not be land applied if any pollutant exceeds these values.

** EPA has temporarily removed molybdenum limits from Table 3, Table 2 and Table

B. Pathogen Reduction (40CFR 503.32) -- Please indicate the level achieved

☐ Class A ☒ Class B

C. Vector Attraction Reduction (40CFR 503.33) -- Please indicate the option perform

☒ Option 1 ☐ Option 2 ☐ Option 3 ☐ Option 4
☐ Option 5 ☐ Option 6 ☐ Option 7 ☐ Option 8
☐ No vector attraction reduction options were performed

D. Certification

I certify, under penalty of law, that the information that will be used to determine compliance with the Class B pathogen requirements in §503.32(b) and the vector attraction reduction requirement in §503.33(b)(1) was prepared under my direction and supervision in accordance with the system designed to ensure that qualified personnel properly gather and evaluate this information. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

A. Name and Official Title Jennifer Hetherington, Wastewater Compliance Specialist	B. Area Code and Telephone Number 480-644-3890
C. Signature Jennifer Hetherington	D. Date Signed 8/23/2019

Laboratory Sample ID: 190709009

CITY OF MESA COMPLIANCE LABORATORY

640 NORTH MESA DRIVE MESA, ARIZONA 85211
Environmental Laboratory License AZ0410
LABORATORY SUPERVISOR: MATTHEW REXING Ph (480)644-5403
QUALITY ASSURANCE COORDINATOR: Amy Cerwinske Ph (480)644-6901

Attn: Jennifer Hetherington

OrderID: 190709009

Collection Date: 7/9/2019
Collection Time: 3:00:00 AM
Collector: R. Adams
Sample Number: 19070154

Receive Date: 7/9/2019
Customer Sample#:
Project ID: GWRP Biosolids
Site: GWRP Biosolids

RESULTS

Parameter	Method No	MRL	Qualifier	Result	Analysis Date	Analyst
Nitrogen, Ammonia Total	SM4500-NH3D	236	D2	6130 mg/Kg-dry	7/27/2019	BSINGH
Cyanide, Total	EPA 9014	18.8	M2	< 18.8 mg/Kg-dry	7/22/2019	PSERIA
Arsenic, Total	EPA 6010D	18.5	D1	< 18.5 mg/Kg-dry	7/26/2019	ACHARLS
Cadmium, Total	EPA 6010D	3.71	D1	< 3.71 mg/Kg-dry	7/24/2019	ACHARLS
Chromium, Total	EPA 6010D	18.5	D1	53.3 mg/Kg-dry	7/24/2019	ACHARLS
Copper, Total	EPA 6010D	18.5	D1	301 mg/Kg-dry	7/24/2019	ACHARLS
Lead, Total	EPA 6010D	9.26	D1	< 9.26 mg/Kg-dry	7/24/2019	ACHARLS
Molybdenum, Total	EPA 6010D	4.63	D1	13.6 mg/Kg-dry	7/24/2019	ACHARLS
Nickel, Total	EPA 6010D	4.63	D1	24.4 mg/Kg-dry	7/24/2019	ACHARLS
Selenium, Total	EPA 6010D	18.5	D1	< 18.5 mg/Kg-dry	7/24/2019	ACHARLS
Silver, Total	EPA 6010D	4.63	D1	< 4.63 mg/Kg-dry	7/24/2019	ACHARLS
Zinc, Total	EPA 6010D	4.63	M1, D1	779 mg/Kg-dry	7/24/2019	ACHARLS
Mercury, Total	EPA 7471B	0.044	D2, M4, R1	0.833 mg/Kg-dry	7/26/2019	ACHARLS
Nitrogen, Nitrate-Nitrite Total	EPA 9056A	106	D1	< 106 mg/Kg-dry	7/24/2019	KHALLA
Nitrogen, Kjeldahl Total	SM4500-Norg	1040		55200 mg/Kg-dry	7/17/2019	PSERIA
Nitrogen, Total	Calculation	1150		55200 mg/Kg-dry	7/30/2019	mrexing
Paint Filter	EPA 9095B			abs pres/abs	7/11/2019	PSERIA
pH	EPA 9045D	1.68		7.89 S.U.	7/11/2019	PSERIA
Phosphate as P, Total	SM4500-P	4670	D2	27200 mg/Kg-dry	7/25/2019	BSINGH
Solids, Total	SM2540G	1		21.2 %	7/11/2019	GSMITH2

Quality Control

BLANK Parameter	mg/L	QC BATCH
Nitrogen, Ammonia Total	< 236 mg/Kg-dry	QC19072801
Cyanide, Total	< 18.8 mg/Kg-dry	QC19072303
Arsenic, Total	< 18.5 mg/Kg-dry	QC19072605
Cadmium, Total	< 3.71 mg/Kg-dry	QC19072605
Chromium, Total	< 18.5 mg/Kg-dry	QC19072605
Copper, Total	< 18.5 mg/Kg-dry	QC19072605
Lead, Total	< 9.26 mg/Kg-dry	QC19072605
Molybdenum, Total	< 4.63 mg/Kg-dry	QC19072605
Nickel, Total	< 4.63 mg/Kg-dry	QC19072605
Selenium, Total	< 18.5 mg/Kg-dry	QC19072605
Silver, Total	< 4.63 mg/Kg-dry	QC19072605
Zinc, Total	< 4.63 mg/Kg-dry	QC19072605
Mercury, Total	< 0.044 mg/Kg-dry	QC19072603
Nitrogen, Nitrate-Nitrite Total	< 106 mg/Kg-dry	QC19072402
Nitrogen, Kjeldahl Total	< 1040 mg/Kg-dry	QC19071805
Phosphate as P, Total	< 4670 mg/Kg-dry	QC19072803
Solids, Total	< 1 %	QC19071202

Standard Parameter	Actual Conc. mg/L	Standard Conc. mg/L	%REC	QC BATCH	QC TYPE
Nitrogen, Ammonia Total	53.9	50	108	QC19072801	LFB
Nitrogen, Ammonia Total	53.9	50	108	QC19072801	ICV
Nitrogen, Ammonia Total	49.1	50	98	QC19072801	CCV
Cyanide, Total	0.23	0.25	92	QC19072303	MRL
Cyanide, Total	9.52	10	95	QC19072303	LFB
Cyanide, Total	9.43	10	94	QC19072303	ICV
Cyanide, Total	9.70	10	97	QC19072303	CCV
Arsenic, Total	2.070	2	104	QC19072605	MRL
Arsenic, Total	23.685	25	95	QC19072605	LFB
Arsenic, Total	24.300	25	97	QC19072605	ICV
Arsenic, Total	24.335	25	97	QC19072605	CCV
Cadmium, Total	0.1045	0.1	105	QC19072605	MRL
Cadmium, Total	1.3315	1.25	107	QC19072605	LFB
Cadmium, Total	1.290	1.25	103	QC19072605	ICV
Cadmium, Total	1.246	1.25	100	QC19072605	CCV
Chromium, Total	0.5950	0.5	119	QC19072605	MRL
Chromium, Total	6.825	6.25	109	QC19072605	LFB
Chromium, Total	6.405	6.25	102	QC19072605	ICV
Chromium, Total	6.175	6.25	99	QC19072605	CCV
Copper, Total	0.580	0.5	116	QC19072605	MRL
Copper, Total	6.695	6.25	107	QC19072605	LFB
Copper, Total	6.325	6.25	101	QC19072605	ICV
Copper, Total	6.100	6.25	98	QC19072605	CCV
Lead, Total	1.110	1	111	QC19072605	MRL
Lead, Total	12.71	12.5	102	QC19072605	LFB
Lead, Total	12.775	12.5	102	QC19072605	ICV
Lead, Total	12.185	12.5	97	QC19072605	CCV
Molybdenum, Total	0.575	0.5	115	QC19072605	MRL
Molybdenum, Total	6.620	6.25	106	QC19072605	LFB
Molybdenum, Total	6.335	6.25	101	QC19072605	ICV
Molybdenum, Total	6.130	6.25	98	QC19072605	CCV
Nickel, Total	0.570	0.5	114	QC19072605	MRL
Nickel, Total	6.545	6.25	105	QC19072605	LFB
Nickel, Total	6.400	6.25	102	QC19072605	ICV
Nickel, Total	6.205	6.25	99	QC19072605	CCV

Selenium, Total	2.385	2	119	QC19072605	MRL
Selenium, Total	21.75	25	87	QC19072605	LFB
Selenium, Total	25.36	25	101	QC19072605	ICV
Selenium, Total	24.185	25	97	QC19072605	CCV
Silver, Total	0.530	0.5	106	QC19072605	MRL
Silver, Total	2.480	2.5	99	QC19072605	LFB
Silver, Total	2.495	2.5	100	QC19072605	ICV
Silver, Total	2.555	2.5	102	QC19072605	CCV
Zinc, Total	0.580	0.5	116	QC19072605	MRL
Zinc, Total	6.315	6.25	101	QC19072605	LFB
Zinc, Total	6.250	6.25	100	QC19072605	ICV
Zinc, Total	6.265	6.25	100	QC19072605	CCV
Mercury, Total	0.01004	0.01	100	QC19072603	LFB
Mercury, Total	0.01988	0.02	99	QC19072603	ICV
Mercury, Total	0.01948	0.02	97	QC19072603	CCV
Nitrogen, Nitrate-Nitrite Total	20.243	20	101	QC19072402	LFB
Nitrogen, Nitrate-Nitrite Total	19.6778	20	98	QC19072402	ICV
Nitrogen, Nitrate-Nitrite Total	20.1425	20	101	QC19072402	CCV
Nitrogen, Kjeldahl Total	491.44	500	98	QC19071805	LFB
Nitrogen, Kjeldahl Total	2505.47	2500	100	QC19071805	CCV
pH	6.99	7	100	QC19071105	ICV
pH	6.99	7	100	QC19071105	CCV
Phosphate as P, Total	14.15	15	94	QC19072803	LFB
Phosphate as P, Total	15.00	15	100	QC19072803	CCV

Duplicate Parameter	Actual Conc. mg/L	Duplicate Conc. mg/L	%RPD	Sample Number	QC BATCH
pH	7.57 S.U.	7.58	0.13	18110805	QC19071105
Phosphate as P, Total	27800 mg/Kg-d	28174	1.47	19070211	QC19072803
Solids, Total	21.2 %	21.2	0.00	19070154	QC19071202

SPIKE RESULTS Parameter	Sample Conc. mg/L	Spike True Value mg/L	Final Result mg/L	%REC	%RPD	Sample Number	QC BATCH	
Arsenic, Total	11.5 mg/Kg-d	115.8394	119.6853	93		19070154	QC19072605	MS
Cadmium, Total	0.996 mg/Kg-d	5.791971	6.63760	97		19070154	QC19072605	MS
Chromium, Total	53.3 mg/Kg-d	28.95985	80.36939	93		19070154	QC19072605	MS
Copper, Total	301 mg/Kg-d	28.95985	326.4586	89		19070154	QC19072605	MS
Cyanide, Total	3.1 mg/Kg-d	188.08	139.55	73		19070154	QC19072303	MS
Lead, Total	3.47 mg/Kg-d	57.91971	58.452*57	95		19070154	QC19072605	MS
Mercury, Total	0.833 mg/Kg-d	0.04204	0.72528	0		19070154	QC19072603	MS
Molybdenum, Total	13.6 mg/Kg-d	28.95985	41.23883	96		19070154	QC19072605	MS
Nickel, Total	24.4 mg/Kg-d	28.95985	52.82277	98		19070154	QC19072605	MS
Nitrogen, Ammonia Total	7460 mg/Kg-d	2291	9995	111		19070211	QC19072801	MS
Nitrogen, Kjeldahl Total	55300 mg/Kg-	9225	64115	95		19070211	QC19071805	MS
Nitrogen, Nitrate-Nitrite Total	< 4.5 mg/Kg-d	94	99.244	106		19070154	QC19072402	MS
Selenium, Total	15.5 mg/Kg-d	115.8394	112.8739	84		19070154	QC19072605	MS
Silver, Total	1.46 mg/Kg-d	11.58394	12.90451	99		19070154	QC19072605	MS
Zinc, Total	779 mg/Kg-d	28.95985	817.61779	133		19070154	QC19072605	MS
Arsenic, Total	11.5 mg/Kg-d	117.4196	124.1125	96	3.63	19070154	QC19072605	MSD
Cadmium, Total	0.996 mg/Kg-d	5.870981	6.49331	94	2.20	19070154	QC19072605	MSD
Chromium, Total	53.3 mg/Kg-d	29.35491	80.62031	93	0.31	19070154	QC19072605	MSD
Copper, Total	301 mg/Kg-d	29.35491	322.90812	75	1.09	19070154	QC19072605	MSD
Cyanide, Total	3.1 mg/Kg-d	188.45	141.34	73	1.27	19070154	QC19072303	MSD
Lead, Total	3.47 mg/Kg-d	58.70981	58.26362	93	0.32	19070154	QC19072605	MSD
Mercury, Total	0.833 mg/Kg-d	0.04242	0.55116	0	27.28	19070154	QC19072603	MSD
Molybdenum, Total	13.6 mg/Kg-d	29.35491	41.61351	96	0.90	19070154	QC19072605	MSD
Nickel, Total	24.4 mg/Kg-d	29.35491	53.68425	100	1.62	19070154	QC19072605	MSD

Nitrogen, Ammonia Total	7460 mg/Kg-(	2291	9753	100	10.01	19070211	QC19072801	MSD
Nitrogen, Kjeldahl Total	55300 mg/Kg-	9232	64381	98	2.91	19070211	QC19071805	MSD
Nitrogen, Nitrate-Nitrite Total	< 4.5 mg/Kg-(	94	99.356	106	0.11	19070154	QC19072402	MSD
Selenium, Total	15.5 mg/Kg-(	117.4196	115.04775	85	1.91	19070154	QC19072605	MSD
Silver, Total	1.46 mg/Kg-(	11.74196	13.52674	103	4.71	19070154	QC19072605	MSD
Zinc, Total	779 mg/Kg-(	29.35491	809.09166	103	1.05	19070154	QC19072605	MSD

QUALIFIERS

D1 Sample diluted due to matrix interference.

D2 Sample diluted due to high concentration.

M2 Matrix spike rec. low, blank spk rec. acceptable.

COMMENTS

M1 Matrix spike recovery was high; the associated blank spike recovery was acceptable.

M4 The analysis of the spiked sample required a dilution such that the spike recovery calculation does not provide useful inforamtion. The associated blank spike recovery was acceptable.
R1 RPD/RSD exceeded method accpetance limit due to matrix.

REVIEWED BY: Amy L Cerwinski

Date Signed: 8/1/2019

mesa·az

Chain of Custody

Project Manager: Jennifer Hetherington

Order# 190709009	Sampled By: SMA
Customer Name: GWRP Compliance	Date Sampled: 7/9/19
Project Name: GWRP BIOSOLIDS	Time Sampled: 0300
19070154	Receiving Temp: 2.0C

Sample Number	GE19-302	
Analysis	GWRP Biosolids	# of Bottles
Paint Filter	X	
Mercury - SW7471B	X	
Metals - SW6010D	X	
pH	X	
Ammonia - 4500NH3C	X	
Nitrate-N - EPA9056	X	
Nitrite-N - EPA9056	X	
TKN - 4500 N ORG C	X	
Phosphorus - 4500-PB,E	X	
% Moisture	X	
% Solids	X	
Cyanide Total - 9014	X	
Total Nitrogen	X	
		2

Comments:

Metals: Arsenic, Cadmium, Chromium, Copper, Lead, Molybdenum, Nickel, Selenium, Silver, Zinc

Time Sampled:	Sampler
00:30	SMA
01:00	SMA
01:30	SMA
02:00	SMA
02:30	SMA
03:00	SMA

Sampled&Relinquished by:	
Signature: [signature]	Time: 0610
Printed Name: Rick Adams	Date: 7/9/19
Company Name: City of Mesa, AZ	
Received by:	
Signature: [signature]	Time: 0610
Printed Name: J. Lopez	Date: 7/9/19
Company Name:	
Sampled&Relinquished by:	
Signature: [signature]	Time: 0940
Printed Name: J. Lopez	Date: 7/9/19
Company Name:	
Received by:	
Signature: [signature]	Time: 0940
Printed Name: M. Sevia	Date: 7/9/19
Company Name:	

Sampled&Relinquished by:	
Signature:	Time:
Printed Name:	Date:
Company Name:	
Received by:	
Signature:	Time:
Printed Name:	Date:
Company Name:	
Sampled&Relinquished by:	
Signature:	Time:
Printed Name:	Date:
Company Name:	
Received by:	
Signature:	Time:
Printed Name:	Date:
Company Name:	
Sampled&Relinquished by:	
Signature:	Time:
Printed Name:	Date:
Company Name:	
Received by:	
Signature:	Time:
Printed Name:	Date:
Company Name:	