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:: NWWRP Compliance

Monitoring Period: 3/1/19 To: 4/30/19

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	< 20.0	41	75
Cadmium	< 4.00	39	85
Chromium	53.9	N/A**	3000
Copper	368	1500	4300
Lead	< 9.99	300	840
Mercury	0.565	17	57
Molybdenum	14.9	N/A**	75
Nickel	24.6	420	420
Nitrogen Concen	55800	N/A**	N/A**
Selenium	< 20.0	100	100
Zinc	686	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 4/26/19

Laboratory Sample ID: 190313011

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: 190313011

Collection Date: 3/13/2019
Collection Time: 3:05:00 AM
Collector: D. Turner
Sample Number: 19030409

Receive Date: 3/13/2019
Customer Sample#:
Project ID: NWWRP BIOSOLIDS
Site: NWWRP Biosolids

RESULTS

Parameter	Method No	MRL	Qualifier	Result	Analysis Date	Analyst
Nitrogen, Ammonia Total	SM4500-NH3D	250	D2	6600 mg/Kg-dry	3/16/2019	BSINGH
Cyanide, Total	EPA 9014	19.8		< 19.8 mg/Kg-dry	3/25/2019	PSERIA
Arsenic, Total	EPA 6010D	20	D1	< 20.0 mg/Kg-dry	3/22/2019	ACHARLS
Cadmium, Total	EPA 6010D	4	D1	< 4.00 mg/Kg-dry	3/22/2019	ACHARLS
Chromium, Total	EPA 6010D	20	D1	53.9 mg/Kg-dry	3/22/2019	ACHARLS
Copper, Total	EPA 6010D	20	D1, M3	368 mg/Kg-dry	3/22/2019	ACHARLS
Lead, Total	EPA 6010D	9.99	D1	< 9.99 mg/Kg-dry	3/22/2019	ACHARLS
Molybdenum, Total	EPA 6010D	5	D1	14.9 mg/Kg-dry	3/22/2019	ACHARLS
Nickel, Total	EPA 6010D	5	D1	24.6 mg/Kg-dry	3/22/2019	ACHARLS
Selenium, Total	EPA 6010D	20	D1	< 20.0 mg/Kg-dry	3/22/2019	ACHARLS
Silver, Total	EPA 6010D	5	D1	< 5.00 mg/Kg-dry	3/22/2019	ACHARLS
Zinc, Total	EPA 6010D	5	D1, M3	686 mg/Kg-dry	3/22/2019	ACHARLS
Mercury, Total	EPA 7471B	0.194	M3, R1, D1	0.565 mg/Kg-dry	4/3/2019	ACHARLS
Nitrogen, Nitrate-Nitrite Total	EPA 9056A	112	D1	< 112 mg/Kg-dry	4/1/2019	KHALLA
Nitrogen, Kjeldahl Total	SM4500-Norg	994		55800 mg/Kg-dry	3/21/2019	PSERIA
Nitrogen, Total	Calculation	1110		55800 mg/Kg-dry	4/2/2019	mrexing
Paint Filter	EPA 9095B			abs pres/abs	3/20/2019	PSERIA
pH	EPA 9045D	1.68		7.72 S.U.	3/20/2019	PSERIA
Phosphate as P, Total	SM4500-P	4600	D2	27300 mg/Kg-dry	3/24/2019	BSINGH
Solids, Total	SM2540G	1		20.0 %	3/13/2019	GSMITH2

Quality Control

BLANK Parameter	mg/L	QC BATCH
Nitrogen, Ammonia Total	< 250 mg/Kg-dry	QC19031602
Cyanide, Total	< 19.8 mg/Kg-dry	QC19032501
Arsenic, Total	< 20 mg/Kg-dry	QC19032602
Cadmium, Total	< 4 mg/Kg-dry	QC19032602
Chromium, Total	< 20 mg/Kg-dry	QC19032602
Copper, Total	< 20 mg/Kg-dry	QC19032602
Lead, Total	< 9.99 mg/Kg-dry	QC19032602
Molybdenum, Total	< 5 mg/Kg-dry	QC19032602
Nickel, Total	< 5 mg/Kg-dry	QC19032602
Selenium, Total	< 20 mg/Kg-dry	QC19032602
Silver, Total	< 5 mg/Kg-dry	QC19032602
Zinc, Total	< 5 mg/Kg-dry	QC19032602
Mercury, Total	< 0.194 mg/Kg-dry	QC19040304
Nitrogen, Nitrate-Nitrite Total	< 112 mg/Kg-dry	QC19040201
Nitrogen, Nitrate-Nitrite Total	< 112 mg/Kg-dry	QC19040201
Nitrogen, Kjeldahl Total	< 994 mg/Kg-dry	QC19032102
Phosphate as P, Total	< 4600 mg/Kg-dry	QC19032402
Solids, Total	< 1 %	QC19031405

Standard Parameter	Actual Conc. mg/L	Standard Conc. mg/L	%REC	QC BATCH	QC TYPE
Nitrogen, Ammonia Total	51.7	50	103	QC19031602	LFB
Nitrogen, Ammonia Total	49.6	50	99	QC19031602	CCV
Cyanide, Total	10.57	10	106	QC19032501	LFB
Cyanide, Total	10.56	10	106	QC19032501	ICV
Cyanide, Total	10.55	10	106	QC19032501	CCV
Arsenic, Total	2.17916	2	109	QC19032602	MRL
Arsenic, Total	22.44805	25	90	QC19032602	LFB
Arsenic, Total	24.30019	25	97	QC19032602	ICV
Arsenic, Total	24.53968	25	98	QC19032602	CCV
Cadmium, Total	0.10574	0.1	106	QC19032602	MRL
Cadmium, Total	1.24122	1.25	99	QC19032602	LFB
Cadmium, Total	1.22958	1.25	98	QC19032602	ICV
Cadmium, Total	1.23653	1.25	99	QC19032602	CCV
Chromium, Total	0.54214	0.5	108	QC19032602	MRL
Chromium, Total	6.10619	6.25	98	QC19032602	LFB
Chromium, Total	6.16791	6.25	99	QC19032602	ICV
Chromium, Total	6.09254	6.25	97	QC19032602	CCV
Copper, Total	0.57806	0.5	116	QC19032602	MRL
Copper, Total	6.36423	6.25	102	QC19032602	LFB
Copper, Total	5.99558	6.25	96	QC19032602	ICV
Copper, Total	6.09923	6.25	98	QC19032602	CCV
Lead, Total	1.03037	1	103	QC19032602	MRL
Lead, Total	11.87822	12.5	95	QC19032602	LFB
Lead, Total	12.27746	12.5	98	QC19032602	ICV
Lead, Total	12.32887	12.5	99	QC19032602	CCV
Molybdenum, Total	0.54484	0.5	109	QC19032602	MRL
Molybdenum, Total	6.17671	6.25	99	QC19032602	LFB
Molybdenum, Total	6.13252	6.25	98	QC19032602	ICV
Molybdenum, Total	6.13106	6.25	98	QC19032602	CCV
Nickel, Total	0.54262	0.5	109	QC19032602	MRL
Nickel, Total	6.09488	6.25	98	QC19032602	LFB
Nickel, Total	6.09439	6.25	98	QC19032602	ICV
Nickel, Total	6.1121	6.25	98	QC19032602	CCV
Selenium, Total	2.00623	2	100	QC19032602	MRL

Selenium, Total	20.97348	25	84	QC19032602	LFB
Selenium, Total	24.50419	25	98	QC19032602	ICV
Selenium, Total	24.61512	25	98	QC19032602	CCV
Silver, Total	0.51975	0.5	104	QC19032602	MRL
Silver, Total	2.37677	2.5	95	QC19032602	LFB
Silver, Total	2.44043	2.5	98	QC19032602	ICV
Silver, Total	2.4393	2.5	98	QC19032602	CCV
Zinc, Total	0.445	0.5	89	QC19032602	MRL
Zinc, Total	6.175	6.25	99	QC19032602	LFB
Zinc, Total	6.395	6.25	102	QC19032602	ICV
Zinc, Total	6.04	6.25	97	QC19032602	CCV
Mercury, Total	0.00929	0.01	93	QC19040304	LFB
Mercury, Total	0.02003	0.02	100	QC19040304	ICV
Mercury, Total	0.01939	0.02	97	QC19040304	CCV
Nitrogen, Nitrate-Nitrite Total	20.084	20	100	QC19040201	LFB
Nitrogen, Nitrate-Nitrite Total	20.324	20	102	QC19040201	LFB
Nitrogen, Nitrate-Nitrite Total	19.802	20	99	QC19040201	ICV
Nitrogen, Nitrate-Nitrite Total	19.9394	20	100	QC19040201	CCV
Nitrogen, Kjeldahl Total	491.59	500	98	QC19032102	LFB
Nitrogen, Kjeldahl Total	2539.88	2500	102	QC19032102	CCV
pH	7.01	7	100	QC19032002	ICV
pH	7.02	7	100	QC19032002	CCV
Phosphate as P, Total	15.05	15	100	QC19032402	LFB
Phosphate as P, Total	14.90	15	99	QC19032402	CCV

Duplicate Parameter	Actual Conc. mg/L	Duplicate Conc. mg/L	%RPD	Sample Number	QC BATCH
pH	8.17 S.U.	8.14	0.37	19030366	QC19032002
Phosphate as P, Total	27300 mg/Kg-d	25634	6.31	19030409	QC19032402
Solids, Total	3.34 %	3.35	0.30	19030368	QC19031405

SPIKE RESULTS Parameter	Sample Conc. mg/L	Spike True Value mg/L	Final Result mg/L	%REC	%RPD	Sample Number	QC BATCH	
Arsenic, Total	9.31 mg/Kg-d	123.1406	124.0806	93		19030366	QC19032602	MS
Cadmium, Total	0.852 mg/Kg-d	6.15703	6.90241	98		19030366	QC19032602	MS
Chromium, Total	50.3 mg/Kg-d	30.78514	83.03843	107		19030366	QC19032602	MS
Copper, Total	260 mg/Kg-d	30.78514	301.8928	137		19030366	QC19032602	MS
Cyanide, Total	1.7 mg/Kg-d	199.28	188.62	94		19030366	QC19032501	MS
Lead, Total	< 1 mg/Kg-d	61.5703	59.71287	97		19030366	QC19032602	MS
Mercury, Total	0.321 mg/Kg-d	0.0495	0.39544	150		19030366	QC19040304	MS
Molybdenum, Total	13.1 mg/Kg-d	30.78514	43.26502	98		19030366	QC19032602	MS
Nickel, Total	23.5 mg/Kg-d	30.78514	55.63803	104		19030366	QC19032602	MS
Nitrogen, Ammonia Total	6600 mg/Kg-d	2500	9250	106		19030409	QC19031602	MS
Nitrogen, Kjeldahl Total	55800 mg/Kg-	9909	66057	104		19030409	QC19032102	MS
Nitrogen, Nitrate-Nitrite Total	< 4.5 mg/Kg-d	100	102.431	102		19030366	QC19040201	MS
Selenium, Total	13.3 mg/Kg-d	123.1406	119.3837	86		19030366	QC19032602	MS
Silver, Total	0.662 mg/Kg-d	12.31406	12.7559	98		19030366	QC19032602	MS
Zinc, Total	717 mg/Kg-d	30.78514	730.02660	43		19030366	QC19032602	MS
Arsenic, Total	9.31 mg/Kg-d	122.8984	118.6074	89	4.51	19030366	QC19032602	MSD
Cadmium, Total	0.852 mg/Kg-d	6.14492	6.44847	91	6.80	19030366	QC19032602	MSD
Chromium, Total	50.3 mg/Kg-d	30.72461	77.46143	89	6.95	19030366	QC19032602	MSD
Copper, Total	260 mg/Kg-d	30.72461	283.5139	77	6.28	19030366	QC19032602	MSD
Cyanide, Total	1.7 mg/Kg-d	198.57	181.49	91	3.85	19030366	QC19032501	MSD
Lead, Total	< 1 mg/Kg-d	61.4492	55.7679	91	6.83	19030366	QC19032602	MSD
Mercury, Total	0.321 mg/Kg-d	0.04914	0.57934	525	37.73	19030366	QC19040304	MSD
Molybdenum, Total	13.1 mg/Kg-d	30.72461	40.81247	90	5.83	19030366	QC19032602	MSD
Nickel, Total	23.5 mg/Kg-d	30.72461	52.20935	94	6.36	19030366	QC19032602	MSD

Nitrogen, Ammonia Total	6600 mg/Kg-(	2500	8970	95	11.16	19030409	QC19031602	MSD
Nitrogen, Kjeldahl Total	55800 mg/Kg-	9988	66651	109	4.83	19030409	QC19032102	MSD
Nitrogen, Nitrate-Nitrite Total	< 4.5 mg/Kg-(	100	101.934	102	0.49	19030366	QC19040201	MSD
Selenium, Total	13.3 mg/Kg-(	122.8984	116.0562	84	2.83	19030366	QC19032602	MSD
Silver, Total	0.662 mg/Kg-(	12.28984	12.13139	93	5.02	19030366	QC19032602	MSD
Zinc, Total	717 mg/Kg-(	30.72461	743.36348	86	1.81	19030366	QC19032602	MSD

QUALIFIERS

D1 Sample diluted due to matrix interference.

D2 Sample diluted due to high concentration.

COMMENTS

M3 The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The associated blank spike recovery was accepatable.

R1 RPD/RSD exceeded the method acceptance limit due to matrix.

REVIEWED BY: Amy L Cerwinski

Date Signed: 4/10/2019

mesa·az

Chain of Custody

Project Manager: Jennifer Hetherington

Order# 19031301 1	Sampled By:
Customer Name: NWWRP Compliance	Date Sampled: 3/12/19 - 3/13/19
Project Name: NWWRP BIOSOLIDS	Time Sampled:
	Receiving Temp:

Sample Number	19030409	
Analysis	NWWRP 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-P B,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
10:08	BG
12:01	BG
1500	AT
22:14	DT
2302	DT
0003	DT
0105	DT
0202	DT
0305	DT

Sampled&Relinquished by:	
Signature:	Time:
Printed Name:	Date:
Company Name:	
Received by:	
Signature:	Time:
Printed Name:	Date:
Company Name:	
Sampled&Relinquished by:	
Signature: William R Grue	Time: 12:01
Printed Name: Bill Grue	Date: 3/12/19
Company Name: City of Mesa, NWWRP	
Received by:	
Signature:	Time: 2200
Printed Name: Dwane Turner	Date: 3/12/19
Company Name: NWWRP	

Sampled&Relinquished by:	
Signature:	Time: 1100
Printed Name: Dwane Turner	Date: 3/13/19
Company Name: NWWRP	
Received by:	
Signature:	Time: 1100
Printed Name: J. Lopez	Date: 3/13/19
Company Name:	
Sampled&Relinquished by:	
Signature:	Time: 1215
Printed Name: J. Lopez	Date: 3/13/19
Company Name:	
Received by:	
Signature:	Time: 1215
Printed Name: K. Hulle	Date: 3/13/19
Company Name:	