



CITY CORPORATION

Russellville Water and Sewer System

205 West 3rd Place PO Box 3186 Russellville, AR 72811-3186

Office (479) 968-2105
Fax (479) 968-3265

January 14, 2014

Mr. Alan Anderson
Enforcement Analyst
NPDES Enforcement Section
Arkansas Department of Environmental Quality
5301 Northshore Dr
North Little Rock, Arkansas 72118

RE: Annual Biosolids Report - 2013
NPDES Permit No. AR0021768, AFIN 58-00105

Mr. Anderson:

Enclosed is the City Corporation Annual Biosolids Report in accordance with NPDES Permit AR0021768 part II, Paragraph 9.O. for the year ending December 31, 2013.

All analyses used to generate this report were performed in accordance with EPA Document SW-846 "Test Methods for Evaluation of Solid Waste", or applicable EPA approved methods.

If you have any questions concerning this report, please contact Randy Bradley, Pretreatment Coordinator, at (479) 968-2080, extension 224.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Steve Mallett'.

Steve Mallett
General Manager

Enclosure

CITY CORPORATION
Russellville Wastewater Treatment Plant
 Annual Sludge Report for 2013, NPDES Permit No. AR0021768

Pounds per Acre Applied in 2013

	NH3N	TKN	NO3N	NO2N	Total
Site #1	14.21	629.76	0.30	0.15	644.42
Site #2	0	0	0	0	0.00
Site #3	0	0	0	0	0.00

Pounds per Acre Applied in 2013
 Plant Available Nitrogen

Site #1	192
Site #2	0

Pounds per Acre Applied in 2013

	As	Cd	Cu	Hg	Mo	Ni	Pb	Se	Zn	Cr	Total
Site #1	0	0.018	5.54	0.02	0.23	0.69	0.42	0	14.1	3.54	24.558
Site #2	0	0	0	0	0	0	0	0	0	0	0.000
Site #3	0	0	0	0	0	0	0	0	0	0	0

Pounds per Acre Applied to Date

	As	Cd	Cu	Hg	Mo	Ni	Pb	Se	Zn	Cr	Total
Site #1	0.7688	1.7658	175.41	0.465	11.09	18.09	39.53	1.76	597.39	13.3	859.6
Site #2	0.0307	0.1417	29.181	0.1225	1.6534	4.2822	4.4775	0.047	93.5867	17.5	151.0
Site #3	0.132	0.23	23.13	0.087	1.233	1.975	11.61	0.293	68.57	0.0	107.3

No biosolids were applied to Sites #2 and #3 in 2013

City Corporation dewatered digested biosolids with an Ashbrook two meter belt press producing 278 dry metric tons and land applied 283 dry metric tons with spreader truck. (5 metric ton produced in 2012, applied in 2013)

The treated biosolids were used to grow native pasture grasses on land permitted by City Corporation. City Corporation employees using City Corporation owned equipment applied all biosolids. No public access to these sites are allowed.

All analyses were conducted in accordance with SW-846 or applicable EPA approved methods. The information included in this report is, to the best of my knowledge, true and correct.


 Steve Mallett, General Manager

1-14-14
 Date

City Corporation Sludge Application

Date	Site	Date	Site
7/8/2013	site 1	10/4/13	site 1
7/9/2013	site 1	10/7/13	site 1
7/10/2013	site 1	10/9/13	site 1
7/11/13	site 1	10/10/13	site 1
7/12/13	site 1	10/14/13	site 1
7/16/13	site 1	10/24/13	site 1
7/18/13	site 1	10/28/13	site 1
7/19/13	site 1	11/1/13	site 1
7/22/13	site 1	11/4/13	site 1
7/26/13	site 1	11/12/13	site 1
7/29/13	site 1	11/13/13	site 1
7/31/13	site 1	11/18/13	site 1
8/1/13	site 1	11/19/13	site 1
8/6/13	site 1	11/20/13	site 1
8/7/13	site 1	12/4/13	site 1
8/8/13	site 1		
8/12/13	site 1		
8/15/13	site 1		
8/17/13	site 1		
8/28/13	site 1		
8/29/13	site 1		
8/30/13	site 1		
9/5/13	site 1		
9/9/13	site 1		
9/10/13	site 1		
9/12/13	site 1		
9/18/13	site 1		
9/19/13	site 1		
9/23/13	site 1		
9/24/13	site 1		
9/25/13	site 1		
9/26/13	site 1		
9/30/13	site 1		
10/1/13	site 1		
10/3/13	site 1		
10/4/13	site 1		
10/7/13	site 1		
10/9/13	site 1		

Cooperative Extension Service
Soil Analysis Report
Soil Testing And Research Laboratory
Marianna, AR 72360
<http://www.uark.edu/depts/soiltest>

The University of Arkansas is an equal opportunity/affirmative action institution

RANDY BRADLEY/CITY CORP	Client ID: 4799685797
404 JIMMY LILE RD	
RUSSELLVILLE	AR 72801
Date Processed:	3/26/2013
Field ID:	PASTURE
Acres	56
Lime Applied in the last 4 years:	Yes
Leveled in past 4 years:	No
Irrigation:	Unknown
County:	Pope
Lab Number:	38575
Sample Number:	2044208

1. Nutrient Availability Index

Nutrient	Concentration		Soil Test Level (Mehlich 3)
	ppm	lb/acre	
P	536	1072	Above Optimum
K	61	122	Low
Ca	1736	3472	--
Mg	115	230	--
SO4-S	70	140	--
Zn	51.6	103.2	--
Fe	330	660	--
Mn	184	368	--
Cu	14.0	28.0	--
B	0.3	0.6	--
NO3-N			--

2. Soil Properties

Property	Value	Units
Soil pH (1:2 soil-water)	5.2	---
Soil EC (1:2 soil-water)		umhos/cm
Soil ECEC	16	cmolc/kg
Organic Matter (Loss on Ignition)		%
Estimated Soil Texture	Silty Clay Loam - Clay Loam	

Estimated Base Saturation (%)				
Total	Ca	Mg	K	Na
60.3	53.0	5.9	1.0	0.4

3. Recommendations (Notice: State and/or federal nutrient management regulations may supersede these agronomic recommendations.)

Crop		N	P2O5	K2O	SO4S	Zn	B	Lime
Last Crop	Pasture (212)							
Crop 1	Mixed Cool and Warm-Season Grasses for Pasture (212)	50	0	200	0	0	0	6000
Crop 2								
Crop 3								

4. Crop 1 Notes:

To favor cool-season grasses, apply N in late winter. To favor warm-season grasses, do not apply N until May 1. For higher production, topdress 50 lb N/Acre after every 4-6 weeks of grazing or as needed.

5. Crop 2 Notes:

6. Crop 3 Notes:

EEG

Environmental
Enterprise Group, Inc.

City Corp Field
Annual Soil test

received
3/22/13

220 North Knoxville Russellville, Arkansas 72801
Phone (479) 968-6767 Fax (479) 968-1956
www.eegonline.com

March 14, 2013
Control No. 165590
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City Corporation
Post Office Box 3186
Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 165590-1

Sample Identification: L246-046780 0313057 Field #2 3/7/2013 130 1530

Analyte	Result	RL	Units	Qualifier
Electrical Conductivity Mod. EPA 9050A	180 Analyzed: 13-Mar-2013 1445 by 93	2	umho/cm Batch: W42884	
Cation-Exchange Capacity Mod. EPA 9080	14 Analyzed: 11-Mar-2013 1154 by 308	0.1	meq/100g Batch: W42857	
Total Solids SM 2540 G	78 Analyzed: 12-Mar-2013 1501 by 302	0.01	% Batch: W42864	
Arsenic EPA 3051A, 6010C	< 5 Analyzed: 11-Mar-2013 2117 by 305	5	mg/Kg Batch: S34186	
Cadmium EPA 3051A, 6010C	0.63 Analyzed: 11-Mar-2013 2117 by 305	0.4	mg/Kg Batch: S34186	
Chromium EPA 3051A, 6010C	55 Analyzed: 11-Mar-2013 2117 by 305	0.7	mg/Kg Batch: S34186	
Copper EPA 3051A, 6010C	86 Analyzed: 11-Mar-2013 2117 by 305	0.6	mg/Kg Batch: S34186	
Lead EPA 3051A, 6010C	30 Analyzed: 11-Mar-2013 2117 by 305	4	mg/Kg Batch: S34186	
Magnesium EPA 3051A, 6010C	880 Analyzed: 11-Mar-2013 2117 by 305	3	mg/Kg Batch: S34186	
Molybdenum EPA 3051A, 6010C	4.4 Analyzed: 11-Mar-2013 2117 by 305	0.8	mg/Kg Batch: S34186	
Nickel EPA 3051A, 6010C	25 Analyzed: 11-Mar-2013 2117 by 305	1	mg/Kg Batch: S34186	
Phosphorus EPA 3051A, 6010C	4000 Analyzed: 11-Mar-2013 2117 by 305	10	mg/Kg Batch: S34186	
Potassium EPA 3051A, 6010C	1400 Analyzed: 11-Mar-2013 2117 by 305	100	mg/Kg Batch: S34186	
Selenium EPA 3051A, 6010C	< 7 Analyzed: 11-Mar-2013 2117 by 305	7	mg/Kg Batch: S34186	
Zinc EPA 3051A, 6010C	160 Analyzed: 11-Mar-2013 2117 by 305	0.2	mg/Kg Batch: S34186	
Mercury EPA 7471B	0.36 Analyzed: 12-Mar-2013 1512 by 271	0.1	mg/Kg Batch: S34185	
Nitrate as N EPA 9056A	5.6 Analyzed: 08-Mar-2013 2048 by 07	0.7	mg/Kg Batch: S34181	

received
4/5/13

March 22, 2013
Control No. 165958
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City Corporation
Post Office Box 3186
Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 165958-1

Sample Identification: L246-046780 0313057 Field #2 3/7/2013 130-1530

<u>Analyte</u>	<u>Result</u>	<u>RL</u>	<u>Units</u>	<u>Qualifier</u>
Sodium Absorption Ratio EPA 3051A, 6010C	0.66			

Prep: 11-Mar-2013 1042 by 270

Analyzed: 11-Mar-2013 2117 by 270

Batch: S34186

received
1/24/2013

1st atr ~~Interplex~~ Biosolids
2013

January 18, 2013
Control No. 164063
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City Corporation
Post Office Box 3186
Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 164063-1

Sample Identification: L246-046565 0113097 PCW Bio-Solids 1/10/2013 715-1500

Analyte	Result	RL	Units	Qualifier
TCLP: Solids EPA 1311	100	0.5	%	
	Analyzed: 14-Jan-2013 1737 by 271		Batch: S33804	
TCLP: Arsenic EPA 3010A, 6010C	< 0.3	0.3	mg/l	D
Prep: 15-Jan-2013 1201 by 100	Analyzed: 15-Jan-2013 1805 by 305		Batch: S33843	Dil: 5
TCLP: Barium EPA 3010A, 6010C	0.076	0.01	mg/l	D
Prep: 15-Jan-2013 1201 by 100	Analyzed: 15-Jan-2013 1805 by 305		Batch: S33843	Dil: 5
TCLP: Cadmium EPA 3010A, 6010C	< 0.02	0.02	mg/l	D
Prep: 15-Jan-2013 1201 by 100	Analyzed: 15-Jan-2013 1805 by 305		Batch: S33843	Dil: 5
TCLP: Chromium EPA 3010A, 6010C	< 0.04	0.04	mg/l	D
Prep: 15-Jan-2013 1201 by 100	Analyzed: 15-Jan-2013 1805 by 305		Batch: S33843	Dil: 5
TCLP: Lead EPA 3010A, 6010C	< 0.2	0.2	mg/l	D
Prep: 15-Jan-2013 1201 by 100	Analyzed: 15-Jan-2013 1805 by 305		Batch: S33843	Dil: 5
TCLP: Selenium EPA 3010A, 6010C	< 0.4	0.4	mg/l	D
Prep: 15-Jan-2013 1201 by 100	Analyzed: 15-Jan-2013 1805 by 305		Batch: S33843	Dil: 5
TCLP: Silver EPA 3010A, 6010C	< 0.04	0.04	mg/l	D
Prep: 15-Jan-2013 1201 by 100	Analyzed: 15-Jan-2013 1805 by 305		Batch: S33843	Dil: 5
TCLP: Mercury EPA 7470A	< 0.008	0.008	mg/l	D
Prep: 15-Jan-2013 1339 by 271	Analyzed: 17-Jan-2013 1516 by 271		Batch: S33846	Dil: 40
Total Solids SM 2540 G	17	0.01	%	
Prep: 16-Jan-2013 1130 by 285	Analyzed: 17-Jan-2013 1131 by 285		Batch: W42262	
Volatile Solids SM 2540 G	69	0.01	%	
Prep: 16-Jan-2013 1131 by 285	Analyzed: 17-Jan-2013 1131 by 285		Batch: W42262	
Ammonia as N SM 4500-NH3 B,G	1400	300	mg/Kg	
Prep: 15-Jan-2013 0938 by 93	Analyzed: 16-Jan-2013 1155 by 93		Batch: W42248	
Total Kjeldahl Nitrogen SM 4500-Norg D	48000	6000	mg/Kg	
Prep: 14-Jan-2013 1637 by 93	Analyzed: 17-Jan-2013 1530 by 93		Batch: W42242	
Arsenic EPA 3051A, 6010C	< 5	5	mg/Kg	
Prep: 14-Jan-2013 0841 by 100	Analyzed: 16-Jan-2013 1538 by 305		Batch: S33826	
Cadmium EPA 3051A, 6010C	2.1	0.4	mg/Kg	
Prep: 14-Jan-2013 0841 by 100	Analyzed: 16-Jan-2013 1538 by 305		Batch: S33826	
Chromium EPA 3051A, 6010C	320	0.7	mg/Kg	
Prep: 14-Jan-2013 0841 by 100	Analyzed: 16-Jan-2013 1538 by 305		Batch: S33826	
Copper EPA 3051A, 6010C	470	0.6	mg/Kg	
Prep: 14-Jan-2013 0841 by 100	Analyzed: 16-Jan-2013 1538 by 305		Batch: S33826	
Lead EPA 3051A, 6010C	34	4	mg/Kg	
Prep: 14-Jan-2013 0841 by 100	Analyzed: 16-Jan-2013 1538 by 305		Batch: S33826	

January 18, 2013
 Control No. 164063
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City Corporation
 Post Office Box 3186
 Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 164063-1 (Continued)

Sample Identification: L246-046565 0113097 PCW Bio-Solids 1/10/2013 715-1500

Analyte	Result	RL	Units	Qualifier
Molybdenum EPA 3051A, 6010C	21	0.8	mg/Kg	
Prep: 14-Jan-2013 0841 by 100	Analyzed: 16-Jan-2013 1538 by 305		Batch: S33826	
Nickel EPA 3051A, 6010C	63	1	mg/Kg	
Prep: 14-Jan-2013 0841 by 100	Analyzed: 16-Jan-2013 1538 by 305		Batch: S33826	
Phosphorus EPA 3051A, 6010C	22000	10	mg/Kg	
Prep: 14-Jan-2013 0841 by 100	Analyzed: 16-Jan-2013 1538 by 305		Batch: S33826	
Potassium EPA 3051A, 6010C	3800	100	mg/Kg	
Prep: 14-Jan-2013 0841 by 100	Analyzed: 16-Jan-2013 1538 by 305		Batch: S33826	
Selenium EPA 3051A, 6010C	< 7	7	mg/Kg	
Prep: 14-Jan-2013 0841 by 100	Analyzed: 16-Jan-2013 1538 by 305		Batch: S33826	
Zinc EPA 3051A, 6010C	1300	0.2	mg/Kg	
Prep: 14-Jan-2013 0841 by 100	Analyzed: 16-Jan-2013 1538 by 305		Batch: S33826	
Mercury EPA 7471B	1.5	0.1	mg/Kg	
Prep: 14-Jan-2013 1051 by 271	Analyzed: 17-Jan-2013 1436 by 271		Batch: S33830	
Nitrate as N EPA 9056A	3.3	3	mg/Kg	
Prep: 11-Jan-2013 1625 by 07	Analyzed: 12-Jan-2013 0359 by 07		Batch: S33824	
Nitrite as N EPA 9056A	< 3	3	mg/Kg	
Prep: 11-Jan-2013 1625 by 07	Analyzed: 12-Jan-2013 0359 by 07		Batch: S33824	
Polychlorinated Biphenyls (PCBs) By EPA 3550C, 8082A				
PCB 1016 EPA 3550C, 8082A	< 0.076	0.076	mg/Kg	
Prep: 11-Jan-2013 1511 by 301	Analyzed: 12-Jan-2013 1718 by 301		Batch: G9122	
PCB 1221 EPA 3550C, 8082A	< 0.076	0.076	mg/Kg	
Prep: 11-Jan-2013 1511 by 301	Analyzed: 12-Jan-2013 1718 by 301		Batch: G9122	
PCB 1232 EPA 3550C, 8082A	< 0.076	0.076	mg/Kg	
Prep: 11-Jan-2013 1511 by 301	Analyzed: 12-Jan-2013 1718 by 301		Batch: G9122	
PCB 1242 EPA 3550C, 8082A	< 0.076	0.076	mg/Kg	
Prep: 11-Jan-2013 1511 by 301	Analyzed: 12-Jan-2013 1718 by 301		Batch: G9122	
PCB 1248 EPA 3550C, 8082A	< 0.076	0.076	mg/Kg	
Prep: 11-Jan-2013 1511 by 301	Analyzed: 12-Jan-2013 1718 by 301		Batch: G9122	
PCB 1254 EPA 3550C, 8082A	< 0.076	0.076	mg/Kg	
Prep: 11-Jan-2013 1511 by 301	Analyzed: 12-Jan-2013 1718 by 301		Batch: G9122	
PCB 1260 EPA 3550C, 8082A	< 0.076	0.076	mg/Kg	
Prep: 11-Jan-2013 1511 by 301	Analyzed: 12-Jan-2013 1718 by 301		Batch: G9122	
Surrogate: Decachlorobiphenyl (7.80-124%) EPA 3550C, 8082A	36.0		%	
Prep: 11-Jan-2013 1511 by 301	Analyzed: 12-Jan-2013 1718 by 301		Batch: G9122	

City Corporation Pretreatment Program

Record of pH

pH Method: SM 18th 4500-H + B Electronic Method

Facility Name: First Quarter Biosolids

Date / Time Sample Collected: 1/10/13 @ 715-1500 Collected by: TJ

Date / Time Sample Analyzed: 1/10/13 @ 715-1500 Analyzed by: MH

pH value sample: 5.37 Temp: _____

pH value duplicate: _____ Abs. Diff. (sample duplicate): 5.37

pH meter # H-160

pH meters used are calibrated each morning - record of calibration on file in the PCW lab.

EEG

Environmental
Enterprise Group, Inc.

220 North Knoxville Russellville, Arkansas 72801
Phone (479) 968-6767 Fax (479) 968-1956
www.eegonline.com

received
7/2/13

2nd Atc 2013
Bio Solids

June 26, 2013
Control No. 168407
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City Corporation
Post Office Box 3186
Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 168407-1

Sample Identification: L246-047200 0613185 PCW Bio-Solids 6/18/2013 1330

Analyte	Result	RL	Units	Qualifier
Total Solids SM 2540 G	19 Prep: 24-Jun-2013 1334 by 285 Analyzed: 25-Jun-2013 1359 by 285	0.01	wt % Batch: W44011	
Volatile Solids SM 2540 G	63 Prep: 24-Jun-2013 1334 by 285 Analyzed: 25-Jun-2013 1359 by 285	0.01	wt % Batch: W44011	
Ammonia as N SM 4500-NH3 B,G	950 Prep: 21-Jun-2013 1750 by 93 Analyzed: 24-Jun-2013 1854 by 93	200	mg/Kg Batch: W44001	
Total Kjeldahl Nitrogen SM 4500-Norg D	47000 Prep: 20-Jun-2013 1554 by 93 Analyzed: 25-Jun-2013 1805 by 302	6000	mg/Kg Batch: W43987	
Arsenic EPA 3051A, 6010C	< 5 Prep: 21-Jun-2013 1426 by 100 Analyzed: 21-Jun-2013 1922 by 305	5	mg/Kg Batch: S34881	
Cadmium EPA 3051A, 6010C	1.2 Prep: 21-Jun-2013 1426 by 100 Analyzed: 21-Jun-2013 1922 by 305	0.4	mg/Kg Batch: S34881	
Chromium EPA 3051A, 6010C	280 Prep: 21-Jun-2013 1426 by 100 Analyzed: 21-Jun-2013 1922 by 305	0.7	mg/Kg Batch: S34881	
Copper EPA 3051A, 6010C	400 Prep: 21-Jun-2013 1426 by 100 Analyzed: 21-Jun-2013 1922 by 305	0.6	mg/Kg Batch: S34881	
Lead EPA 3051A, 6010C	33 Prep: 21-Jun-2013 1426 by 100 Analyzed: 21-Jun-2013 1922 by 305	4	mg/Kg Batch: S34881	
Molybdenum EPA 3051A, 6010C	15 Prep: 21-Jun-2013 1426 by 100 Analyzed: 21-Jun-2013 1922 by 305	0.8	mg/Kg Batch: S34881	
Nickel EPA 3051A, 6010C	49 Prep: 21-Jun-2013 1426 by 100 Analyzed: 21-Jun-2013 1922 by 305	1	mg/Kg Batch: S34881	
Phosphorus EPA 3051A, 6010C	18000 Prep: 21-Jun-2013 1426 by 100 Analyzed: 21-Jun-2013 1939 by 305	100	mg/Kg Batch: S34881	
Potassium EPA 3051A, 6010C	3300 Prep: 21-Jun-2013 1426 by 100 Analyzed: 21-Jun-2013 1922 by 305	100	mg/Kg Batch: S34881	
Selenium EPA 3051A, 6010C	< 7 Prep: 21-Jun-2013 1426 by 100 Analyzed: 21-Jun-2013 1922 by 305	7	mg/Kg Batch: S34881	
Zinc EPA 3051A, 6010C	800 Prep: 21-Jun-2013 1426 by 100 Analyzed: 21-Jun-2013 1922 by 305	0.2	mg/Kg Batch: S34881	
Mercury EPA 7471B	1.3 Prep: 24-Jun-2013 1033 by 271 Analyzed: 25-Jun-2013 1407 by 271	0.1	mg/Kg Batch: S34892	
Nitrate as N EPA 9056A	92 Prep: 20-Jun-2013 1105 by 07 Analyzed: 20-Jun-2013 1210 by 07	4	mg/Kg Batch: S34869	
Nitrite as N EPA 9056A	47 Prep: 20-Jun-2013 1105 by 07 Analyzed: 20-Jun-2013 1210 by 07	4	mg/Kg Batch: S34869	

City Corporation
Post Office Box 3186
Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 168407-1 (Continued)

Sample Identification: L246-047200 0613185 PCW Bio-Solids 6/18/2013 1330

Analyte	Result	RL	Units	Qualifier
Polychlorinated Biphenyls (PCBs) By EPA 3550C, 8082A				
PCB 1016	< 0.069	0.069	mg/Kg	
EPA 3550C, 8082A	Prep: 21-Jun-2013 1502 by 295	Analyzed: 24-Jun-2013 1104 by 301	Batch: G9314	
PCB 1221	< 0.069	0.069	mg/Kg	
EPA 3550C, 8082A	Prep: 21-Jun-2013 1502 by 295	Analyzed: 24-Jun-2013 1104 by 301	Batch: G9314	
PCB 1232	< 0.069	0.069	mg/Kg	
EPA 3550C, 8082A	Prep: 21-Jun-2013 1502 by 295	Analyzed: 24-Jun-2013 1104 by 301	Batch: G9314	
PCB 1242	< 0.069	0.069	mg/Kg	
EPA 3550C, 8082A	Prep: 21-Jun-2013 1502 by 295	Analyzed: 24-Jun-2013 1104 by 301	Batch: G9314	
PCB 1248	< 0.069	0.069	mg/Kg	
EPA 3550C, 8082A	Prep: 21-Jun-2013 1502 by 295	Analyzed: 24-Jun-2013 1104 by 301	Batch: G9314	
PCB 1254	< 0.069	0.069	mg/Kg	
EPA 3550C, 8082A	Prep: 21-Jun-2013 1502 by 295	Analyzed: 24-Jun-2013 1104 by 301	Batch: G9314	
PCB 1260	< 0.069	0.069	mg/Kg	
EPA 3550C, 8082A	Prep: 21-Jun-2013 1502 by 295	Analyzed: 24-Jun-2013 1104 by 301	Batch: G9314	
Surrogate: Decachlorobiphenyl (42.6-134%)	56.4		%	
EPA 3550C, 8082A	Prep: 21-Jun-2013 1502 by 295	Analyzed: 24-Jun-2013 1104 by 301	Batch: G9314	

City Corporation Pretreatment Program

Record of pH

pH Method: SM 18th 4500-H + B Electronic Method

Facility Name: Second Quarter Biosolids

Date / Time Sample Collected: 6/18/13 @715-1310 Collected by: TJ

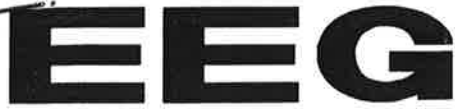
Date / Time Sample Analyzed: 6/18/13 @715-1310 Analyzed by: CPP

pH value sample: 4.23 Temp: 28.9C

pH value duplicate: _____ Abs. Diff. (sample duplicate): 4.23

pH meter # H-160

pH meters used are calibrated each morning - record of calibration on file in the PCW lab.



Environmental
Enterprise Group, Inc.

3rd Qtr 2013
Bio Solids

received
8/5/13

220 North Knoxville Russellville, Arkansas 72801
Phone (479) 968-6767 Fax (479) 968-1956
www.eegonline.com

July 30, 2013
Control No. 169146
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City Corporation
Post Office Box 3186
Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 169146-1

Sample Identification: L246-047310 0713164 PCW Bio-Solids 7/17/2013 1330

Analyte	Result	RL	Units	Qualifier
Total Solids SM 2540 G	19 Prep: 25-Jul-2013 1500 by 285 Analyzed: 26-Jul-2013 1317 by 285	0.01	wt % Batch: W44312	
Volatile Solids SM 2540 G	67 Prep: 25-Jul-2013 1500 by 285 Analyzed: 26-Jul-2013 1317 by 285	0.01	wt % Batch: W44312	
Ammonia as N SM 4500-NH3 B,G	1300 Prep: 26-Jul-2013 1221 by 93 Analyzed: 29-Jul-2013 1210 by 302	200	mg/Kg Batch: W44324	
Total Kjeldahl Nitrogen SM 4500-Norg D	47000 Prep: 26-Jul-2013 1220 by 93 Analyzed: 29-Jul-2013 1821 by 302	5000	mg/Kg Batch: W44323	
Arsenic EPA 3051A, 6010C	< 5 Prep: 24-Jul-2013 1007 by 100 Analyzed: 24-Jul-2013 1311 by 305	5	mg/Kg Batch: S35077	
Cadmium EPA 3051A, 6010C	1.1 Prep: 24-Jul-2013 1007 by 100 Analyzed: 24-Jul-2013 1311 by 305	0.4	mg/Kg Batch: S35077	
Chromium EPA 3051A, 6010C	240 Prep: 24-Jul-2013 1007 by 100 Analyzed: 24-Jul-2013 1311 by 305	0.7	mg/Kg Batch: S35077	
Copper EPA 3051A, 6010C	400 Prep: 24-Jul-2013 1007 by 100 Analyzed: 24-Jul-2013 1311 by 305	0.6	mg/Kg Batch: S35077	
Lead EPA 3051A, 6010C	31 Prep: 24-Jul-2013 1007 by 100 Analyzed: 24-Jul-2013 1311 by 305	4	mg/Kg Batch: S35077	
Molybdenum EPA 3051A, 6010C	14 Prep: 24-Jul-2013 1007 by 100 Analyzed: 24-Jul-2013 1311 by 305	0.8	mg/Kg Batch: S35077	
Nickel EPA 3051A, 6010C	49 Prep: 24-Jul-2013 1007 by 100 Analyzed: 24-Jul-2013 1311 by 305	1	mg/Kg Batch: S35077	
Phosphorus EPA 3051A, 6010C	16000 Prep: 24-Jul-2013 1007 by 100 Analyzed: 24-Jul-2013 1323 by 305	100	mg/Kg Batch: S35077	
Potassium EPA 3051A, 6010C	2100 Prep: 24-Jul-2013 1007 by 100 Analyzed: 24-Jul-2013 1311 by 305	100	mg/Kg Batch: S35077	
Selenium EPA 3051A, 6010C	< 7 Prep: 24-Jul-2013 1007 by 100 Analyzed: 24-Jul-2013 1311 by 305	7	mg/Kg Batch: S35077	
Zinc EPA 3051A, 6010C	1000 Prep: 24-Jul-2013 1007 by 100 Analyzed: 24-Jul-2013 1311 by 305	0.2	mg/Kg Batch: S35077	
Mercury EPA 7471B	1.3 Prep: 24-Jul-2013 1135 by 271 Analyzed: 25-Jul-2013 1111 by 271	0.1	mg/Kg Batch: S35079	
Nitrate as N EPA 9056A	< 3 Prep: 24-Jul-2013 0944 by 07 Analyzed: 24-Jul-2013 1401 by 07	3	mg/Kg Batch: S35075	H
Nitrite as N EPA 9056A	< 3 Prep: 24-Jul-2013 0944 by 07 Analyzed: 24-Jul-2013 1401 by 07	3	mg/Kg Batch: S35075	H

City Corporation
Post Office Box 3186
Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 169146-1 (Continued)

Sample Identification: L246-047310 0713164 PCW Bio-Solids 7/17/2013 1330

Analyte	Result	RL	Units	Qualifier
Polychlorinated Biphenyls (PCBs) By EPA 3550C, 8082A				
PCB 1016 EPA 3550C, 8082A	< 0.067	0.067	mg/Kg	
Prep: 24-Jul-2013 1128 by 306	Analyzed: 25-Jul-2013 1142 by 301		Batch: G9344	
PCB 1221 EPA 3550C, 8082A	< 0.067	0.067	mg/Kg	
Prep: 24-Jul-2013 1128 by 306	Analyzed: 25-Jul-2013 1142 by 301		Batch: G9344	
PCB 1232 EPA 3550C, 8082A	< 0.067	0.067	mg/Kg	
Prep: 24-Jul-2013 1128 by 306	Analyzed: 25-Jul-2013 1142 by 301		Batch: G9344	
PCB 1242 EPA 3550C, 8082A	< 0.067	0.067	mg/Kg	
Prep: 24-Jul-2013 1128 by 306	Analyzed: 25-Jul-2013 1142 by 301		Batch: G9344	
PCB 1248 EPA 3550C, 8082A	< 0.067	0.067	mg/Kg	
Prep: 24-Jul-2013 1128 by 306	Analyzed: 25-Jul-2013 1142 by 301		Batch: G9344	
PCB 1254 EPA 3550C, 8082A	< 0.067	0.067	mg/Kg	
Prep: 24-Jul-2013 1128 by 306	Analyzed: 25-Jul-2013 1142 by 301		Batch: G9344	
PCB 1260 EPA 3550C, 8082A	< 0.067	0.067	mg/Kg	
Prep: 24-Jul-2013 1128 by 306	Analyzed: 25-Jul-2013 1142 by 301		Batch: G9344	
Surrogate: Decachlorobiphenyl (32.1-122%) EPA 3550C, 8082A	69.2		%	
Prep: 24-Jul-2013 1128 by 306	Analyzed: 25-Jul-2013 1142 by 301		Batch: G9344	

City Corporation Pretreatment Program

Record of pH

pH Method: SM 18th 4500-H + B Electronic Method

Facility Name: Third Quarter Biosolids

Date / Time Sample Collected: 7/17/13 @ 715-1330 Collected by: TJ

Date / Time Sample Analyzed: 7/17/13 @ 715-1330 Analyzed by: M H

pH value sample: 5.58 Temp: _____

pH value duplicate: _____ Abs. Diff. (sample duplicate): 5.58

pH meter # H-160

pH meters used are calibrated each morning - record of calibration on file in the PCW lab.

EEG

Environmental
Enterprise Group, Inc.

4th Qtr 2013
Bio Solids

220 North Knoxville Russellville, Arkansas 72801
Phone (479) 968-6767 Fax (479) 968-1956
www.eegonline.com

Received
10/25/13

October 21, 2013
Control No. 171608
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City Corporation
Post Office Box 3186
Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 171608-1

Sample Identification: L246-047639 1013116 PCW Bio-Solids 10/14/2013 1310

Analyte	Result	RL	Units	Qualifier
Total Solids SM 2540 G	18	0.01	wt %	
Prep: 16-Oct-2013 1512 by 302	Analyzed: 18-Oct-2013 1542 by 302		Batch: W45299	
Volatile Solids SM 2540 G	67	0.01	wt %	
Prep: 16-Oct-2013 1512 by 302	Analyzed: 18-Oct-2013 1542 by 302		Batch: W45299	
Ammonia as N SM 4500-NH3 B,G	680	60	mg/Kg	
Prep: 16-Oct-2013 1447 by 93	Analyzed: 17-Oct-2013 1200 by 93		Batch: W45280	
Total Kjeldahl Nitrogen SM 4500-Norg D	50000	8000	mg/Kg	
Prep: 16-Oct-2013 1448 by 93	Analyzed: 18-Oct-2013 1539 by 93		Batch: W45296	
Arsenic EPA 3051A, 6010C	< 5	5	mg/Kg	
Prep: 17-Oct-2013 1002 by 271	Analyzed: 17-Oct-2013 1848 by 305		Batch: S35608	
Cadmium EPA 3051A, 6010C	1.2	0.4	mg/Kg	
Prep: 17-Oct-2013 1002 by 271	Analyzed: 17-Oct-2013 1848 by 305		Batch: S35608	
Chromium EPA 3051A, 6010C	240	0.7	mg/Kg	
Prep: 17-Oct-2013 1002 by 271	Analyzed: 17-Oct-2013 1848 by 305		Batch: S35608	
Copper EPA 3051A, 6010C	420	0.6	mg/Kg	
Prep: 17-Oct-2013 1002 by 271	Analyzed: 17-Oct-2013 1848 by 305		Batch: S35608	
Lead EPA 3051A, 6010C	30	4	mg/Kg	
Prep: 17-Oct-2013 1002 by 271	Analyzed: 17-Oct-2013 1848 by 305		Batch: S35608	
Molybdenum EPA 3051A, 6010C	20	0.8	mg/Kg	
Prep: 17-Oct-2013 1002 by 271	Analyzed: 17-Oct-2013 1848 by 305		Batch: S35608	
Nickel EPA 3051A, 6010C	50	1	mg/Kg	
Prep: 17-Oct-2013 1002 by 271	Analyzed: 17-Oct-2013 1848 by 305		Batch: S35608	
Phosphorus EPA 3051A, 6010C	19000	500	mg/Kg	
Prep: 17-Oct-2013 1002 by 271	Analyzed: 18-Oct-2013 1125 by 305		Batch: S35608	
Potassium EPA 3051A, 6010C	3000	100	mg/Kg	
Prep: 17-Oct-2013 1002 by 271	Analyzed: 17-Oct-2013 1848 by 305		Batch: S35608	
Selenium EPA 3051A, 6010C	< 7	7	mg/Kg	
Prep: 17-Oct-2013 1002 by 271	Analyzed: 17-Oct-2013 1848 by 305		Batch: S35608	
Zinc EPA 3051A, 6010C	1200	0.2	mg/Kg	
Prep: 17-Oct-2013 1002 by 271	Analyzed: 17-Oct-2013 1848 by 305		Batch: S35608	
Mercury EPA 7471B	1.4	0.1	mg/Kg	
Prep: 17-Oct-2013 0909 by 311	Analyzed: 17-Oct-2013 1234 by 311		Batch: S35604	
Nitrate as N EPA 9056A	< 3	3	mg/Kg	H
Prep: 16-Oct-2013 1530 by 07	Analyzed: 16-Oct-2013 1956 by 07		Batch: C16134	
Nitrite as N EPA 9056A	< 3	3	mg/Kg	H
Prep: 16-Oct-2013 1530 by 07	Analyzed: 16-Oct-2013 1956 by 07		Batch: C16134	

analytical services provided by:



October 21, 2013
Control No. 171608
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City Corporation
Post Office Box 3186
Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 171608-1 (Continued)

Sample Identification: L246-047639 1013116 PCW Bio-Solids 10/14/2013 1310

Analyte	Result	RL	Units	Qualifier
Polychlorinated Biphenyls (PCBs) By EPA 3550C, 8082A				
PCB 1016	< 0.070	0.070	mg/Kg	
EPA 3550C, 8082A	Prep: 17-Oct-2013 1436 by 301	Analyzed: 18-Oct-2013 0949 by 306	Batch: G9451	
PCB 1221	< 0.070	0.070	mg/Kg	
EPA 3550C, 8082A	Prep: 17-Oct-2013 1436 by 301	Analyzed: 18-Oct-2013 0949 by 306	Batch: G9451	
PCB 1232	< 0.070	0.070	mg/Kg	
EPA 3550C, 8082A	Prep: 17-Oct-2013 1436 by 301	Analyzed: 18-Oct-2013 0949 by 306	Batch: G9451	
PCB 1242	< 0.070	0.070	mg/Kg	
EPA 3550C, 8082A	Prep: 17-Oct-2013 1436 by 301	Analyzed: 18-Oct-2013 0949 by 306	Batch: G9451	
PCB 1248	< 0.070	0.070	mg/Kg	
EPA 3550C, 8082A	Prep: 17-Oct-2013 1436 by 301	Analyzed: 18-Oct-2013 0949 by 306	Batch: G9451	
PCB 1254	< 0.070	0.070	mg/Kg	
EPA 3550C, 8082A	Prep: 17-Oct-2013 1436 by 301	Analyzed: 18-Oct-2013 0949 by 306	Batch: G9451	
PCB 1260	< 0.070	0.070	mg/Kg	
EPA 3550C, 8082A	Prep: 17-Oct-2013 1436 by 301	Analyzed: 18-Oct-2013 0949 by 306	Batch: G9451	
Surrogate: Decachlorobiphenyl (35.7-168%)	118		%	
EPA 3550C, 8082A	Prep: 17-Oct-2013 1436 by 301	Analyzed: 18-Oct-2013 0949 by 306	Batch: G9451	

City Corporation Pretreatment Program

Record of pH

pH Method: SM 18th 4500-H + B Electronic Method

Facility Name: Fourth Quarter Biosolids

Date / Time Sample Collected: 10/14/13 @715-1310 Collected by: TJ

Date / Time Sample Analyzed: 10/14/13 @715-1310 Analyzed by: MH

pH value sample: 5.23 Temp: _____

pH value duplicate: _____ Abs. Diff. (sample duplicate): 5.23

pH meter # H-160

pH meters used are calibrated each morning - record of calibration on file in the PCW lab.

Received
11/19/13

October 28, 2013
Control No. 171893
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City Corporation
Post Office Box 3186
Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 171893-1

Sample Identification: L246-047639 1013116 PCW Bio-Solids 10/14/2013 1310

<u>Analyte</u>	<u>Result</u>	<u>RL</u>	<u>Units</u>	<u>Qualifier</u>
Sodium Absorption Ratio EPA 3051A, 6010C	1.8			
Prep: 17-Oct-2013 1002 by 271	Analyzed: 17-Oct-2013 1848 by 305		Batch: S35608	



**E n v i r o n m e n t a l
E n t e r p r i s e G r o u p , I n c .**

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January 16, 2014
Control No. 174448
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City Corporation
Post Office Box 3186
Russellville, AR 72811-3186

ANALYTICAL RESULTS

AIC No. 174448-1

Sample Identification: L246-047991 0114076 PCW Bio-Solids 10/14/2013 1310

<u>Analyte</u>	<u>Result</u>	<u>RL</u>	<u>Units</u>	<u>Qualifier</u>
Calcium EPA 3051A, 6010C	15000 Prep: 16-Jan-2014 0858 by 271 Analyzed: 16-Jan-2014 1048 by 305	500	mg/Kg Batch: S36107	
Magnesium EPA 3051A, 6010C	2000 Prep: 16-Jan-2014 0858 by 271 Analyzed: 16-Jan-2014 1041 by 305	3	mg/Kg Batch: S36107	
Sodium EPA 3051A, 6010C	930 Prep: 16-Jan-2014 0858 by 271 Analyzed: 16-Jan-2014 1041 by 305	100	mg/Kg Batch: S36107	