

City of Cedar Rapids WWTP  
7525 Bertram Road SE  
Cedar Rapids, IA 52403

Project: Beneficial Reuse  
Project Number: Cedar Rapids Lime Sludge  
Project Manager: Accounts Payable

Reported  
10/22/14 16:33

**East Well Field**  
**1J40609-04 (Sludge)**

Date Sampled: 9/23/2014 12:00:00AM

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**Keystone Laboratories, Inc. - Newton**

**Determination of Conventional Chemistry Parameters**

% Solids	52.3	0.1	%	1	1XJ0348	10/09/14	10/09/14 11:01	SM 2540 G	I-05
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**Determination of Total Metals**

Silver, total	ND	0.3	mg/kg dry	1	1XJ0578	10/15/14	10/16/14 23:27	EPA 6010B	
Arsenic, total	3.55	0.34	"	10	"	"	10/20/14 18:50	EPA 6020A	
Barium, total	257	0.34	"	1	"	"	10/16/14 23:27	EPA 6010B	
Beryllium, total	ND	0.3	"	10	"	"	10/20/14 18:50	EPA 6020A	
Boron, total	8.5	3.4	"	1	"	"	10/16/14 23:27	EPA 6010B	
Cadmium, total	ND	0.3	"	"	"	"	"	"	
Chromium, total	2.5	1.0	"	"	"	"	"	"	
Copper, total	3.3	1.0	"	"	"	"	"	"	
Mercury, total	ND	0.12	"	"	1XJ0383	10/10/14	10/10/14 14:31	EPA 7471A	
Manganese, total	1100	0.3	"	"	1XJ0578	10/15/14	10/16/14 23:27	EPA 6010B	
Molybdenum, total	ND	0.3	"	"	"	"	"	"	
Nickel, total	2.3	1.7	"	"	"	"	"	"	
Lead, total	ND	1.7	"	"	"	"	"	"	
Antimony, total	ND	0.34	"	10	"	"	10/20/14 18:50	EPA 6020A	
Selenium, total	ND	1.0	"	1	"	"	10/16/14 23:27	EPA 6010B	
Thallium, total	ND	0.3	"	10	"	"	10/20/14 18:50	EPA 6020A	
Vanadium, total	4.55	1.70	"	1	"	"	10/16/14 23:27	EPA 6010B	
Zinc, total	24.5	1.0	"	"	"	"	"	"	

**Determination of TCLP Metals**

Silver (TCLP)	ND	0.010	mg/L	1	1XJ0745	10/21/14	10/21/14 20:13	EPA 6010B	
Barium (TCLP)	1.23	0.500	"	"	"	"	"	"	
Cadmium (TCLP)	ND	0.005	"	"	"	"	"	"	
Chromium (TCLP)	ND	0.030	"	"	"	"	"	"	
Mercury (TCLP)	ND	0.00050	"	"	1XJ0734	10/20/14	10/21/14 15:05	EPA 7470A	
Lead (TCLP)	0.010	0.010	"	"	1XJ0745	10/21/14	10/21/14 20:13	EPA 6010B	

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**TCLP Extraction**

TCLP pH, Final	6.3	0.1	pH	1	1XJ0698	10/20/14	10/20/14 07:36	EPA 1311	
TCLP pH, Initial	2.9	0.1	"	"	"	"	"	"	

**Determination of SPLP Metals**

Arsenic (SPLP)	ND	0.0040	mg/L	4	1XJ0661	10/17/14	10/20/14 17:06	EPA 6020A	
Barium (SPLP)	0.102	0.0040	"	"	"	"	"	"	
Beryllium (SPLP)	ND	0.0040	"	"	"	"	"	"	
Cadmium (SPLP)	ND	0.0020	"	"	"	"	"	"	
Chromium (SPLP)	ND	0.0080	"	"	"	"	"	"	
Copper (SPLP)	ND	0.0040	"	"	"	"	"	"	
Mercury (SPLP)	ND	0.00050	"	1	1XJ0733	10/20/14	10/21/14 15:05	EPA 7470A	
Lead (SPLP)	ND	0.0040	"	4	1XJ0661	10/17/14	10/20/14 17:06	EPA 6020A	
Antimony (SPLP)	ND	0.0040	"	"	"	"	"	"	
Selenium (SPLP)	ND	0.0040	"	"	"	"	"	"	
Thallium (SPLP)	ND	0.0040	"	"	"	"	"	"	

**SPLP Extraction**

SPLP pH, Initial	5.0		pH	1	1XJ0610	10/16/14	10/16/14 08:56	EPA 1312	
SPLP pH, Final	9.9		"	"	"	"	"	"	

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**East Well Field**  
**1J40609-04RE1 (Sludge)**

**Date Sampled: 9/23/2014 12:00:00AM**

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**Determination of TCLP Metals**

Arsenic (TCLP)	ND	0.500	mg/L	5	1XJ0745	10/21/14	10/22/14 15:18	EPA 6010B	R-01
Selenium (TCLP)	ND	0.250	"	"	"	"	"	"	R-01