

**TABLE 1
WASTE MANAGEMENT 2T-HZ
SOIL ANALYTICAL RESULTS SUMMARY TABLE**

Sample ID	Date Sampled	Depth (inches bgs)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Total Xylenes (mg/kg)	TPH ⁽²⁾ (mg/kg)	Specific Conductance (mmhos/cm)	SAR	pH
COGCC standards for soil (mg/kg) ⁽¹⁾			0.17	85	100	175	500	<4	<12	6-9
SS01 @ 6"	11/25/2014	6	<0.0020	<0.0050	<0.0050	<0.0050	<50	0.129	1.08	7.29
SS02 @ 6"	11/25/2014	6	0.023	<0.0050	<0.0050	<0.0050	<50	0.624	2.40	7.05
SS03 @ 6"	11/25/2014	6	0.079	0.041	<0.0050	<0.0050	<50	0.823	6.39	7.03

Notes:

1. Standards for soil are taken from 2 CCR 404-1, Table 910-1, effective February 1, 2014.
 2. TPH = Total volatile and extractable petroleum hydrocarbons. Value calculated by adding GRO and DRO concentrations.
- COGCC = Colorado Oil and Gas Conservation Commission
 (<) = Analytical result is less than the indicated laboratory reporting limit.
 GRO = Gasoline range organics.
 DRO = Diesel range organics.
 mg/kg = Milligrams per kilogram.
 mmhos/cm = Millimhos per centimeter.
 bgs = Below ground surface.
BOLD= Analytical result is in exceedance of COGCC Table 910-1 soil standards.

ATTACHMENT A

Summit Scientific

741 Corporate Circle – Suite I ♦ Golden, Colorado 80401

303.277.9310 - laboratory ♦ 303.277.9531 - fax

November 26, 2014

Troy Swain
PDC Energy
1775 Sherman St. STE. 3000
Denver, CO 80203
RE: Waste Management 2T-HZ

Enclosed are the results of analyses for samples received by Summit Scientific on 11/25/14 16:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Paul Shrewsbury
President



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
SS01@6"	1411184-01	Soil	11/25/14 13:15	11/25/14 16:00
SS02@6"	1411184-02	Soil	11/25/14 13:25	11/25/14 16:00
SS03@6"	1411184-03	Soil	11/25/14 13:35	11/25/14 16:00

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

Summit Scientific 1411184

S₂

741 Corporate Circle Suite I • Golden, Colorado 80401
303-277-9310 • 303-374-5933 Fax

Page 1 of 1

Client: PDC Energy
Address: _____ Project Manager: Troy Swain
City/State/Zip: _____ E-Mail: Troy.Swain@PDC.COM
Phone: _____ Fax: _____ Project Name: Waste Management 2T-HZ
Sampler Name: Don Baggus Project Number: _____

Sample Description	Date Sampled	Time Sampled	Number of Containers	Preservative				Matrix			Analyze For:						Special Instructions				
				HCl	HNO ₃	None	Other (Specify)	Groundwater	Soil	Air - Canister Serial #	Other (Specify)	BTEX	TPH - DRO/GSO	SAR	EC	PH		SAR			
SS01@6"	11/25	13:15	2			X			X				X	X	X	X	X				
SS02@6"	11/25	13:25	2			X			X				X	X	X	X	X				
SS03@6"	11/25	13:35	7			X			X				X	X	X	X	X				
Relinquished by: <u>Don Baggus</u> Date/Time: <u>11/25/2014 1600</u>				Received by: <u>[Signature]</u> Date/Time: <u>11/25/14 1700</u>				Turn Around Time (Check) Same Day <input checked="" type="checkbox"/> 72 Hours <input type="checkbox"/> 24 Hours <input type="checkbox"/> Standard <input type="checkbox"/> 48 Hours <input type="checkbox"/>													Notes:
Relinquished by: _____ Date/Time: _____				Received by: _____ Date/Time: _____				Sample Integrity: Temperature Upon Receipt: <u>7°C</u> Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No													
Relinquished by: _____ Date/Time: _____				Received in Lab by: _____ Date/Time: _____																	

www.s2scientific.com



PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

SS01@6"
1411184-01 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/25/14 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1411237	11/25/14	11/25/14	8015M	

Date Sampled: 11/25/14 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		108 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/25/14 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	ND	0.0020	mg/kg	1	1411245	11/25/14	11/25/14	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/25/14 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		104 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		92.4 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		91.4 %	21-167		"	"	"	"	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: 11/25/14 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

SS01@6"
1411184-01 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1180	10.2	mg/kg dry	1	1411244	11/25/14	11/25/14	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	184	5.10	"	"	"	"	"	"	
Sodium	163	5.10	"	"	"	"	"	"	

Date Sampled: 11/25/14 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	1.08		units	"	1411248	11/26/14	11/26/14	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/25/14 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.129	0.00100	mmhos/cm	1	1411247	11/26/14	11/26/14	EPA 120.1	

Date Sampled: 11/25/14 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.29	1.00	pH Units	"	1411246	"	"	EPA 9040	

Date Sampled: 11/25/14 13:15

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	85.2		%	"	1411249	11/26/14	11/26/14	% calculation	

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

SS02@6"
1411184-02 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/25/14 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1411237	11/25/14	11/25/14	8015M	

Date Sampled: 11/25/14 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		110 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/25/14 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.023	0.0020	mg/kg	1	1411245	11/25/14	11/25/14	EPA 8260B	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/25/14 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		107 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		97.1 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		90.8 %	21-167		"	"	"	"	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: 11/25/14 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

SS02@6"
1411184-02 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1820	12.0	mg/kg dry	1	1411244	11/25/14	11/25/14	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	321	6.01	"	"	"	"	"	"	
Sodium	508	6.01	"	"	"	"	"	"	

Date Sampled: 11/25/14 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	2.40		units	"	1411248	11/26/14	11/26/14	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/25/14 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.624	0.00100	mmhos/cm	1	1411247	11/26/14	11/26/14	EPA 120.1	

Date Sampled: 11/25/14 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.05	1.00	pH Units	"	1411246	"	"	EPA 9040	

Date Sampled: 11/25/14 13:25

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	74.0		%	"	1411249	11/26/14	11/26/14	% calculation	

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

SS03@6"
1411184-03 (Soil)

Summit Scientific

Extractable Petroleum Hydrocarbons by 8015

Date Sampled: 11/25/14 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
C10-C28 (DRO)	ND	50	mg/kg	1	1411237	11/25/14	11/25/14	8015M	

Date Sampled: 11/25/14 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: <i>o</i> -Terphenyl		106 %	30-150		"	"	"	"	

Volatile Organic Compounds by EPA Method 8260B

Date Sampled: 11/25/14 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Benzene	0.079	0.0020	mg/kg	1	1411245	11/25/14	11/25/14	EPA 8260B	
Toluene	0.041	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Gasoline Range Hydrocarbons	ND	0.50	"	"	"	"	"	"	

Date Sampled: 11/25/14 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Surrogate: 1,2-Dichloroethane-d4		102 %	23-173		"	"	"	"	
Surrogate: Toluene-d8		101 %	20-170		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		95.2 %	21-167		"	"	"	"	

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Date Sampled: 11/25/14 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

SS03@6"
1411184-03 (Soil)

Summit Scientific

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Calcium	1860	13.1	mg/kg dry	1	1411244	11/25/14	11/25/14	EPA 6020/Mod. USDA60 6(2, 3A)	
Magnesium	369	6.53	"	"	"	"	"	"	
Sodium	1320	6.53	"	"	"	"	"	"	

Date Sampled: 11/25/14 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Sodium Adsorption Ratio	6.39		units	"	1411248	11/26/14	11/26/14	"	

Physical Parameters by APHA/ASTM/EPA Methods

Date Sampled: 11/25/14 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Specific Conductance (EC)	0.823	0.00100	mmhos/cm	1	1411247	11/26/14	11/26/14	EPA 120.1	

Date Sampled: 11/25/14 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
pH	7.03	1.00	pH Units	"	1411246	"	"	EPA 9040	

Date Sampled: 11/25/14 13:35

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
% Solids	76.5		%	"	1411249	11/26/14	11/26/14	% calculation	

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

Extractable Petroleum Hydrocarbons by 8015 - Quality Control
Summit Scientific

Analyte	Result	Reporting		Spike Level	Source		%REC		RPD		Notes
		Limit	Units		Result	%REC	Limits	RPD	Limit		

Batch 1411237 - EPA 3550A

Blank (1411237-BLK1)

Prepared & Analyzed: 11/25/14

C10-C28 (DRO)	ND	50	mg/kg								
<i>Surrogate: o-Terphenyl</i>	12.1		"	12.2		99.0	30-150				

LCS (1411237-BS1)

Prepared & Analyzed: 11/25/14

C10-C28 (DRO)	477	50	mg/kg	501		95.2	73-134				
<i>Surrogate: o-Terphenyl</i>	12.3		"	12.2		101	30-150				

Matrix Spike (1411237-MS1)

Source: 1411174-03

Prepared & Analyzed: 11/25/14

C10-C28 (DRO)	502	50	mg/kg	494	23.9	96.7	50-148				
<i>Surrogate: o-Terphenyl</i>	12.4		"	12.0		103	30-150				

Matrix Spike Dup (1411237-MSD1)

Source: 1411174-03

Prepared & Analyzed: 11/25/14

C10-C28 (DRO)	499	50	mg/kg	481	23.9	98.8	50-148	0.598		13	
<i>Surrogate: o-Terphenyl</i>	12.2		"	11.7		104	30-150				

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1411245 - EPA 5030 Soil MS

Blank (1411245-BLK1)

Prepared & Analyzed: 11/25/14

Benzene	ND	0.0020	mg/kg							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Gasoline Range Hydrocarbons	ND	0.50	"							
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0378</i>		<i>"</i>	<i>0.0396</i>		<i>95.5</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0389</i>		<i>"</i>	<i>0.0400</i>		<i>97.4</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0375</i>		<i>"</i>	<i>0.0400</i>		<i>93.8</i>	<i>21-167</i>			

LCS (1411245-BS1)

Prepared & Analyzed: 11/25/14

Benzene	0.130	0.0020	mg/kg	0.100		130	58-130			
Toluene	0.109	0.0050	"	0.100		109	61-134			
Ethylbenzene	0.107	0.0050	"	0.0992		108	74-139			
m,p-Xylene	0.216	0.010	"	0.200		108	73-137			
o-Xylene	0.104	0.0050	"	0.0984		105	73-141			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0548</i>		<i>"</i>	<i>0.0396</i>		<i>138</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0405</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0381</i>		<i>"</i>	<i>0.0400</i>		<i>95.2</i>	<i>21-167</i>			

Matrix Spike (1411245-MS1)

Source: 1411184-01

Prepared & Analyzed: 11/25/14

Benzene	0.110	0.0020	mg/kg	0.100	ND	110	30-131			
Toluene	0.138	0.0050	"	0.100	ND	138	30-134			S-02
Ethylbenzene	0.104	0.0050	"	0.0992	ND	105	22-153			
m,p-Xylene	0.221	0.010	"	0.200	ND	111	10-159			
o-Xylene	0.103	0.0050	"	0.0984	ND	105	31-151			
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0499</i>		<i>"</i>	<i>0.0396</i>		<i>126</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0404</i>		<i>"</i>	<i>0.0400</i>		<i>101</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0349</i>		<i>"</i>	<i>0.0400</i>		<i>87.3</i>	<i>21-167</i>			

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PDC Energy
 1775 Sherman St. STE. 3000
 Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
 Project Manager: Troy Swain

Reported:
 11/26/14 06:48

Volatile Organic Compounds by EPA Method 8260B - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC			RPD	Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1411245 - EPA 5030 Soil MS

Matrix Spike Dup (1411245-MSD1)	Source: 1411184-01			Prepared & Analyzed: 11/25/14						
Benzene	0.0964	0.0020	mg/kg	0.100	ND	96.4	30-131	13.0	34	
Toluene	0.0993	0.0050	"	0.100	ND	99.3	30-134	32.7	30	S-02
Ethylbenzene	0.0959	0.0050	"	0.0992	ND	96.7	22-153	8.45	24	
m,p-Xylene	0.192	0.010	"	0.200	ND	96.1	10-159	14.0	68	
o-Xylene	0.0795	0.0050	"	0.0984	ND	80.8	31-151	25.7	38	
<i>Surrogate: 1,2-Dichloroethane-d4</i>	<i>0.0434</i>		<i>"</i>	<i>0.0396</i>		<i>110</i>	<i>23-173</i>			
<i>Surrogate: Toluene-d8</i>	<i>0.0392</i>		<i>"</i>	<i>0.0400</i>		<i>97.9</i>	<i>20-170</i>			
<i>Surrogate: 4-Bromofluorobenzene</i>	<i>0.0323</i>		<i>"</i>	<i>0.0400</i>		<i>80.7</i>	<i>21-167</i>			

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

Soluble Nutrients by EPA 6020/Mod. USDA60 6(2, 3A) - Dry Weight Basis - Quality Control
Summit Scientific

Analyte	Reporting		Spike Level	Source Result	%REC		RPD		Notes
	Result	Limit			Units	%REC	Limits	RPD	

Batch 1411244 - General Preparation

Blank (1411244-BLK1)

Prepared & Analyzed: 11/25/14

Calcium	ND	10.0	mg/kg wet						
Magnesium	ND	5.00	"						
Sodium	ND	5.00	"						

LCS (1411244-BS1)

Prepared & Analyzed: 11/25/14

Calcium	574	10.0	mg/kg wet	500	115	80-120			
Magnesium	578	5.00	"	500	116	80-120			
Sodium	540	5.00	"	500	108	80-120			

Duplicate (1411244-DUP1)

Source: 1411184-01

Prepared & Analyzed: 11/25/14

Calcium	1930	10.3	mg/kg dry	1180			48.7	200	
Magnesium	600	5.16	"	184			106	200	
Sodium	635	5.16	"	163			118	200	

Matrix Spike (1411244-MS1)

Source: 1411184-01

Prepared & Analyzed: 11/25/14

Calcium	1980	10.3	mg/kg dry	515	1180	155	75-125		QM-07
Magnesium	758	5.15	"	515	184	111	75-125		
Sodium	807	5.15	"	515	163	125	75-125		

Matrix Spike Dup (1411244-MSD1)

Source: 1411184-01

Prepared & Analyzed: 11/25/14

Calcium	1200	10.5	mg/kg dry	527	1180	4.86	75-125	48.8	25	QM-07
Magnesium	520	5.27	"	527	184	63.7	75-125	37.2	25	QM-07
Sodium	402	5.27	"	527	163	45.5	75-125	66.9	25	QM-07

Summit Scientific

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



PDC Energy
 1775 Sherman St. STE. 3000
 Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
 Project Manager: Troy Swain

Reported:
 11/26/14 06:48

Physical Parameters by APHA/ASTM/EPA Methods - Quality Control
Summit Scientific

Analyte	Reporting			Spike	Source	%REC		RPD		Notes
	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	

Batch 1411246 - General Preparation

LCS (1411246-BS1)					Prepared & Analyzed: 11/26/14					
pH	6.05	1.00	pH Units	6.00	101	95-105				

Duplicate (1411246-DUP1)					Source: 1411184-01 Prepared & Analyzed: 11/26/14					
pH	7.16	1.00	pH Units	7.29	1.80	13.7				

Batch 1411247 - General Preparation

Duplicate (1411247-DUP1)					Source: 1411184-01 Prepared & Analyzed: 11/26/14					
Specific Conductance (EC)	0.136	0.00100	mmhos/cm	0.129	4.61	20				

Summit Scientific

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PDC Energy
1775 Sherman St. STE. 3000
Denver CO, 80203

Project: Waste Management 2T-HZ

Project Number: [none]
Project Manager: Troy Swain

Reported:
11/26/14 06:48

Notes and Definitions

- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample extract.
- QM-07 The spike recovery was outside acceptance limits for the MS and/or MSD. The batch was accepted based on acceptable LCS/LCSD recovery.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference