

Table 910-1		PIONEER NATURAL RESOURCES		sampling date: 2/10/16	
CONCENTRATION LEVELS					
Contaminant of Concern	Concentrations	Units	HILL 33-22 ABOVE POND	HILL 33-22 NATIVE (Background)	HILL 33-22 BELOW CULVERT
Organic Compounds in Soil					
TPH (Gasoline Range Organics)		mg/kg	NT	NT	NT
TPH (Diesel Range Organics)		mg/kg	NT	NT	NT
Benzene	0.17	mg/kg	NT	NT	NT
Toluene	85	mg/kg	NT	NT	NT
Ethylbenzene	100	mg/kg	NT	NT	NT
Xylenes (total)	175	mg/kg	NT	NT	NT
Acenaphthene	1000	mg/kg	NT	NT	NT
Anthracene	1000	mg/kg	NT	NT	NT
Benzo(A)anthracene	0.22	mg/kg	NT	NT	NT
Benzo(B)fluoranthene	0.22	mg/kg	NT	NT	NT
Benzo(K)fluoranthene	2.2	mg/kg	NT	NT	NT
Benzo(A)pyrene	0.022	mg/kg	NT	NT	NT
Chrysene	22	mg/kg	NT	NT	NT
Dibenzo(A,H)anthracene	0.022	mg/kg	NT	NT	NT
Fluoranthene	1000	mg/kg	NT	NT	NT
Fluorene	1000	mg/kg	NT	NT	NT
Indeno(1,2,3,C,D)pyrene	0.22	mg/kg	NT	NT	NT
Napthalene	23	mg/kg	NT	NT	NT
Pyrene	1000	mg/kg	NT	NT	NT
Organic Compounds in Ground Water					
Benzene	5	µg/l	NT	NT	NT
Toluene	560 to 1000	µg/l	NT	NT	NT
Ethylbenzene	700	µg/l	NT	NT	NT
Xylenes (total)	1400 to 10,000	µg/l	NT	NT	NT
Inorganics in Soils					
Electrical Conductivity (EC)	<4000 or 2x background	umhos/cm	370	25	200
Sodium Adsorption Ratio (SAR)	<12	NA	13	ND	4.5
pH	6.0-9.0	NA	8.06	6.30	7.69
Metals in Soils					
Arsenic	0.39	mg/kg	2.2	1.6	2.1
Barium Total	15,000	mg/kg	190	160	190
Boron	NA	mg/kg	ND	ND	ND
Boron (Hot Water Soluble)	2	mg/L	NT	NT	NT
Cadmium	70	mg/kg	ND	ND	ND
Calcium	NA	mg/kg	4400	3200	4600
Magnesium	NA	mg/kg	3300	2900	2700
Molybdenum	NA	mg/kg	ND	ND	ND
Chromium	NA	mg/kg	19	15	15
Chromium (III)	120,000	mg/kg	NT	NT	NT
Chromium (VI)	23	mg/kg	NT	NT	NT
Copper	3,100	mg/kg	20	16	17
Lead	400	mg/kg	12	9.7	13
Mercury	23	mg/kg	ND	ND	ND
Nickel	1,600	mg/kg	14	12	13
Selenium	390	mg/kg	0.60	0.51	0.33
Silver	390	mg/kg	ND	ND	ND
Sodium	NA	mg/kg	740	ND	ND
Zinc	23,000	mg/kg	57	46	49
Liquid Hydrocarbons in Soils and Ground Water					
Liquid hydrocarbons including condensate and oil	Below detection level	NA	NA	NA	NA

NT - Not tested

NA - Not applicable

ND - below the method detection limit

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Tel: (303)736-0100

TestAmerica Job ID: 280-79765-1

Client Project/Site: Soil Testing Suite

Sampling Event: Soil Suites

Revision: 1

For:

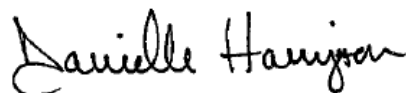
Pioneer Natural Resources USA, Inc.

5205 N. OConnor

Suite 200

Irving, Texas 75039

Attn: LaCretia White



Authorized for release by:

3/3/2016 4:33:51 PM

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LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
F3	Duplicate RPD exceeds the control limit

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Job ID: 280-79765-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Pioneer Natural Resources USA, Inc.

Project: Soil Suite

Report Number: 280-79765-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 01/22/2016; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 0.8C.

Total Metals SW846 6010B, 6020 and 7471A

The Method 20B sample duplicate was performed on sample HILL 33-22 ABOVE PONT and was within control limits.

The Method 6010B MS/MSD performed on sample from another client and/or lot was outside control limits for Boron and Sodium.

The Method 6020 MS/MSD performed on sample HILL 33-22 NATIVE was outside control limits for Copper.

The Method 7471A MS/MSD performed on sample HILL 33-22 ABOVE POND was within control limits.

Analyst notated that all of the samples could not be thoroughly homogenized before sub sampling as they were clay like.

No other anomalies were observed.

General Chemistry

The pH and specific conductance sample duplicates were performed on samples HILL 33-22 ABOVE POND and were within control limits.

All other sample duplicates were performed on samples from another client and/or lot and were within control limits.

No other anomalies were observed.

General Comments

The pH and conductivity analysis with the saturated paste extraction were performed at our TestAmerica Nashville Laboratory:

TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
615.726.0177

Case Narrative

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Job ID: 280-79765-1 (Continued)

Laboratory: TestAmerica Denver (Continued)

REVISION

Client requested to report the Hill samples separate from the Lorencito samples. This report contains the Hill samples only.

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Detection Summary

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Client Sample ID: HILL 33-22 ABOVE POND

Lab Sample ID: 280-79765-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Barium	190		1.2		mg/Kg	1		✱	6010B	Total/NA
Calcium	4400		61		mg/Kg	1		✱	6010B	Total/NA
Magnesium	3300		24		mg/Kg	1		✱	6010B	Total/NA
Sodium	740		610		mg/Kg	1		✱	6010B	Total/NA
Arsenic	2.2		0.099		mg/Kg	1		✱	6020	Total/NA
Chromium	19		0.20		mg/Kg	1		✱	6020	Total/NA
Copper	20		0.25		mg/Kg	1		✱	6020	Total/NA
Lead	12		0.099		mg/Kg	1		✱	6020	Total/NA
Nickel	14		0.15		mg/Kg	1		✱	6020	Total/NA
Selenium	0.60		0.20		mg/Kg	1		✱	6020	Total/NA
Zinc	57		0.99		mg/Kg	1		✱	6020	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Sodium Adsorption Ratio	13		1.2		No Unit	10			20B	Soluble
pH	8.06		0.100		SU	1			9040C	Soluble
Specific Conductance (25C)	370		10		umhos/cm	1			9050A	Soluble

Client Sample ID: HILL 33-22 NATIVE

Lab Sample ID: 280-79765-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Barium	160		1.2		mg/Kg	1		✱	6010B	Total/NA
Calcium	3200		59		mg/Kg	1		✱	6010B	Total/NA
Magnesium	2900		24		mg/Kg	1		✱	6010B	Total/NA
Arsenic	1.6		0.11		mg/Kg	1		✱	6020	Total/NA
Chromium	15		0.22		mg/Kg	1		✱	6020	Total/NA
Copper	16	F1	0.27		mg/Kg	1		✱	6020	Total/NA
Lead	9.7		0.11		mg/Kg	1		✱	6020	Total/NA
Nickel	12		0.16		mg/Kg	1		✱	6020	Total/NA
Selenium	0.51		0.22		mg/Kg	1		✱	6020	Total/NA
Zinc	46		1.1		mg/Kg	1		✱	6020	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
pH	6.30		0.100		SU	1			9040C	Soluble
Specific Conductance (25C)	25		10		umhos/cm	1			9050A	Soluble

Client Sample ID: HILL 33-22 BELOW CULVERT

Lab Sample ID: 280-79765-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Barium	190		1.2		mg/Kg	1		✱	6010B	Total/NA
Calcium	4600		59		mg/Kg	1		✱	6010B	Total/NA
Magnesium	2700		24		mg/Kg	1		✱	6010B	Total/NA
Arsenic	2.1		0.092		mg/Kg	1		✱	6020	Total/NA
Chromium	15		0.18		mg/Kg	1		✱	6020	Total/NA
Copper	17		0.23		mg/Kg	1		✱	6020	Total/NA
Lead	13		0.092		mg/Kg	1		✱	6020	Total/NA
Nickel	13		0.14		mg/Kg	1		✱	6020	Total/NA
Selenium	0.33		0.18		mg/Kg	1		✱	6020	Total/NA
Zinc	49		0.92		mg/Kg	1		✱	6020	Total/NA
Analyte	Result	Qualifier	RL	RL	Unit	Dil	Fac	D	Method	Prep Type
Sodium Adsorption Ratio	4.5		1.2		No Unit	10			20B	Soluble
pH	7.69		0.100		SU	1			9040C	Soluble
Specific Conductance (25C)	200		10		umhos/cm	1			9050A	Soluble

This Detection Summary does not include radiochemical test results.

TestAmerica Denver

Method Summary

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Method	Method Description	Protocol	Laboratory
20B	Sodium Adsorption Ratio	USDA	TAL DEN
6010B	Total Metals	SW846	TAL DEN
6020	Total Metals by ICP-MS	SW846	TAL DEN
7471A	Mercury (CVAA)	SW846	TAL DEN
9040C	pH	SW846	TAL NSH
9050A	Specific Conductance	SW846	TAL NSH
Moisture	Percent Moisture	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

USDA = "USDA Agriculture Handbook 60, section 20B".

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Sample Summary

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-79765-1	HILL 33-22 ABOVE POND	Solid	02/10/16 10:10	02/11/16 09:45
280-79765-2	HILL 33-22 NATIVE	Solid	02/10/16 10:15	02/11/16 09:45
280-79765-3	HILL 33-22 BELOW CULVERT	Solid	02/10/16 10:30	02/11/16 09:45

Client Sample Results

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Client Sample ID: HILL 33-22 ABOVE POND

Date Collected: 02/10/16 10:10

Date Received: 02/11/16 09:45

Lab Sample ID: 280-79765-1

Matrix: Solid

Percent Solids: 72.4

Method: 20B - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	13		1.2		No Unit		02/16/16 16:48	02/29/16 09:57	10

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	190		1.2		mg/Kg	☼	02/18/16 08:20	02/27/16 03:07	1
Boron	ND		12		mg/Kg	☼	02/18/16 08:20	02/27/16 03:07	1
Cadmium	ND		0.61		mg/Kg	☼	02/18/16 08:20	02/27/16 03:07	1
Calcium	4400		61		mg/Kg	☼	02/18/16 08:20	02/27/16 03:07	1
Magnesium	3300		24		mg/Kg	☼	02/18/16 08:20	02/29/16 14:19	1
Molybdenum	ND		2.4		mg/Kg	☼	02/18/16 08:20	02/27/16 03:07	1
Silver	ND		1.2		mg/Kg	☼	02/18/16 08:20	02/27/16 03:07	1
Sodium	740		610		mg/Kg	☼	02/18/16 08:20	02/27/16 03:07	1

Method: 6020 - Total Metals by ICP-MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.2		0.099		mg/Kg	☼	02/18/16 08:20	02/19/16 05:46	1
Chromium	19		0.20		mg/Kg	☼	02/18/16 08:20	02/19/16 05:46	1
Copper	20		0.25		mg/Kg	☼	02/18/16 08:20	02/19/16 05:46	1
Lead	12		0.099		mg/Kg	☼	02/18/16 08:20	02/19/16 05:46	1
Nickel	14		0.15		mg/Kg	☼	02/18/16 08:20	02/19/16 05:46	1
Selenium	0.60		0.20		mg/Kg	☼	02/18/16 08:20	02/19/16 05:46	1
Zinc	57		0.99		mg/Kg	☼	02/18/16 08:20	02/19/16 05:46	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.023		mg/Kg	☼	02/25/16 10:40	02/25/16 15:11	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	27.6		0.1		%			02/16/16 08:46	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.06		0.100		SU		02/23/16 11:55	02/24/16 10:18	1
Specific Conductance (25C)	370		10		umhos/cm		02/23/16 11:55	02/24/16 17:30	1

TestAmerica Denver

Client Sample Results

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Client Sample ID: HILL 33-22 NATIVE

Date Collected: 02/10/16 10:15

Date Received: 02/11/16 09:45

Lab Sample ID: 280-79765-2

Matrix: Solid

Percent Solids: 78.0

Method: 20B - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	ND		1.2		No Unit		02/16/16 16:48	02/29/16 10:05	10

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	160		1.2		mg/Kg	☼	02/18/16 08:20	02/27/16 03:09	1
Boron	ND		12		mg/Kg	☼	02/18/16 08:20	02/27/16 03:09	1
Cadmium	ND		0.59		mg/Kg	☼	02/18/16 08:20	02/27/16 03:09	1
Calcium	3200		59		mg/Kg	☼	02/18/16 08:20	02/27/16 03:09	1
Magnesium	2900		24		mg/Kg	☼	02/18/16 08:20	02/29/16 14:22	1
Molybdenum	ND		2.4		mg/Kg	☼	02/18/16 08:20	02/27/16 03:09	1
Silver	ND		1.2		mg/Kg	☼	02/18/16 08:20	02/27/16 03:09	1
Sodium	ND		590		mg/Kg	☼	02/18/16 08:20	02/27/16 03:09	1

Method: 6020 - Total Metals by ICP-MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.6		0.11		mg/Kg	☼	02/18/16 08:20	02/19/16 05:50	1
Chromium	15		0.22		mg/Kg	☼	02/18/16 08:20	02/19/16 05:50	1
Copper	16	F1	0.27		mg/Kg	☼	02/18/16 08:20	02/19/16 05:50	1
Lead	9.7		0.11		mg/Kg	☼	02/18/16 08:20	02/19/16 05:50	1
Nickel	12		0.16		mg/Kg	☼	02/18/16 08:20	02/19/16 05:50	1
Selenium	0.51		0.22		mg/Kg	☼	02/18/16 08:20	02/19/16 05:50	1
Zinc	46		1.1		mg/Kg	☼	02/18/16 08:20	02/19/16 05:50	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.026		mg/Kg	☼	02/25/16 10:40	02/25/16 15:17	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	22.0		0.1		%			02/16/16 08:46	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	6.30		0.100		SU		02/23/16 11:55	02/24/16 10:18	1
Specific Conductance (25C)	25		10		umhos/cm		02/23/16 11:55	02/24/16 17:30	1

TestAmerica Denver

Client Sample Results

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Client Sample ID: HILL 33-22 BELOW CULVERT

Lab Sample ID: 280-79765-3

Date Collected: 02/10/16 10:30

Matrix: Solid

Date Received: 02/11/16 09:45

Percent Solids: 78.8

Method: 20B - Sodium Adsorption Ratio - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium Adsorption Ratio	4.5		1.2		No Unit	—	02/16/16 16:48	02/29/16 10:07	10

Method: 6010B - Total Metals

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	190		1.2		mg/Kg	☼	02/18/16 08:20	02/27/16 03:12	1
Boron	ND		12		mg/Kg	☼	02/18/16 08:20	02/27/16 03:12	1
Cadmium	ND		0.59		mg/Kg	☼	02/18/16 08:20	02/27/16 03:12	1
Calcium	4600		59		mg/Kg	☼	02/18/16 08:20	02/27/16 03:12	1
Magnesium	2700		24		mg/Kg	☼	02/18/16 08:20	02/29/16 14:24	1
Molybdenum	ND		2.4		mg/Kg	☼	02/18/16 08:20	02/27/16 03:12	1
Silver	ND		1.2		mg/Kg	☼	02/18/16 08:20	02/27/16 03:12	1
Sodium	ND		590		mg/Kg	☼	02/18/16 08:20	02/27/16 03:12	1

Method: 6020 - Total Metals by ICP-MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	2.1		0.092		mg/Kg	☼	02/18/16 08:20	02/19/16 06:16	1
Chromium	15		0.18		mg/Kg	☼	02/18/16 08:20	02/19/16 06:16	1
Copper	17		0.23		mg/Kg	☼	02/18/16 08:20	02/19/16 06:16	1
Lead	13		0.092		mg/Kg	☼	02/18/16 08:20	02/19/16 06:16	1
Nickel	13		0.14		mg/Kg	☼	02/18/16 08:20	02/19/16 06:16	1
Selenium	0.33		0.18		mg/Kg	☼	02/18/16 08:20	02/19/16 06:16	1
Zinc	49		0.92		mg/Kg	☼	02/18/16 08:20	02/19/16 06:16	1

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.023		mg/Kg	☼	02/25/16 10:40	02/25/16 15:24	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	21.2		0.1		%	—		02/16/16 08:46	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	7.69		0.100		SU	—	02/23/16 11:55	02/24/16 10:18	1
Specific Conductance (25C)	200		10		umhos/cm	—	02/23/16 11:55	02/24/16 17:30	1

TestAmerica Denver

Surrogate Summary

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		12DCE (58-140)	TOL (80-126)	BFB (76-127)	DBFM (75-121)
280-79765-4	LORENCITO 3-18 SSB	94	107	85	104
280-79765-4 MS	LORENCITO 3-18 SSB	94	102	85	105
280-79765-4 MSD	LORENCITO 3-18 SSB	106	119	94	117
LCS 280-313660/2-A	Lab Control Sample	94	102	80	106
MB 280-313660/1-A	Method Blank	98	103	79	109

Surrogate Legend

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

BFB = 4-Bromofluorobenzene (Surr)

DBFM = Dibromofluoromethane (Surr)

Method: 8015B - Gasoline Range Organics - (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		TFT1 (77-123)			
280-79765-4	LORENCITO 3-18 SSB	97			
280-79765-4 MS	LORENCITO 3-18 SSB	99			
280-79765-4 MSD	LORENCITO 3-18 SSB	98			
LCS 280-314103/2-A	Lab Control Sample	104			
LCSD 280-314103/3-A	Lab Control Sample Dup	110			
MB 280-314103/1-A	Method Blank	103			

Surrogate Legend

TFT = a,a,a-Trifluorotoluene

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Solid

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		OTPH1 (49-115)			
280-79765-4	LORENCITO 3-18 SSB	76			
280-79845-A-3-F MS	Matrix Spike	106			
280-79845-A-3-G MSD	Matrix Spike Duplicate	122 X			
LCS 280-314560/2-A	Lab Control Sample	97			
MB 280-314560/1-A	Method Blank	98			

Surrogate Legend

OTPH = o-Terphenyl

Lab Chronicle

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Client Sample ID: HILL 33-22 ABOVE POND

Date Collected: 02/10/16 10:10

Date Received: 02/11/16 09:45

Lab Sample ID: 280-79765-1

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	20B			92.051 g	50 mL	313638	02/16/16 16:48	SEJ	TAL DEN
Soluble	Analysis	20B		10	92.051 g	50 mL	315390	02/29/16 09:57	SJS	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	318376	02/23/16 11:55	AAB	TAL NSH
Soluble	Analysis	9040C		1	1 g	1 mL	319846	02/24/16 10:18	HMV	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	318376	02/23/16 11:55	AAB	TAL NSH
Soluble	Analysis	9050A		1	1 g	1 mL	319833	02/24/16 17:30	YSJ	TAL NSH
Total/NA	Analysis	Moisture		1			313550	02/16/16 08:46	WTW	TAL DEN

Client Sample ID: HILL 33-22 ABOVE POND

Date Collected: 02/10/16 10:10

Date Received: 02/11/16 09:45

Lab Sample ID: 280-79765-1

Matrix: Solid

Percent Solids: 72.4

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.133 g	100 mL	313646	02/18/16 08:20	TEB	TAL DEN
Total/NA	Analysis	6010B		1	1.133 g	100 mL	315123	02/27/16 03:07	CMK	TAL DEN
Total/NA	Prep	3050B			1.133 g	100 mL	313646	02/18/16 08:20	TEB	TAL DEN
Total/NA	Analysis	6010B		1	1.133 g	100 mL	315352	02/29/16 14:19	CMK	TAL DEN
Total/NA	Prep	3050B			1.392 g	100 mL	313595	02/18/16 08:20	TEB	TAL DEN
Total/NA	Analysis	6020		1	1.392 g	100 mL	314052	02/19/16 05:46	LMT	TAL DEN
Total/NA	Prep	7471A			0.60 g	50 mL	314463	02/25/16 10:40	CDH	TAL DEN
Total/NA	Analysis	7471A		1	0.60 g	50 mL	315035	02/25/16 15:11	CDH	TAL DEN

Client Sample ID: HILL 33-22 NATIVE

Date Collected: 02/10/16 10:15

Date Received: 02/11/16 09:45

Lab Sample ID: 280-79765-2

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	20B			92.315 g	50 mL	313638	02/16/16 16:48	SEJ	TAL DEN
Soluble	Analysis	20B		10	92.315 g	50 mL	315390	02/29/16 10:05	SJS	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	318376	02/23/16 11:55	AAB	TAL NSH
Soluble	Analysis	9040C		1	1 g	1 mL	319846	02/24/16 10:18	HMV	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	318376	02/23/16 11:55	AAB	TAL NSH
Soluble	Analysis	9050A		1	1 g	1 mL	319833	02/24/16 17:30	YSJ	TAL NSH
Total/NA	Analysis	Moisture		1			313550	02/16/16 08:46	WTW	TAL DEN

Client Sample ID: HILL 33-22 NATIVE

Date Collected: 02/10/16 10:15

Date Received: 02/11/16 09:45

Lab Sample ID: 280-79765-2

Matrix: Solid

Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.090 g	100 mL	313646	02/18/16 08:20	TEB	TAL DEN
Total/NA	Analysis	6010B		1	1.090 g	100 mL	315123	02/27/16 03:09	CMK	TAL DEN
Total/NA	Prep	3050B			1.090 g	100 mL	313646	02/18/16 08:20	TEB	TAL DEN

TestAmerica Denver

Lab Chronicle

Client: Pioneer Natural Resources USA, Inc.
Project/Site: Soil Testing Suite

TestAmerica Job ID: 280-79765-1

Client Sample ID: HILL 33-22 NATIVE

Lab Sample ID: 280-79765-2

Date Collected: 02/10/16 10:15

Matrix: Solid

Date Received: 02/11/16 09:45

Percent Solids: 78.0

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B		1	1.090 g	100 mL	315352	02/29/16 14:22	CMK	TAL DEN
Total/NA	Prep	3050B			1.170 g	100 mL	313595	02/18/16 08:20	TEB	TAL DEN
Total/NA	Analysis	6020		1	1.170 g	100 mL	314052	02/19/16 05:50	LMT	TAL DEN
Total/NA	Prep	7471A			0.51 g	50 mL	314463	02/25/16 10:40	CDH	TAL DEN
Total/NA	Analysis	7471A		1	0.51 g	50 mL	315035	02/25/16 15:17	CDH	TAL DEN

Client Sample ID: HILL 33-22 BELOW CULVERT

Lab Sample ID: 280-79765-3

Date Collected: 02/10/16 10:30

Matrix: Solid

Date Received: 02/11/16 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Soluble	Prep	20B			92.382 g	50 mL	313638	02/16/16 16:48	SEJ	TAL DEN
Soluble	Analysis	20B		10	92.382 g	50 mL	315390	02/29/16 10:07	SJS	TAL DEN
Soluble	Prep	Sat Paste Ext			1 g	1 mL	318376	02/23/16 11:55	AAB	TAL NSH
Soluble	Analysis	9040C		1	1 g	1 mL	319846	02/24/16 10:18	HMV	TAL NSH
Soluble	Prep	Sat Paste Ext			1 g	1 mL	318376	02/23/16 11:55	AAB	TAL NSH
Soluble	Analysis	9050A		1	1 g	1 mL	319833	02/24/16 17:30	YSJ	TAL NSH
Total/NA	Analysis	Moisture		1			313550	02/16/16 08:46	WTW	TAL DEN

Client Sample ID: HILL 33-22 BELOW CULVERT

Lab Sample ID: 280-79765-3

Date Collected: 02/10/16 10:30

Matrix: Solid

Date Received: 02/11/16 09:45

Percent Solids: 78.8

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			1.070 g	100 mL	313646	02/18/16 08:20	TEB	TAL DEN
Total/NA	Analysis	6010B		1	1.070 g	100 mL	315123	02/27/16 03:12	CMK	TAL DEN
Total/NA	Prep	3050B			1.070 g	100 mL	313646	02/18/16 08:20	TEB	TAL DEN
Total/NA	Analysis	6010B		1	1.070 g	100 mL	315352	02/29/16 14:24	CMK	TAL DEN
Total/NA	Prep	3050B			1.380 g	100 mL	313595	02/18/16 08:20	TEB	TAL DEN
Total/NA	Analysis	6020		1	1.380 g	100 mL	314052	02/19/16 06:16	LMT	TAL DEN
Total/NA	Prep	7471A			0.56 g	50 mL	314463	02/25/16 10:40	CDH	TAL DEN
Total/NA	Analysis	7471A		1	0.56 g	50 mL	315035	02/25/16 15:24	CDH	TAL DEN

Laboratory References:

TAL DEN = TestAmerica Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

TestAmerica Denver

Chain of Custody



280-79765 Chain of Custody

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information Client Contact: Bill Ward Company: Norwest Corporation			Lab PM: Harrington, Danielle Phone: danielle.harrington@testamericalinc.com E-Mail: danielle.harrington@testamericalinc.com			DOC No: 280-34119-4609.1 Page: Page 1 of 1 Job #:		
Due Date Requested: TAT Requested (days): Routine			Analysis Requested			Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		
Address: 950 South Cherry Street Suite 800 City: Denver State, Zip: CO, 80246 Phone:			PO #:			Matrix (W=water, S=solid, O=oil, G=grab)		
Email: vward@norwestcorp.com			Project #: 28001998			Sample Date		
Site: Colorado			SSOW#:			Sample Time		
Sample Identification			Sample Date			Sample Time		
H:11 33-22 Above Pond			2/10			1010		
H:11 33-22 Native			2/10			1015		
H:11 33-22 Below Culvert			2/10			1030		
Lorencito 3-18 S18B			2/10			1337		
Lorencito 3-18 Native South			2/10			1345		
Lorencito 3-18 Native North			2/10			1352		
Temperature Blank								
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological			Date: 2/10/16 1800			Company: Norwest		
Deliverable Requested: I, II, III, IV, Other (specify)			Date/Time: 2/10/16 1800			Company: Norwest		
Empty Kit Relinquished by:			Date: 2/10/16 1800			Company: Norwest		
Relinquished by:			Date/Time: 2/10/16 1800			Company: Norwest		
Relinquished by:			Date/Time: 2/10/16 1800			Company: Norwest		
Relinquished by:			Date/Time: 2/10/16 1800			Company: Norwest		
Custody Seal No.: A Yes A No			Custody Seal No.: A Yes A No			Custody Seal No.: A Yes A No		