

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: 280-72827-1
Client Project/Site: New Monthly

For:
Pioneer Natural Resources USA, Inc.
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Attn: Katie Gillen



Authorized for release by:
8/21/2015 2:07:02 PM

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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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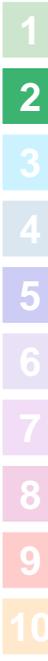


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Definitions/Glossary

Client: Pioneer Natural Resources USA, Inc.
Project/Site: New Monthly

TestAmerica Job ID: 280-72827-1

Qualifiers

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC is outside acceptance limits.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

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.
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TestAmerica Job ID: 280-72827-1

Job ID: 280-72827-1

Laboratory: TestAmerica Denver

Narrative

CASE NARRATIVE

Client: Pioneer Natural Resources USA, Inc.

Project: Pioneer Natural Resources

Report Number: 280-72827-1

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.

Sample Receipt

The sample was received on 08/08/2015; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 0.8C

Please note, there were no sample times listed on the container labels for samples FILBERT 079 ADISPT, GUNSLINGER 108 ADISPT, KING 152 ADISPT, BLACK RABBIT 090 ADISPT, POLLY 065 ADISPT, and LAZY LIZARD 060 ADISPT.

Metals

The Method 200.7 MS/MSD performed on sample LORENCITO 010 ADISPT and MONTOYA 245 ADISPT was within control limits.

The accuracy and precision of the Sodium MS/MSD performed on a sample MELBOURNE 217 ADISPT could not be reliably evaluated, as the concentrations present in the parent sample were 4 times greater than the matrix spike concentration. The acceptable LCS analysis data indicated that the analytical system was operating within control; therefore, corrective action is deemed unnecessary.

Initial Calibration Verification Low(ICVL) standards associated with the Method Blank in batch 280-290243 exhibited %D values out of range, biased high, for Sodium. This is an indicator that data may be biased high. As no detectable concentrations of Sodium are present in the associated Method Blank, corrective action is deemed unnecessary.

No other anomalies were observed.

General Chemistry, Various Methods

Due to analytes present above the linear calibration curve or matrix interferences, some samples were analyzed at a dilution or using lesser volume required for various analyses. The reporting limits have been adjusted relative to the dilution required.

The Total Sulfide MS/MSDs were performed on samples LORENCITO 075 ADISPT and were in control.

All other MS/MSDs were performed on samples from other jobs and were in control.

The pH, Specific Conductance, and Total Dissolved Solids Sample Duplicates were performed on sample KENNEDY 241 ADISPT, MONTOYA 004 ADISPT, and FILBERT 079 ADISPT and were in control.

All other Sample Duplicates were performed on samples from other jobs and were in control.

No other anomalies were observed.

Method Summary

Client: Pioneer Natural Resources USA, Inc.
Project/Site: New Monthly

TestAmerica Job ID: 280-72827-1

Method	Method Description	Protocol	Laboratory
200.7	ICP Total Metals by 200.7	EPA	TAL DEN
200.7 Rev 4.4	Metals (ICP)	EPA	TAL DEN
300.0	Anions by IC	EPA	TAL DEN
SM 2320B	Alkalinity	SM	TAL DEN
SM 2510B	Conductivity, Specific Conductance	SM	TAL DEN
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL DEN
SM 4500 H+ B	pH	SM	TAL DEN
SM 4500 S2 D	Sulfide, Total	SM	TAL DEN
SM4500 S2 H	Unionized Hydrogen Sulfide	SM	TAL DEN
Field Sampling	Field Sampling	EPA	TAL DEN

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater",

Laboratory References:

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



Sample Summary

Client: Pioneer Natural Resources USA, Inc.
Project/Site: New Monthly

TestAmerica Job ID: 280-72827-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-72827-1	LORENCITO 010 ADISPT	Water	08/05/15 09:51	08/07/15 09:45
280-72827-2	LORENCITO 075 ADISPT	Water	08/05/15 10:16	08/07/15 09:45
280-72827-3	LORENCITO 073 ADISPT	Water	08/05/15 10:53	08/07/15 09:45
280-72827-4	LORENCITO 071 ADISPT	Water	08/05/15 11:17	08/07/15 09:45
280-72827-5	LORENCITO 005 ADISPT	Water	08/05/15 11:34	08/07/15 09:45
280-72827-6	KENNEDY 241 ADISPT	Water	08/06/15 13:06	08/07/15 09:45
280-72827-7	MONTOYA 004 ADISPT	Water	08/06/15 13:44	08/07/15 09:45
280-72827-8	MONTOYA 007 ADISPT	Water	08/06/15 13:56	08/07/15 09:45
280-72827-9	MONTOYA 245 ADISPT	Water	08/06/15 14:10	08/07/15 09:45
280-72827-10	MELBOURNE 217 ADISPT	Water	08/06/15 14:41	08/07/15 09:45
280-72827-12	FILBERT 079 ADISPT	Water	08/06/15 11:50	08/07/15 09:45
280-72827-13	GUNSLINGER 108 ADISPT	Water	08/06/15 12:34	08/07/15 09:45
280-72827-14	KING 152 ADISPT	Water	08/06/15 13:08	08/07/15 09:45
280-72827-15	BLACK RABBIT 090 ADISPT	Water	08/06/15 13:40	08/07/15 09:45
280-72827-16	POLLY 065 ADISPT	Water	08/06/15 14:02	08/07/15 09:45
280-72827-17	LAZY LIZARD 060 ADISPT	Water	08/06/15 14:25	08/07/15 09:45

Client Sample Results

Client: Pioneer Natural Resources USA, Inc.
Project/Site: New Monthly

TestAmerica Job ID: 280-72827-1

Client Sample ID: LAZY LIZARD 060 ADISPT

Lab Sample ID: 280-72827-17

Date Collected: 08/06/15 14:25

Matrix: Water

Date Received: 08/07/15 09:45

Method: 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	0.696		0.0500		mg/L		08/11/15 15:00	08/12/15 16:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	387		6.00		mg/L			08/10/15 23:30	2
Total Dissolved Solids	2040		20.0		mg/L			08/13/15 09:01	1
Total Suspended Solids	10.4		4.00		mg/L			08/12/15 16:30	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
pH	8.58	HF	0.100		SU			08/08/15 14:28	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	NONE	NONE	Unit	D	Prepared	Analyzed	Dil Fac
Field pH	8.43				SU			08/06/15 14:25	1
Field Conductivity	3509				umhos/cm			08/06/15 14:25	1
Field Temperature	28.6				Degrees C			08/06/15 14:25	1

Lab Chronicle

Client: Pioneer Natural Resources USA, Inc.
Project/Site: New Monthly

TestAmerica Job ID: 280-72827-1

Client Sample ID: POLLY 065 ADISPT

Lab Sample ID: 280-72827-16

Date Collected: 08/06/15 14:02

Matrix: Water

Date Received: 08/07/15 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	289922	08/10/15 14:34	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	290336	08/12/15 16:30	MW1	TAL DEN
Total/NA	Analysis	SM 4500 H+ B		1			289818	08/08/15 14:23	MAS	TAL DEN
Total/NA	Analysis	Field Sampling		1			289793	08/06/15 14:02	UP	TAL DEN

Client Sample ID: LAZY LIZARD 060 ADISPT

Lab Sample ID: 280-72827-17

Date Collected: 08/06/15 14:25

Matrix: Water

Date Received: 08/07/15 09:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			50 mL	50 mL	289884	08/11/15 15:00	SEJ	TAL DEN
Total Recoverable	Analysis	200.7 Rev 4.4		1	50 mL	50 mL	290420	08/12/15 16:59	CRR	TAL DEN
Total/NA	Analysis	300.0		2	5 mL	5 mL	289852	08/10/15 23:30	AFB	TAL DEN
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	290444	08/13/15 09:01	SVC	TAL DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	290336	08/12/15 16:30	MW1	TAL DEN
Total/NA	Analysis	SM 4500 H+ B		1			289818	08/08/15 14:28	MAS	TAL DEN
Total/NA	Analysis	Field Sampling		1			289793	08/06/15 14:25	UP	TAL DEN

Laboratory References:

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

TestAmerica Denver
 4955 Yarrow Street
 Arvada, CO 80002
 Phone (303) 736-0100 Fax (303) 431-7171

Chain of Custody Record

TestAmerica
 THE LEADER IN ENVIRONMENTAL TESTING

Client Information 4955 Yarrow Street Arvada, CO 80002 Phone (303) 736-0100 Fax (303) 431-7171		Sampler: SM Lab PM: Harrington, Danielle M Client Contact: Bill Ward E-Mail: danielle.harrington@testamericainc.com		Carrier Tracking No(s): COCINo: 280134119-4609.1 Page: Page 1 of 1 Job #	
Due Date Requested: TAT Requested (days): 7 day / 1500 TAT		Analysis Requested			
PO #: 7 day / 1500 TAT WO #: 7 day / 1500 TAT Project #: 28001998 SSOW#:		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:			
Sample Identification Champion 096 Aleapt (500) Filbert 029 Aleapt 7 day Gwasinger 108 Aleapt King 152 Aleapt Black Rabbit 090 Aleapt Dolly 065 Aleapt Lazy Lizard 060 Aleapt		Matrix (W=water, S=solid, O=oil, D=oil, A=air) Sample Type (C=comp, G=grab) Sample Time Sample Date Preservation Code		Total Number of Containers Login, see special instructions Special Instructions (Note): pH Temp EC	
Date: 8/14/15 Time: 10:45 Matrix: W		Date: 8/14/15 Time: 11:50 Matrix: W		Date: 8/14/15 Time: 12:34 Matrix: W	
Date: 8/14/15 Time: 13:08 Matrix: W		Date: 8/14/15 Time: 13:40 Matrix: W		Date: 8/14/15 Time: 14:02 Matrix: W	
Date: 8/14/15 Time: 14:25 Matrix: W					
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		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months			
Empty Kit Relinquished by: Dariusz M... Relinquished by: Dariusz M... Relinquished by:		Special Instructions/QC Requirements: SAMPLER please circle all that apply (pH Nitrate by IC, Nitrite by IC, Potentially Dissolved Metals)			
Date: 8/15/1800 Company: 10/10/15		Date: 09/15/15 Company: JAD			
Date: 8/15/1800 Company:		Date: 09/15/15 Company:			
Date: 8/15/1800 Company:		Date: 09/15/15 Company:			
Custody Seal No.: Δ Yes Δ No		Cooler Temperature(s) °C and Other Remarks:			

