



STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES

Alaska Geologic Materials Center *Data Report No. 405*

No. 405

Petrotechnical Resources of Alaska and TestAmerica
Laboratories Inc., 2012, Geochemical analyses of oil and gas
cuttings from the Brontosaurus #1, Walakpa #1, S. Barrow
#14, and S. Barrow #19 wells

Spreadsheet available for download

Received April 2012

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TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Anchorage

2000 West International Airport Road Suite A10

Anchorage, AK 99502-1119

Tel: (907) 563-9200

TestAmerica Job ID: AUB0026

Client Project/Site: [none]

Client Project Description: North Slope Borough Project

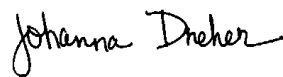
For:

Petrotechnical Resources of Alaska

3601 C Street, Suite # 1424

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Attn: Barbara McMullen



Authorized for release by:

03/14/2011 02:35:08 PM

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GMC Data Report 405

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Qualifier Definition/Glossary

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Qualifiers

Metals

Qualifier	Qualifier Description
F	Duplicate RPD exceeds the control limit
F	MS or MSD exceeds the control limits

General Chemistry

Qualifier	Qualifier Description
F	Duplicate RPD exceeds the control limit
F	MS or MSD exceeds the control limits

Glossary

Glossary	Glossary Description
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis.

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Case Narrative

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Job ID: AUB0026

Laboratory: TestAmerica Anchorage

Narrative

TestAmerica Anchorage

Receipt

All samples were received in good condition within temperature requirements.

Subcontracted

This data set was subcontracted to TestAmerica Seattle from TestAmerica Anchorage.

Laboratory: TestAmerica Seattle

Narrative

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

Metals

No analytical or quality issues were noted.

General Chemistry - Method 300.0

Due to the high concentration of chloride and sulfate the matrix spike (MS) for batch 81909 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

The matrix spike (MS) recoveries for batch 81909 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

General Chemistry - Method 9012A

The matrix spike (MS) recoveries for batch 81358 were outside control limits. The associated laboratory control sample (LCS) recovery met acceptance criteria.

No other analytical or quality issues were noted.

Detection Summary

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: Brontosaurus #1 #1- surface hole

Lab Sample ID: AUB0026-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	15000		2800		mg/Kg	100	*	6010B	Total/NA
Iron	43000		940		mg/Kg	100	*	6010B	Total/NA
Magnesium	9000		5200		mg/Kg	100	*	6010B	Total/NA
Antimony	0.21		0.17		mg/Kg	10	*	6020	Total/NA
Arsenic	15		0.43		mg/Kg	10	*	6020	Total/NA
Barium	550		0.17		mg/Kg	10	*	6020	Total/NA
Beryllium	0.95		0.17		mg/Kg	10	*	6020	Total/NA
Cadmium	0.44		0.17		mg/Kg	10	*	6020	Total/NA
Chromium	54		0.17		mg/Kg	10	*	6020	Total/NA
Copper	47		0.17		mg/Kg	10	*	6020	Total/NA
Lead	150		0.17		mg/Kg	10	*	6020	Total/NA
Nickel	50		0.17		mg/Kg	10	*	6020	Total/NA
Selenium	0.67		0.60		mg/Kg	10	*	6020	Total/NA
Vanadium	38		0.43		mg/Kg	10	*	6020	Total/NA
Zinc	120		0.60		mg/Kg	10	*	6020	Total/NA
Mercury	0.77		0.017		mg/Kg	1	*	7471A	Total/NA
Chloride	390		3.3		mg/Kg	1	*	300.0	Soluble
Sulfate	210		3.0		mg/Kg	1	*	300.0	Soluble

Client Sample ID: Brontosaurus #1 #2- intermed hole

Lab Sample ID: AUB0026-02

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	13000		2000		mg/Kg	100	*	6010B	Total/NA
Iron	59000		660		mg/Kg	100	*	6010B	Total/NA
Magnesium	9600		3600		mg/Kg	100	*	6010B	Total/NA
Antimony	0.25		0.18		mg/Kg	10	*	6020	Total/NA
Arsenic	15		0.46		mg/Kg	10	*	6020	Total/NA
Barium	240		0.18		mg/Kg	10	*	6020	Total/NA
Beryllium	0.90		0.18		mg/Kg	10	*	6020	Total/NA
Cadmium	0.26		0.18		mg/Kg	10	*	6020	Total/NA
Chromium	36		0.18		mg/Kg	10	*	6020	Total/NA
Copper	51		0.18		mg/Kg	10	*	6020	Total/NA
Lead	34		0.18		mg/Kg	10	*	6020	Total/NA
Nickel	52		0.18		mg/Kg	10	*	6020	Total/NA
Selenium	0.70		0.64		mg/Kg	10	*	6020	Total/NA
Vanadium	36		0.46		mg/Kg	10	*	6020	Total/NA
Zinc	110		0.64		mg/Kg	10	*	6020	Total/NA
Mercury	0.37		0.013		mg/Kg	1	*	7471A	Total/NA
Chloride	75		3.3		mg/Kg	1	*	300.0	Soluble
Sulfate	750		30		mg/Kg	10	*	300.0	Soluble

Client Sample ID: Brontosaurus #1 #3- intermed hole

Lab Sample ID: AUB0026-03

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	11000		2400		mg/Kg	100	*	6010B	Total/NA
Iron	40000		800		mg/Kg	100	*	6010B	Total/NA
Magnesium	8000		4400		mg/Kg	100	*	6010B	Total/NA
Antimony	0.36		0.15		mg/Kg	10	*	6020	Total/NA
Arsenic	21		0.38		mg/Kg	10	*	6020	Total/NA
Barium	150		0.15		mg/Kg	10	*	6020	Total/NA
Beryllium	0.86		0.15		mg/Kg	10	*	6020	Total/NA
Cadmium	0.98		0.15		mg/Kg	10	*	6020	Total/NA
Chromium	27		0.15		mg/Kg	10	*	6020	Total/NA
Copper	47		0.15		mg/Kg	10	*	6020	Total/NA

Detection Summary

Client: Petrotechnical Resources of Alaska
 Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: Brontosaurus #1 #3- intermed hole (Continued)

Lab Sample ID: AUB0026-03

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	74		0.15		mg/Kg	10	*	6020	Total/NA
Nickel	53		0.15		mg/Kg	10	*	6020	Total/NA
Selenium	3.8		0.53		mg/Kg	10	*	6020	Total/NA
Silver	0.29		0.15		mg/Kg	10	*	6020	Total/NA
Thallium	0.33		0.30		mg/Kg	10	*	6020	Total/NA
Vanadium	40		0.38		mg/Kg	10	*	6020	Total/NA
Zinc	140		0.53		mg/Kg	10	*	6020	Total/NA
Mercury	0.72		0.016		mg/Kg	1	*	7471A	Total/NA
Chloride	61		3.3		mg/Kg	1	*	300.0	Soluble
Sulfate	500		3.0		mg/Kg	1	*	300.0	Soluble

Client Sample ID: Walakpa #1 #1- surface hole

Lab Sample ID: AUB0026-04

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	14000		2600		mg/Kg	100	*	6010B	Total/NA
Iron	40000		860		mg/Kg	100	*	6010B	Total/NA
Magnesium	10000		4700		mg/Kg	100	*	6010B	Total/NA
Antimony	0.19		0.16		mg/Kg	10	*	6020	Total/NA
Arsenic	15		0.41		mg/Kg	10	*	6020	Total/NA
Barium	200		0.16		mg/Kg	10	*	6020	Total/NA
Beryllium	0.98		0.16		mg/Kg	10	*	6020	Total/NA
Cadmium	0.37		0.16		mg/Kg	10	*	6020	Total/NA
Chromium	31		0.16		mg/Kg	10	*	6020	Total/NA
Copper	41		0.16		mg/Kg	10	*	6020	Total/NA
Lead	240		0.16		mg/Kg	10	*	6020	Total/NA
Nickel	48		0.16		mg/Kg	10	*	6020	Total/NA
Selenium	0.80		0.57		mg/Kg	10	*	6020	Total/NA
Vanadium	39		0.41		mg/Kg	10	*	6020	Total/NA
Zinc	230		0.57		mg/Kg	10	*	6020	Total/NA
Mercury	0.31		0.013		mg/Kg	1	*	7471A	Total/NA
Chloride	460		3.3		mg/Kg	1	*	300.0	Soluble
Sulfate	1400		30		mg/Kg	10	*	300.0	Soluble

Client Sample ID: Walakpa #1 #2- intermed. hole

Lab Sample ID: AUB0026-05

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	14000		2100		mg/Kg	100	*	6010B	Total/NA
Iron	47000		700		mg/Kg	100	*	6010B	Total/NA
Magnesium	9600		3900		mg/Kg	100	*	6010B	Total/NA
Antimony	0.17		0.15		mg/Kg	10	*	6020	Total/NA
Arsenic	12		0.37		mg/Kg	10	*	6020	Total/NA
Barium	170		0.15		mg/Kg	10	*	6020	Total/NA
Beryllium	0.91		0.15		mg/Kg	10	*	6020	Total/NA
Cadmium	0.31		0.15		mg/Kg	10	*	6020	Total/NA
Chromium	30		0.15		mg/Kg	10	*	6020	Total/NA
Copper	36		0.15		mg/Kg	10	*	6020	Total/NA
Lead	130		0.15		mg/Kg	10	*	6020	Total/NA
Nickel	46		0.15		mg/Kg	10	*	6020	Total/NA
Selenium	0.74		0.52		mg/Kg	10	*	6020	Total/NA
Vanadium	34		0.37		mg/Kg	10	*	6020	Total/NA
Zinc	340		0.52		mg/Kg	10	*	6020	Total/NA
Mercury	0.66		0.12		mg/Kg	10	*	7471A	Total/NA
Chloride	140		3.3		mg/Kg	1	*	300.0	Soluble

Detection Summary

Client: Petrotechnical Resources of Alaska
 Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: Walakpa #1 #2- intermed. hole (Continued)

Lab Sample ID: AUB0026-05

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	410		3.0		mg/Kg	1	*	300.0	Soluble

Client Sample ID: Walakpa #1 #3- intermed. hole

Lab Sample ID: AUB0026-06

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	12000		2900		mg/Kg	100	*	6010B	Total/NA
Iron	42000		960		mg/Kg	100	*	6010B	Total/NA
Magnesium	7600		5300		mg/Kg	100	*	6010B	Total/NA
Antimony	0.33		0.16		mg/Kg	10	*	6020	Total/NA
Arsenic	21		0.39		mg/Kg	10	*	6020	Total/NA
Barium	220		0.16		mg/Kg	10	*	6020	Total/NA
Beryllium	0.70		0.16		mg/Kg	10	*	6020	Total/NA
Cadmium	0.58		0.16		mg/Kg	10	*	6020	Total/NA
Chromium	23		0.16		mg/Kg	10	*	6020	Total/NA
Copper	47		0.16		mg/Kg	10	*	6020	Total/NA
Lead	86		0.16		mg/Kg	10	*	6020	Total/NA
Nickel	48		0.16		mg/Kg	10	*	6020	Total/NA
Selenium	4.2		0.55		mg/Kg	10	*	6020	Total/NA
Silver	0.29		0.16		mg/Kg	10	*	6020	Total/NA
Vanadium	45		0.39		mg/Kg	10	*	6020	Total/NA
Zinc	150		0.55		mg/Kg	10	*	6020	Total/NA
Mercury	0.49		0.015		mg/Kg	1	*	7471A	Total/NA
Chloride	82		3.3		mg/Kg	1	*	300.0	Soluble
Sulfate	1100		30		mg/Kg	10	*	300.0	Soluble

Client Sample ID: S. Barrow 19 #1- surface hole

Lab Sample ID: AUB0026-07

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	14000		2500		mg/Kg	100	*	6010B	Total/NA
Iron	41000		840		mg/Kg	100	*	6010B	Total/NA
Magnesium	9600		4600		mg/Kg	100	*	6010B	Total/NA
Antimony	0.34		0.17		mg/Kg	10	*	6020	Total/NA
Arsenic	18		0.42		mg/Kg	10	*	6020	Total/NA
Barium	800		0.17		mg/Kg	10	*	6020	Total/NA
Beryllium	0.98		0.17		mg/Kg	10	*	6020	Total/NA
Cadmium	0.32		0.17		mg/Kg	10	*	6020	Total/NA
Chromium	26		0.17		mg/Kg	10	*	6020	Total/NA
Copper	30		0.17		mg/Kg	10	*	6020	Total/NA
Lead	230		0.17		mg/Kg	10	*	6020	Total/NA
Nickel	39		0.17		mg/Kg	10	*	6020	Total/NA
Selenium	0.63		0.59		mg/Kg	10	*	6020	Total/NA
Vanadium	36		0.42		mg/Kg	10	*	6020	Total/NA
Zinc	200		0.59		mg/Kg	10	*	6020	Total/NA
Mercury	0.71		0.14		mg/Kg	10	*	7471A	Total/NA
Chloride	750		33		mg/Kg	10	*	300.0	Soluble
Sulfate	3300		30		mg/Kg	10	*	300.0	Soluble

Client Sample ID: S. Barrow 19 #2- intermed. hole

Lab Sample ID: AUB0026-08

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	9100		2500		mg/Kg	100	*	6010B	Total/NA
Iron	45000		830		mg/Kg	100	*	6010B	Total/NA
Magnesium	8300		4600		mg/Kg	100	*	6010B	Total/NA
Antimony	0.62		0.19		mg/Kg	10	*	6020	Total/NA

Detection Summary

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: S. Barrow 19 #2- intermed. hole (Continued)

Lab Sample ID: AUB0026-08

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	36		0.48		mg/Kg	10	*	6020	Total/NA
Barium	140		0.19		mg/Kg	10	*	6020	Total/NA
Beryllium	0.63		0.19		mg/Kg	10	*	6020	Total/NA
Cadmium	0.38		0.19		mg/Kg	10	*	6020	Total/NA
Chromium	120		0.19		mg/Kg	10	*	6020	Total/NA
Copper	44		0.19		mg/Kg	10	*	6020	Total/NA
Lead	2400		19		mg/Kg	1000	*	6020	Total/NA
Nickel	53		0.19		mg/Kg	10	*	6020	Total/NA
Selenium	3.2		0.68		mg/Kg	10	*	6020	Total/NA
Silver	0.37		0.19		mg/Kg	10	*	6020	Total/NA
Vanadium	46		0.48		mg/Kg	10	*	6020	Total/NA
Zinc	640		0.68		mg/Kg	10	*	6020	Total/NA
Mercury	0.92		0.16		mg/Kg	10	*	7471A	Total/NA
Chloride	11000		170		mg/Kg	50	*	300.0	Soluble
Sulfate	11000		150		mg/Kg	50	*	300.0	Soluble

Client Sample ID: S. Barrow 19 #3- intermed. hole

Lab Sample ID: AUB0026-09

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	8500		2500		mg/Kg	100	*	6010B	Total/NA
Iron	44000		830		mg/Kg	100	*	6010B	Total/NA
Magnesium	5600		4600		mg/Kg	100	*	6010B	Total/NA
Antimony	0.32		0.17		mg/Kg	10	*	6020	Total/NA
Arsenic	21		0.42		mg/Kg	10	*	6020	Total/NA
Barium	140		0.17		mg/Kg	10	*	6020	Total/NA
Beryllium	0.59		0.17		mg/Kg	10	*	6020	Total/NA
Chromium	49		0.17		mg/Kg	10	*	6020	Total/NA
Copper	14		0.17		mg/Kg	10	*	6020	Total/NA
Lead	39		0.17		mg/Kg	10	*	6020	Total/NA
Nickel	34		0.17		mg/Kg	10	*	6020	Total/NA
Selenium	0.99		0.59		mg/Kg	10	*	6020	Total/NA
Vanadium	33		0.42		mg/Kg	10	*	6020	Total/NA
Zinc	100		0.59		mg/Kg	10	*	6020	Total/NA
Mercury	0.65		0.013		mg/Kg	1	*	7471A	Total/NA
Chloride	12000		330		mg/Kg	100	*	300.0	Soluble
Sulfate	5800		300		mg/Kg	100	*	300.0	Soluble

Client Sample ID: S. Barrow 14 #1- surface hole

Lab Sample ID: AUB0026-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	12000		2200		mg/Kg	100	*	6010B	Total/NA
Iron	53000		750		mg/Kg	100	*	6010B	Total/NA
Magnesium	7900		4100		mg/Kg	100	*	6010B	Total/NA
Antimony	0.44		0.18		mg/Kg	10	*	6020	Total/NA
Arsenic	60		0.44		mg/Kg	10	*	6020	Total/NA
Barium	300		0.18		mg/Kg	10	*	6020	Total/NA
Beryllium	0.70		0.18		mg/Kg	10	*	6020	Total/NA
Chromium	40		0.18		mg/Kg	10	*	6020	Total/NA
Copper	77		0.18		mg/Kg	10	*	6020	Total/NA
Lead	830		0.18		mg/Kg	10	*	6020	Total/NA
Nickel	55		0.18		mg/Kg	10	*	6020	Total/NA
Selenium	1.1		0.61		mg/Kg	10	*	6020	Total/NA
Silver	0.19		0.18		mg/Kg	10	*	6020	Total/NA
Vanadium	34		0.44		mg/Kg	10	*	6020	Total/NA

TestAmerica Anchorage

Detection Summary

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: S. Barrow 14 #1- surface hole (Continued)

Lab Sample ID: AUB0026-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	93		0.61		mg/Kg	10	*	6020	Total/NA
Mercury	3.1		0.29		mg/Kg	20	*	7471A	Total/NA
Chloride	330		3.3		mg/Kg	1	*	300.0	Soluble
Sulfate	1400		30		mg/Kg	10	*	300.0	Soluble

Client Sample ID: S. Barrow 14 #2- intermed. hole

Lab Sample ID: AUB0026-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	5800		2300		mg/Kg	100	*	6010B	Total/NA
Iron	160000		760		mg/Kg	100	*	6010B	Total/NA
Magnesium	7500		4200		mg/Kg	100	*	6010B	Total/NA
Antimony	0.70		0.20		mg/Kg	10	*	6020	Total/NA
Arsenic	41		0.49		mg/Kg	10	*	6020	Total/NA
Barium	190		0.20		mg/Kg	10	*	6020	Total/NA
Beryllium	0.63		0.20		mg/Kg	10	*	6020	Total/NA
Cadmium	0.48		0.20		mg/Kg	10	*	6020	Total/NA
Chromium	82		0.20		mg/Kg	10	*	6020	Total/NA
Copper	93		0.20		mg/Kg	10	*	6020	Total/NA
Lead	2800		20		mg/Kg	1000	*	6020	Total/NA
Nickel	86		0.20		mg/Kg	10	*	6020	Total/NA
Selenium	3.1		0.69		mg/Kg	10	*	6020	Total/NA
Silver	0.35		0.20		mg/Kg	10	*	6020	Total/NA
Vanadium	38		0.49		mg/Kg	10	*	6020	Total/NA
Zinc	380		0.69		mg/Kg	10	*	6020	Total/NA
Mercury	1.9		0.13		mg/Kg	10	*	7471A	Total/NA
Chloride	190		3.3		mg/Kg	1	*	300.0	Soluble
Sulfate	6200		150		mg/Kg	50	*	300.0	Soluble

Client Sample ID: S. Barrow 14 #3- intermed. hole

Lab Sample ID: AUB0026-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aluminum	4200		2300		mg/Kg	100	*	6010B	Total/NA
Iron	58000		780		mg/Kg	100	*	6010B	Total/NA
Magnesium	5300		4300		mg/Kg	100	*	6010B	Total/NA
Antimony	0.40		0.17		mg/Kg	10	*	6020	Total/NA
Arsenic	41		0.42		mg/Kg	10	*	6020	Total/NA
Barium	75		0.17		mg/Kg	10	*	6020	Total/NA
Beryllium	0.45		0.17		mg/Kg	10	*	6020	Total/NA
Chromium	60		0.17		mg/Kg	10	*	6020	Total/NA
Copper	35		0.17		mg/Kg	10	*	6020	Total/NA
Lead	110		0.17		mg/Kg	10	*	6020	Total/NA
Nickel	51		0.17		mg/Kg	10	*	6020	Total/NA
Selenium	2.5		0.58		mg/Kg	10	*	6020	Total/NA
Silver	0.23		0.17		mg/Kg	10	*	6020	Total/NA
Thallium	0.34		0.33		mg/Kg	10	*	6020	Total/NA
Vanadium	29		0.42		mg/Kg	10	*	6020	Total/NA
Zinc	140		0.58		mg/Kg	10	*	6020	Total/NA
Mercury	0.98		0.14		mg/Kg	10	*	7471A	Total/NA
Chloride	3400		33		mg/Kg	10	*	300.0	Soluble
Sulfate	3300		30		mg/Kg	10	*	300.0	Soluble

Analytical Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: Brontosaurus #1 #1- surface hole

Lab Sample ID: AUB0026-01

Date Collected: 02/17/11 10:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.2

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	15000		2800		mg/Kg	☼	02/28/11 10:15	03/01/11 08:04	100
Iron	43000		940		mg/Kg	☼	02/28/11 10:15	03/01/11 08:04	100
Magnesium	9000		5200		mg/Kg	☼	02/28/11 10:15	03/01/11 08:04	100
Sodium	ND		9400		mg/Kg	☼	02/28/11 10:15	03/01/11 08:04	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.21		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Arsenic	15		0.43		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Barium	550		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Beryllium	0.95		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Cadmium	0.44		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Chromium	54		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Copper	47		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Lead	150		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Nickel	50		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Selenium	0.67		0.60		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Silver	ND		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Thallium	ND		0.34		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Vanadium	38		0.43		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10
Zinc	120		0.60		mg/Kg	☼	03/02/11 10:22	03/03/11 16:24	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.77		0.017		mg/Kg	☼	03/03/11 09:03	03/03/11 12:05	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.94		mg/Kg	☼	02/24/11 17:04	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	390		3.3		mg/Kg	☼		03/08/11 09:49	1
Sulfate	210		3.0		mg/Kg	☼		03/08/11 09:49	1

Client Sample ID: Brontosaurus #1 #2- intermed hole

Lab Sample ID: AUB0026-02

Date Collected: 02/17/11 10:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.3

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	13000		2000		mg/Kg	☼	02/28/11 10:15	03/01/11 08:09	100
Iron	59000		660		mg/Kg	☼	02/28/11 10:15	03/01/11 08:09	100
Magnesium	9600		3600		mg/Kg	☼	02/28/11 10:15	03/01/11 08:09	100
Sodium	ND		6600		mg/Kg	☼	02/28/11 10:15	03/01/11 08:09	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.25		0.18		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Arsenic	15		0.46		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10

TestAmerica Anchorage

Analytical Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: Brontosaurus #1 #2- intermed hole

Lab Sample ID: AUB0026-02

Date Collected: 02/17/11 10:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.3

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	240		0.18		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Beryllium	0.90		0.18		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Cadmium	0.26		0.18		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Chromium	36		0.18		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Copper	51		0.18		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Lead	34		0.18		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Nickel	52		0.18		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Selenium	0.70		0.64		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Silver	ND		0.18		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Thallium	ND		0.36		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Vanadium	36		0.46		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10
Zinc	110		0.64		mg/Kg	☼	03/02/11 10:22	03/03/11 16:36	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.37		0.013		mg/Kg	☼	03/03/11 09:03	03/03/11 12:07	1

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.90		mg/Kg	☼	02/24/11 17:04	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	75		3.3		mg/Kg	☼		03/08/11 10:38	1
Sulfate	750		30		mg/Kg	☼		03/08/11 15:52	10

Client Sample ID: Brontosaurus #1 #3- intermed hole

Lab Sample ID: AUB0026-03

Date Collected: 02/17/11 11:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.1

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	11000		2400		mg/Kg	☼	02/28/11 10:15	03/01/11 08:14	100
Iron	40000		800		mg/Kg	☼	02/28/11 10:15	03/01/11 08:14	100
Magnesium	8000		4400		mg/Kg	☼	02/28/11 10:15	03/01/11 08:14	100
Sodium	ND		8000		mg/Kg	☼	02/28/11 10:15	03/01/11 08:14	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.36		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Arsenic	21		0.38		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Barium	150		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Beryllium	0.86		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Cadmium	0.98		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Chromium	27		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Copper	47		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Lead	74		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Nickel	53		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Selenium	3.8		0.53		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10

TestAmerica Anchorage

Analytical Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: Brontosaurus #1 #3- intermed hole

Lab Sample ID: AUB0026-03

Date Collected: 02/17/11 11:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.1

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.29		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Thallium	0.33		0.30		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Vanadium	40		0.38		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10
Zinc	140		0.53		mg/Kg	☼	03/02/11 10:22	03/03/11 17:00	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.72		0.016		mg/Kg	☼	03/03/11 09:03	03/03/11 12:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.84		mg/Kg	☼	02/24/11 17:04	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	61		3.3		mg/Kg	☼		03/08/11 18:19	1
Sulfate	500		3.0		mg/Kg	☼		03/08/11 18:19	1

Client Sample ID: Walakpa #1 #1- surface hole

Lab Sample ID: AUB0026-04

Date Collected: 02/17/11 11:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.1

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14000		2600		mg/Kg	☼	02/28/11 10:15	03/01/11 08:19	100
Iron	40000		860		mg/Kg	☼	02/28/11 10:15	03/01/11 08:19	100
Magnesium	10000		4700		mg/Kg	☼	02/28/11 10:15	03/01/11 08:19	100
Sodium	ND		8600		mg/Kg	☼	02/28/11 10:15	03/01/11 08:19	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.19		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Arsenic	15		0.41		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Barium	200		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Beryllium	0.98		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Cadmium	0.37		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Chromium	31		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Copper	41		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Lead	240		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Nickel	48		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Selenium	0.80		0.57		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Silver	ND		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Thallium	ND		0.33		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Vanadium	39		0.41		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10
Zinc	230		0.57		mg/Kg	☼	03/02/11 10:22	03/03/11 17:12	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.31		0.013		mg/Kg	☼	03/03/11 09:03	03/03/11 12:13	1

TestAmerica Anchorage

Analytical Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: Walakpa #1 #1- surface hole

Lab Sample ID: AUB0026-04

Date Collected: 02/17/11 11:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.1

Sampler Name:

Sampler Phone Number: (907) 272-1232

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.97		mg/Kg	☼	02/24/11 17:04	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	460		3.3		mg/Kg	☼		03/08/11 12:00	1
Sulfate	1400		30		mg/Kg	☼		03/08/11 16:25	10

Client Sample ID: Walakpa #1 #2- intermed. hole

Lab Sample ID: AUB0026-05

Date Collected: 02/17/11 12:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.2

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14000		2100		mg/Kg	☼	02/28/11 10:15	03/01/11 08:24	100
Iron	47000		700		mg/Kg	☼	02/28/11 10:15	03/01/11 08:24	100
Magnesium	9600		3900		mg/Kg	☼	02/28/11 10:15	03/01/11 08:24	100
Sodium	ND		7000		mg/Kg	☼	02/28/11 10:15	03/01/11 08:24	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.17		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Arsenic	12		0.37		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Barium	170		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Beryllium	0.91		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Cadmium	0.31		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Chromium	30		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Copper	36		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Lead	130		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Nickel	46		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Selenium	0.74		0.52		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Silver	ND		0.15		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Thallium	ND		0.30		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Vanadium	34		0.37		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10
Zinc	340		0.52		mg/Kg	☼	03/02/11 10:22	03/03/11 17:24	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.66		0.12		mg/Kg	☼	03/03/11 09:03	03/03/11 12:45	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.91		mg/Kg	☼	02/24/11 17:04	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		3.3		mg/Kg	☼		03/08/11 12:16	1
Sulfate	410		3.0		mg/Kg	☼		03/08/11 12:16	1

Analytical Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: Walakpa #1 #3- intermed. hole

Lab Sample ID: AUB0026-06

Date Collected: 02/17/11 12:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 98.6

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	12000		2900		mg/Kg	☼	02/28/11 10:15	03/01/11 08:29	100
Iron	42000		960		mg/Kg	☼	02/28/11 10:15	03/01/11 08:29	100
Magnesium	7600		5300		mg/Kg	☼	02/28/11 10:15	03/01/11 08:29	100
Sodium	ND		9600		mg/Kg	☼	02/28/11 10:15	03/01/11 08:29	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.33		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Arsenic	21		0.39		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Barium	220		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Beryllium	0.70		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Cadmium	0.58		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Chromium	23		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Copper	47		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Lead	86		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Nickel	48		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Selenium	4.2		0.55		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Silver	0.29		0.16		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Thallium	ND		0.32		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Vanadium	45		0.39		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10
Zinc	150		0.55		mg/Kg	☼	03/02/11 10:22	03/03/11 17:36	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.49		0.015		mg/Kg	☼	03/03/11 09:03	03/03/11 12:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.97		mg/Kg	☼	02/24/11 17:04	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	82		3.3		mg/Kg	☼		03/08/11 12:33	1
Sulfate	1100		30		mg/Kg	☼		03/08/11 16:41	10

Client Sample ID: S. Barrow 19 #1- surface hole

Lab Sample ID: AUB0026-07

Date Collected: 02/17/11 13:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.1

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	14000		2500		mg/Kg	☼	02/28/11 10:15	03/01/11 08:34	100
Iron	41000		840		mg/Kg	☼	02/28/11 10:15	03/01/11 08:34	100
Magnesium	9600		4600		mg/Kg	☼	02/28/11 10:15	03/01/11 08:34	100
Sodium	ND		8400		mg/Kg	☼	02/28/11 10:15	03/01/11 08:34	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.34		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Arsenic	18		0.42		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10

TestAmerica Anchorage

Analytical Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: S. Barrow 19 #1- surface hole

Lab Sample ID: AUB0026-07

Date Collected: 02/17/11 13:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.1

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	800		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Beryllium	0.98		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Cadmium	0.32		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Chromium	26		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Copper	30		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Lead	230		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Nickel	39		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Selenium	0.63		0.59		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Silver	ND		0.17		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Thallium	ND		0.34		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Vanadium	36		0.42		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10
Zinc	200		0.59		mg/Kg	☼	03/02/11 10:22	03/03/11 17:48	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.71		0.14		mg/Kg	☼	03/03/11 09:03	03/03/11 12:48	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.83		mg/Kg	☼	02/24/11 17:04	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	750		33		mg/Kg	☼		03/08/11 16:57	10
Sulfate	3300		30		mg/Kg	☼		03/08/11 16:57	10

Client Sample ID: S. Barrow 19 #2- intermed. hole

Lab Sample ID: AUB0026-08

Date Collected: 02/17/11 13:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 97.3

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	9100		2500		mg/Kg	☼	02/28/11 10:15	03/01/11 08:38	100
Iron	45000		830		mg/Kg	☼	02/28/11 10:15	03/01/11 08:38	100
Magnesium	8300		4600		mg/Kg	☼	02/28/11 10:15	03/01/11 08:38	100
Sodium	ND		8300		mg/Kg	☼	02/28/11 10:15	03/01/11 08:38	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.62		0.19		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10
Arsenic	36		0.48		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10
Barium	140		0.19		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10
Beryllium	0.63		0.19		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10
Cadmium	0.38		0.19		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10
Chromium	120		0.19		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10
Copper	44		0.19		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10
Lead	2400		19		mg/Kg	☼	03/02/11 10:22	03/04/11 07:55	1000
Nickel	53		0.19		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10
Selenium	3.2		0.68		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10

TestAmerica Anchorage

Analytical Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: S. Barrow 19 #2- intermed. hole

Lab Sample ID: AUB0026-08

Date Collected: 02/17/11 13:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 97.3

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	0.37		0.19		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10
Thallium	ND		0.39		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10
Vanadium	46		0.48		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10
Zinc	640		0.68		mg/Kg	☼	03/02/11 10:22	03/04/11 07:34	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.92		0.16		mg/Kg	☼	03/03/11 09:03	03/03/11 12:51	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.90		mg/Kg	☼	02/24/11 17:04	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11000		170		mg/Kg	☼		03/09/11 09:26	50
Sulfate	11000		150		mg/Kg	☼		03/09/11 09:26	50

Client Sample ID: S. Barrow 19 #3- intermed. hole

Lab Sample ID: AUB0026-09

Date Collected: 02/17/11 14:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 98.0

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	8500		2500		mg/Kg	☼	02/28/11 10:15	03/01/11 08:53	100
Iron	44000		830		mg/Kg	☼	02/28/11 10:15	03/01/11 08:53	100
Magnesium	5600		4600		mg/Kg	☼	02/28/11 10:15	03/01/11 08:53	100
Sodium	ND		8300		mg/Kg	☼	02/28/11 10:15	03/01/11 08:53	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.32		0.17		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Arsenic	21		0.42		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Barium	140		0.17		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Beryllium	0.59		0.17		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Cadmium	ND		0.17		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Chromium	49		0.17		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Copper	14		0.17		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Lead	39		0.17		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Nickel	34		0.17		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Selenium	0.99		0.59		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Silver	ND		0.17		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Thallium	ND		0.34		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Vanadium	33		0.42		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10
Zinc	100		0.59		mg/Kg	☼	03/02/11 10:22	03/04/11 07:38	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.65		0.013		mg/Kg	☼	03/03/11 09:03	03/03/11 12:34	1

TestAmerica Anchorage

Analytical Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: S. Barrow 19 #3- intermed. hole

Lab Sample ID: AUB0026-09

Date Collected: 02/17/11 14:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 98.0

Sampler Name:

Sampler Phone Number: (907) 272-1232

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.82		mg/Kg	☼	02/24/11 17:04	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12000		330		mg/Kg	☼		03/08/11 17:30	100
Sulfate	5800		300		mg/Kg	☼		03/08/11 17:30	100

Client Sample ID: S. Barrow 14 #1- surface hole

Lab Sample ID: AUB0026-10

Date Collected: 02/17/11 14:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.2

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	12000		2200		mg/Kg	☼	02/28/11 10:15	03/01/11 08:57	100
Iron	53000		750		mg/Kg	☼	02/28/11 10:15	03/01/11 08:57	100
Magnesium	7900		4100		mg/Kg	☼	02/28/11 10:15	03/01/11 08:57	100
Sodium	ND		7500		mg/Kg	☼	02/28/11 10:15	03/01/11 08:57	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.44		0.18		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Arsenic	60		0.44		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Barium	300		0.18		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Beryllium	0.70		0.18		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Cadmium	ND		0.18		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Chromium	40		0.18		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Copper	77		0.18		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Lead	830		0.18		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Nickel	55		0.18		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Selenium	1.1		0.61		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Silver	0.19		0.18		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Thallium	ND		0.35		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Vanadium	34		0.44		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10
Zinc	93		0.61		mg/Kg	☼	03/02/11 10:22	03/04/11 07:42	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.1		0.29		mg/Kg	☼	03/03/11 09:03	03/03/11 13:00	20

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		1.0		mg/Kg	☼	02/24/11 17:04	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	330		3.3		mg/Kg	☼		03/08/11 13:38	1
Sulfate	1400		30		mg/Kg	☼		03/08/11 17:47	10

Analytical Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: S. Barrow 14 #2- intermed. hole

Lab Sample ID: AUB0026-11

Date Collected: 02/17/11 15:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 98.9

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	5800		2300		mg/Kg	☼	02/28/11 10:15	03/01/11 09:02	100
Iron	160000		760		mg/Kg	☼	02/28/11 10:15	03/01/11 09:02	100
Magnesium	7500		4200		mg/Kg	☼	02/28/11 10:15	03/01/11 09:02	100
Sodium	ND		7600		mg/Kg	☼	02/28/11 10:15	03/01/11 09:02	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.70		0.20		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Arsenic	41		0.49		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Barium	190		0.20		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Beryllium	0.63		0.20		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Cadmium	0.48		0.20		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Chromium	82		0.20		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Copper	93		0.20		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Lead	2800		20		mg/Kg	☼	03/02/11 10:22	03/04/11 07:59	1000
Nickel	86		0.20		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Selenium	3.1		0.69		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Silver	0.35		0.20		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Thallium	ND		0.39		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Vanadium	38		0.49		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10
Zinc	380		0.69		mg/Kg	☼	03/02/11 10:22	03/04/11 07:46	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.9		0.13		mg/Kg	☼	03/03/11 09:03	03/03/11 13:03	10

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.96		mg/Kg	☼	02/24/11 17:04	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	190		3.3		mg/Kg	☼		03/08/11 13:55	1
Sulfate	6200		150		mg/Kg	☼		03/09/11 11:10	50

Client Sample ID: S. Barrow 14 #3- intermed. hole

Lab Sample ID: AUB0026-12

Date Collected: 02/17/11 15:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 98.9

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	4200		2300		mg/Kg	☼	02/28/11 10:15	03/01/11 09:07	100
Iron	58000		780		mg/Kg	☼	02/28/11 10:15	03/01/11 09:07	100
Magnesium	5300		4300		mg/Kg	☼	02/28/11 10:15	03/01/11 09:07	100
Sodium	ND		7800		mg/Kg	☼	02/28/11 10:15	03/01/11 09:07	100

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.40		0.17		mg/Kg	☼	03/02/11 10:22	03/04/11 07:51	10
Arsenic	41		0.42		mg/Kg	☼	03/02/11 10:22	03/04/11 07:51	10

TestAmerica Anchorage

Analytical Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: S. Barrow 14 #3- intermed. hole

Lab Sample ID: AUB0026-12

Date Collected: 02/17/11 15:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 98.9

Sampler Name:

Sampler Phone Number: (907) 272-1232

Method: 6020 - Metals (ICP/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	75		0.17		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10
Beryllium	0.45		0.17		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10
Cadmium	ND		0.17		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10
Chromium	60		0.17		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10
Copper	35		0.17		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10
Lead	110		0.17		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10
Nickel	51		0.17		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10
Selenium	2.5		0.58		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10
Silver	0.23		0.17		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10
Thallium	0.34		0.33		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10
Vanadium	29		0.42		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10
Zinc	140		0.58		mg/Kg	*	03/02/11 10:22	03/04/11 07:51	10

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.98		0.14		mg/Kg	*	03/03/11 09:03	03/03/11 13:06	10

General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		1.0		mg/Kg	*	02/24/11 17:05	02/28/11 14:39	1

General Chemistry - Soluble

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	3400		33		mg/Kg	*		03/08/11 18:03	10
Sulfate	3300		30		mg/Kg	*		03/08/11 18:03	10

Quality Control Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 580-81322/19-A
Matrix: Solid
Analysis Batch: 81403

Client Sample ID: MB 580-81322/19-A
Prep Type: Total/NA
Prep Batch: 81322

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	ND		30		mg/Kg		02/28/11 10:15	03/01/11 07:14	1
Iron	ND		10		mg/Kg		02/28/11 10:15	03/01/11 07:14	1
Magnesium	ND		55		mg/Kg		02/28/11 10:15	03/01/11 07:14	1
Sodium	ND		100		mg/Kg		02/28/11 10:15	03/01/11 07:14	1

Lab Sample ID: LCS 580-81322/20-A
Matrix: Solid
Analysis Batch: 81403

Client Sample ID: LCS 580-81322/20-A
Prep Type: Total/NA
Prep Batch: 81322

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits
Iron	1100	1070		mg/Kg		98	80 - 120
Magnesium	1000	934		mg/Kg		93	80 - 120
Sodium	1000	938		mg/Kg		94	80 - 120

Lab Sample ID: LCSD 580-81322/21-A
Matrix: Solid
Analysis Batch: 81403

Client Sample ID: LCSD 580-81322/21-A
Prep Type: Total/NA
Prep Batch: 81322

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	
								RPD	Limit
Aluminum	200	206		mg/Kg		103	80 - 120	1	20
Iron	1100	1100		mg/Kg		100	80 - 120	2	20
Magnesium	1000	920		mg/Kg		92	80 - 120	1	20
Sodium	1000	976		mg/Kg		98	80 - 120	4	20

Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 580-81476/22-A
Matrix: Solid
Analysis Batch: 81616

Client Sample ID: MB 580-81476/22-A
Prep Type: Total/NA
Prep Batch: 81476

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Antimony	ND		0.20		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Arsenic	ND		0.50		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Barium	ND		0.20		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Beryllium	ND		0.20		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Cadmium	ND		0.20		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Chromium	ND		0.20		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Copper	ND		0.20		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Lead	ND		0.20		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Nickel	ND		0.20		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Selenium	ND		0.70		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Silver	ND		0.20		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Thallium	ND		0.40		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Vanadium	ND		0.50		mg/Kg		03/02/11 10:22	03/03/11 14:49	10
Zinc	ND		0.70		mg/Kg		03/02/11 10:22	03/03/11 14:49	10

Quality Control Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 580-81476/23-A

Matrix: Solid

Analysis Batch: 81616

Client Sample ID: LCS 580-81476/23-A

Prep Type: Total/NA

Prep Batch: 81476

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec.	
		Result	Qualifier				Limits	
Antimony	150	152		mg/Kg		101	80 - 120	
Arsenic	200	211		mg/Kg		106	80 - 120	
Barium	200	212		mg/Kg		106	80 - 120	
Beryllium	5.00	4.93		mg/Kg		99	80 - 120	
Cadmium	5.00	5.42		mg/Kg		108	80 - 120	
Chromium	20.0	21.3		mg/Kg		107	80 - 120	
Copper	25.0	27.4		mg/Kg		110	80 - 120	
Lead	50.0	52.6		mg/Kg		105	80 - 120	
Nickel	50.0	53.6		mg/Kg		107	80 - 120	
Selenium	200	192		mg/Kg		96	80 - 120	
Silver	30.0	32.1		mg/Kg		107	80 - 120	
Thallium	200	202		mg/Kg		101	80 - 120	
Vanadium	50.0	53.4		mg/Kg		107	80 - 120	
Zinc	50.0	56.6		mg/Kg		113	80 - 120	

Lab Sample ID: LCSD 580-81476/24-A

Matrix: Solid

Analysis Batch: 81616

Client Sample ID: LCSD 580-81476/24-A

Prep Type: Total/NA

Prep Batch: 81476

Analyte	Spike Added	LCSD	LCSD	Unit	D	% Rec	% Rec.		RPD	
		Result	Qualifier				Limits	RPD	Limit	
Antimony	150	152		mg/Kg		101	80 - 120	0	20	
Arsenic	200	216		mg/Kg		108	80 - 120	3	20	
Barium	200	211		mg/Kg		106	80 - 120	1	20	
Beryllium	5.00	5.12		mg/Kg		102	80 - 120	4	20	
Cadmium	5.00	5.22		mg/Kg		104	80 - 120	4	20	
Chromium	20.0	21.5		mg/Kg		108	80 - 120	1	20	
Copper	25.0	27.9		mg/Kg		111	80 - 120	2	20	
Lead	50.0	52.9		mg/Kg		106	80 - 120	1	20	
Nickel	50.0	55.2		mg/Kg		110	80 - 120	3	20	
Selenium	200	210		mg/Kg		105	80 - 120	9	20	
Silver	30.0	32.0		mg/Kg		107	80 - 120	0	20	
Thallium	200	201		mg/Kg		100	80 - 120	1	20	
Vanadium	50.0	54.0		mg/Kg		108	80 - 120	1	20	
Zinc	50.0	57.8		mg/Kg		116	80 - 120	2	20	

Lab Sample ID: 580-24602-A-1-C MS

Matrix: Solid

Analysis Batch: 81616

Client Sample ID: 580-24602-A-1-C MS

Prep Type: Total/NA

Prep Batch: 81476

Analyte	Sample	Sample	Spike Added	MS	MS	Unit	D	% Rec	% Rec.	
	Result	Qualifier		Result	Qualifier				Limits	
Antimony	2.4		335	330		mg/Kg	☼	98	80 - 120	
Arsenic	4.3		446	473		mg/Kg	☼	105	80 - 120	
Barium	160		446	627		mg/Kg	☼	104	80 - 120	
Beryllium	ND		11.2	13.1		mg/Kg	☼	116	80 - 120	
Cadmium	1.7		11.2	13.4		mg/Kg	☼	105	80 - 120	
Chromium	14		44.6	62.2		mg/Kg	☼	108	80 - 120	
Copper	170		55.8	215		mg/Kg	☼	87	80 - 120	
Lead	51		112	168		mg/Kg	☼	105	80 - 120	
Nickel	12		112	131		mg/Kg	☼	106	80 - 120	
Selenium	2.2		446	476		mg/Kg	☼	106	80 - 120	

TestAmerica Anchorage

Quality Control Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-24602-A-1-C MS

Matrix: Solid

Analysis Batch: 81616

Client Sample ID: 580-24602-A-1-C MS

Prep Type: Total/NA

Prep Batch: 81476

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits
Silver	1.8		66.9	73.3		mg/Kg	☼	107	80 - 120
Thallium	ND		446	450		mg/Kg	☼	101	80 - 120
Vanadium	19		112	135		mg/Kg	☼	105	80 - 120
Zinc	380		112	486		mg/Kg	☼	91	80 - 120

Lab Sample ID: 580-24602-A-1-D MSD

Matrix: Solid

Analysis Batch: 81616

Client Sample ID: 580-24602-A-1-D MSD

Prep Type: Total/NA

Prep Batch: 81476

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	RPD Limit
Antimony	2.4		315	353		mg/Kg	☼	111	80 - 120	7	20
Arsenic	4.3		420	503		mg/Kg	☼	119	80 - 120	6	20
Barium	160		420	670		mg/Kg	☼	120	80 - 120	7	20
Beryllium	ND		10.5	12.8	F	mg/Kg	☼	121	80 - 120	2	20
Cadmium	1.7		10.5	13.9		mg/Kg	☼	116	80 - 120	3	20
Chromium	14		42.0	65.6	F	mg/Kg	☼	122	80 - 120	5	20
Copper	170		52.5	231	F	mg/Kg	☼	123	80 - 120	7	20
Lead	51		105	181	F	mg/Kg	☼	124	80 - 120	8	20
Nickel	12		105	142	F	mg/Kg	☼	124	80 - 120	8	20
Selenium	2.2		420	480		mg/Kg	☼	114	80 - 120	1	20
Silver	1.8		63.0	78.2	F	mg/Kg	☼	121	80 - 120	7	20
Thallium	ND		420	484		mg/Kg	☼	115	80 - 120	7	20
Vanadium	19		105	144		mg/Kg	☼	120	80 - 120	7	20
Zinc	380		105	528	F	mg/Kg	☼	137	80 - 120	8	20

Lab Sample ID: 580-24602-A-1-B DU

Matrix: Solid

Analysis Batch: 81616

Client Sample ID: 580-24602-A-1-B DU

Prep Type: Total/NA

Prep Batch: 81476

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Antimony	2.4		2.24		mg/Kg	☼	7	20
Arsenic	4.3		3.86		mg/Kg	☼	11	20
Barium	160		156		mg/Kg	☼	5	20
Beryllium	ND		ND		mg/Kg	☼	NC	20
Cadmium	1.7		1.43		mg/Kg	☼	15	20
Chromium	14		13.0		mg/Kg	☼	8	20
Copper	170		153		mg/Kg	☼	8	20
Lead	51		47.7		mg/Kg	☼	6	20
Nickel	12		11.1		mg/Kg	☼	7	20
Selenium	2.2		1.96		mg/Kg	☼	12	20
Silver	1.8		1.67		mg/Kg	☼	6	20
Thallium	ND		ND		mg/Kg	☼	NC	20
Vanadium	19		17.2		mg/Kg	☼	7	20
Zinc	380		355		mg/Kg	☼	8	20

Quality Control Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 580-81552/22-A
Matrix: Solid
Analysis Batch: 81618

Client Sample ID: MB 580-81552/22-A
Prep Type: Total/NA
Prep Batch: 81552

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.017		mg/Kg		03/03/11 09:03	03/03/11 11:24	1

Lab Sample ID: LCS 580-81552/23-A
Matrix: Solid
Analysis Batch: 81618

Client Sample ID: LCS 580-81552/23-A
Prep Type: Total/NA
Prep Batch: 81552

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	% Rec	% Rec. Limits

Lab Sample ID: LCSD 580-81552/24-A
Matrix: Solid
Analysis Batch: 81618

Client Sample ID: LCSD 580-81552/24-A
Prep Type: Total/NA
Prep Batch: 81552

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	
								RPD	Limit
Mercury	0.167	0.163		mg/Kg		98	80 - 120	1	20

Lab Sample ID: 580-24645-A-1-D MS
Matrix: Solid
Analysis Batch: 81618

Client Sample ID: 580-24645-A-1-D MS
Prep Type: Total/NA
Prep Batch: 81552

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	% Rec	% Rec. Limits

Lab Sample ID: 580-24645-A-1-E MSD
Matrix: Solid
Analysis Batch: 81618

Client Sample ID: 580-24645-A-1-E MSD
Prep Type: Total/NA
Prep Batch: 81552

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	% Rec	% Rec. Limits	RPD	
										RPD	Limit
Mercury	0.14		0.168	0.327		mg/Kg	✱	114	80 - 120	1	20

Lab Sample ID: 580-24645-A-1-C DU
Matrix: Solid
Analysis Batch: 81618

Client Sample ID: 580-24645-A-1-C DU
Prep Type: Total/NA
Prep Batch: 81552

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD	
								RPD	Limit
Mercury	0.14		0.0957	F	mg/Kg	✱		35	20

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 580-81790/1-A
Matrix: Solid
Analysis Batch: 81909

Client Sample ID: MB 580-81790/1-A
Prep Type: Soluble

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	ND		3.3		mg/Kg			03/08/11 09:16	1
Sulfate	ND		3.0		mg/Kg			03/08/11 09:16	1

Quality Control Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 580-81790/2-A
Matrix: Solid
Analysis Batch: 81909

Client Sample ID: LCS 580-81790/2-A
Prep Type: Soluble

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec.
		Result	Qualifier				
Chloride	400	422		mg/Kg		105	90 - 110
Sulfate	400	420		mg/Kg		105	90 - 110

Lab Sample ID: 580-24607-1 MS
Matrix: Solid
Analysis Batch: 81909

Client Sample ID: AUB0026-01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS	MS	Unit	D	% Rec	% Rec.
				Result	Qualifier				
Chloride	390		401	188	F	mg/Kg	☼	-51	90 - 110
Sulfate	210		401	127	F	mg/Kg	☼	-20	90 - 110

Lab Sample ID: 580-24607-2 MS
Matrix: Solid
Analysis Batch: 81909

Client Sample ID: AUB0026-02
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	MS	MS	Unit	D	% Rec	% Rec.
				Result	Qualifier				
Chloride	75		395	513	F	mg/Kg	☼	111	90 - 110
Sulfate	720		395	925	F	mg/Kg	☼	52	90 - 110

Lab Sample ID: 580-24607-1 DU
Matrix: Solid
Analysis Batch: 81909

Client Sample ID: AUB0026-01
Prep Type: Soluble

Analyte	Sample Result	Sample Qualifier	Spike Added	DU	DU	Unit	D	Prepared	Analyzed	RPD	RPD
				Result	Qualifier					Limit	Limit
Chloride	390			441	F	mg/Kg	☼			11	10
Sulfate	210			210		mg/Kg	☼			1	10

Method: 9012A - Cyanide, Total and/or Amenable

Lab Sample ID: MB 580-81232/1-A
Matrix: Solid
Analysis Batch: 81358

Client Sample ID: MB 580-81232/1-A
Prep Type: Total/NA
Prep Batch: 81232

Analyte	MB	MB	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cyanide, Total	ND		1.0		mg/Kg		02/24/11 17:04	02/28/11 14:39	1

Lab Sample ID: LCS 580-81232/2-A
Matrix: Solid
Analysis Batch: 81358

Client Sample ID: LCS 580-81232/2-A
Prep Type: Total/NA
Prep Batch: 81232

Analyte	Spike Added	LCS	LCS	Unit	D	% Rec	% Rec.
		Result	Qualifier				
Cyanide, Total	10.0	9.27		mg/Kg		93	80 - 120

Lab Sample ID: 580-24607-1 MS
Matrix: Solid
Analysis Batch: 81358

Client Sample ID: AUB0026-01
Prep Type: Total/NA
Prep Batch: 81232

Analyte	Sample Result	Sample Qualifier	Spike Added	MS	MS	Unit	D	% Rec	% Rec.
				Result	Qualifier				
Cyanide, Total	ND		9.57	1.46	F	mg/Kg	☼	15	80 - 120

Quality Control Data

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Method: 9012A - Cyanide, Total and/or Amenable (Continued)

Lab Sample ID: 580-24607-1 DU

Matrix: Solid

Analysis Batch: 81358

Client Sample ID: AUB0026-01

Prep Type: Total/NA

Prep Batch: 81232

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	ND		ND		mg/Kg	*	NC	20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Association Summary

Client: Petrotechnical Resources of Alaska
 Project/Site: [none]

TestAmerica Job ID: AUB0026

Metals

Prep Batch: 81322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
AUB0026-04	Walakpa #1 #1- surface hole	Total/NA	Soil	3050B	
AUB0026-05	Walakpa #1 #2- intermed. hole	Total/NA	Soil	3050B	
AUB0026-06	Walakpa #1 #3- intermed. hole	Total/NA	Soil	3050B	
AUB0026-07	S. Barrow 19 #1- surface hole	Total/NA	Soil	3050B	
AUB0026-08	S. Barrow 19 #2- intermed. hole	Total/NA	Soil	3050B	
AUB0026-09	S. Barrow 19 #3- intermed. hole	Total/NA	Soil	3050B	
AUB0026-10	S. Barrow 14 #1- surface hole	Total/NA	Soil	3050B	
AUB0026-11	S. Barrow 14 #2- intermed. hole	Total/NA	Soil	3050B	
AUB0026-12	S. Barrow 14 #3- intermed. hole	Total/NA	Soil	3050B	
MB 580-81322/19-A	MB 580-81322/19-A	Total/NA	Solid	3050B	
LCS 580-81322/20-A	LCS 580-81322/20-A	Total/NA	Solid	3050B	
LCSD 580-81322/21-A	LCSD 580-81322/21-A	Total/NA	Solid	3050B	
AUB0026-01	Brontosaurus #1 #1- surface hole	Total/NA	Soil	3050B	
AUB0026-02	Brontosaurus #1 #2- intermed hole	Total/NA	Soil	3050B	
AUB0026-03	Brontosaurus #1 #3- intermed hole	Total/NA	Soil	3050B	

Analysis Batch: 81403

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-81322/19-A	MB 580-81322/19-A	Total/NA	Solid	6010B	81322
AUB0026-03	Brontosaurus #1 #3- intermed hole	Total/NA	Soil	6010B	81322
AUB0026-04	Walakpa #1 #1- surface hole	Total/NA	Soil	6010B	81322
AUB0026-05	Walakpa #1 #2- intermed. hole	Total/NA	Soil	6010B	81322
AUB0026-06	Walakpa #1 #3- intermed. hole	Total/NA	Soil	6010B	81322
AUB0026-07	S. Barrow 19 #1- surface hole	Total/NA	Soil	6010B	81322
AUB0026-08	S. Barrow 19 #2- intermed. hole	Total/NA	Soil	6010B	81322
AUB0026-09	S. Barrow 19 #3- intermed. hole	Total/NA	Soil	6010B	81322
AUB0026-10	S. Barrow 14 #1- surface hole	Total/NA	Soil	6010B	81322
AUB0026-11	S. Barrow 14 #2- intermed. hole	Total/NA	Soil	6010B	81322
AUB0026-12	S. Barrow 14 #3- intermed. hole	Total/NA	Soil	6010B	81322
LCS 580-81322/20-A	LCS 580-81322/20-A	Total/NA	Solid	6010B	81322
LCSD 580-81322/21-A	LCSD 580-81322/21-A	Total/NA	Solid	6010B	81322
AUB0026-01	Brontosaurus #1 #1- surface hole	Total/NA	Soil	6010B	81322
AUB0026-02	Brontosaurus #1 #2- intermed hole	Total/NA	Soil	6010B	81322

Prep Batch: 81476

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
AUB0026-01	Brontosaurus #1 #1- surface hole	Total/NA	Soil	3050B	
AUB0026-02	Brontosaurus #1 #2- intermed hole	Total/NA	Soil	3050B	
AUB0026-03	Brontosaurus #1 #3- intermed hole	Total/NA	Soil	3050B	
AUB0026-04	Walakpa #1 #1- surface hole	Total/NA	Soil	3050B	
AUB0026-05	Walakpa #1 #2- intermed. hole	Total/NA	Soil	3050B	
AUB0026-06	Walakpa #1 #3- intermed. hole	Total/NA	Soil	3050B	
AUB0026-07	S. Barrow 19 #1- surface hole	Total/NA	Soil	3050B	
AUB0026-08	S. Barrow 19 #2- intermed. hole	Total/NA	Soil	3050B	
AUB0026-08	S. Barrow 19 #2- intermed. hole	Total/NA	Soil	3050B	
AUB0026-09	S. Barrow 19 #3- intermed. hole	Total/NA	Soil	3050B	
AUB0026-10	S. Barrow 14 #1- surface hole	Total/NA	Soil	3050B	
580-24602-A-1-B DU	580-24602-A-1-B DU	Total/NA	Solid	3050B	
AUB0026-11	S. Barrow 14 #2- intermed. hole	Total/NA	Soil	3050B	
AUB0026-11	S. Barrow 14 #2- intermed. hole	Total/NA	Soil	3050B	
AUB0026-12	S. Barrow 14 #3- intermed. hole	Total/NA	Soil	3050B	
MB 580-81476/22-A	MB 580-81476/22-A	Total/NA	Solid	3050B	



QC Association Summary

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Metals (Continued)

Prep Batch: 81476 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 580-81476/23-A	LCS 580-81476/23-A	Total/NA	Solid	3050B	
LCSD 580-81476/24-A	LCSD 580-81476/24-A	Total/NA	Solid	3050B	
580-24602-A-1-C MS	580-24602-A-1-C MS	Total/NA	Solid	3050B	
580-24602-A-1-D MSD	580-24602-A-1-D MSD	Total/NA	Solid	3050B	

Prep Batch: 81552

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
AUB0026-01	Brontosaurus #1 #1- surface hole	Total/NA	Soil	7471A	
AUB0026-02	Brontosaurus #1 #2- intermed hole	Total/NA	Soil	7471A	
AUB0026-03	Brontosaurus #1 #3- intermed hole	Total/NA	Soil	7471A	
AUB0026-04	Walakpa #1 #1- surface hole	Total/NA	Soil	7471A	
AUB0026-05	Walakpa #1 #2- intermed. hole	Total/NA	Soil	7471A	
AUB0026-06	Walakpa #1 #3- intermed. hole	Total/NA	Soil	7471A	
AUB0026-07	S. Barrow 19 #1- surface hole	Total/NA	Soil	7471A	
AUB0026-08	S. Barrow 19 #2- intermed. hole	Total/NA	Soil	7471A	
AUB0026-09	S. Barrow 19 #3- intermed. hole	Total/NA	Soil	7471A	
AUB0026-10	S. Barrow 14 #1- surface hole	Total/NA	Soil	7471A	
580-24645-A-1-C DU	580-24645-A-1-C DU	Total/NA	Solid	7471A	
AUB0026-11	S. Barrow 14 #2- intermed. hole	Total/NA	Soil	7471A	
AUB0026-12	S. Barrow 14 #3- intermed. hole	Total/NA	Soil	7471A	
MB 580-81552/22-A	MB 580-81552/22-A	Total/NA	Solid	7471A	
LCS 580-81552/23-A	LCS 580-81552/23-A	Total/NA	Solid	7471A	
LCSD 580-81552/24-A	LCSD 580-81552/24-A	Total/NA	Solid	7471A	
580-24645-A-1-D MS	580-24645-A-1-D MS	Total/NA	Solid	7471A	
580-24645-A-1-E MSD	580-24645-A-1-E MSD	Total/NA	Solid	7471A	

Analysis Batch: 81616

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-81476/22-A	MB 580-81476/22-A	Total/NA	Solid	6020	81476
580-24602-A-1-B DU	580-24602-A-1-B DU	Total/NA	Solid	6020	81476
580-24602-A-1-C MS	580-24602-A-1-C MS	Total/NA	Solid	6020	81476
580-24602-A-1-D MSD	580-24602-A-1-D MSD	Total/NA	Solid	6020	81476
LCS 580-81476/23-A	LCS 580-81476/23-A	Total/NA	Solid	6020	81476
LCSD 580-81476/24-A	LCSD 580-81476/24-A	Total/NA	Solid	6020	81476
AUB0026-01	Brontosaurus #1 #1- surface hole	Total/NA	Soil	6020	81476
AUB0026-02	Brontosaurus #1 #2- intermed hole	Total/NA	Soil	6020	81476
AUB0026-03	Brontosaurus #1 #3- intermed hole	Total/NA	Soil	6020	81476
AUB0026-04	Walakpa #1 #1- surface hole	Total/NA	Soil	6020	81476
AUB0026-05	Walakpa #1 #2- intermed. hole	Total/NA	Soil	6020	81476
AUB0026-06	Walakpa #1 #3- intermed. hole	Total/NA	Soil	6020	81476
AUB0026-07	S. Barrow 19 #1- surface hole	Total/NA	Soil	6020	81476

Analysis Batch: 81618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-81552/22-A	MB 580-81552/22-A	Total/NA	Solid	7471A	81552
AUB0026-01	Brontosaurus #1 #1- surface hole	Total/NA	Soil	7471A	81552
AUB0026-02	Brontosaurus #1 #2- intermed hole	Total/NA	Soil	7471A	81552
AUB0026-03	Brontosaurus #1 #3- intermed hole	Total/NA	Soil	7471A	81552
AUB0026-04	Walakpa #1 #1- surface hole	Total/NA	Soil	7471A	81552
AUB0026-06	Walakpa #1 #3- intermed. hole	Total/NA	Soil	7471A	81552
AUB0026-09	S. Barrow 19 #3- intermed. hole	Total/NA	Soil	7471A	81552
AUB0026-05	Walakpa #1 #2- intermed. hole	Total/NA	Soil	7471A	81552

QC Association Summary

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Metals (Continued)

Analysis Batch: 81618 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 580-81552/23-A	LCS 580-81552/23-A	Total/NA	Solid	7471A	81552
AUB0026-07	S. Barrow 19 #1- surface hole	Total/NA	Soil	7471A	81552
AUB0026-08	S. Barrow 19 #2- intermed. hole	Total/NA	Soil	7471A	81552
AUB0026-10	S. Barrow 14 #1- surface hole	Total/NA	Soil	7471A	81552
AUB0026-11	S. Barrow 14 #2- intermed. hole	Total/NA	Soil	7471A	81552
AUB0026-12	S. Barrow 14 #3- intermed. hole	Total/NA	Soil	7471A	81552
LCSD 580-81552/24-A	LCSD 580-81552/24-A	Total/NA	Solid	7471A	81552
580-24645-A-1-C DU	580-24645-A-1-C DU	Total/NA	Solid	7471A	81552
580-24645-A-1-D MS	580-24645-A-1-D MS	Total/NA	Solid	7471A	81552
580-24645-A-1-E MSD	580-24645-A-1-E MSD	Total/NA	Solid	7471A	81552

Analysis Batch: 81639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
AUB0026-08	S. Barrow 19 #2- intermed. hole	Total/NA	Soil	6020	81476
AUB0026-09	S. Barrow 19 #3- intermed. hole	Total/NA	Soil	6020	81476
AUB0026-10	S. Barrow 14 #1- surface hole	Total/NA	Soil	6020	81476
AUB0026-11	S. Barrow 14 #2- intermed. hole	Total/NA	Soil	6020	81476
AUB0026-12	S. Barrow 14 #3- intermed. hole	Total/NA	Soil	6020	81476
AUB0026-08	S. Barrow 19 #2- intermed. hole	Total/NA	Soil	6020	81476
AUB0026-11	S. Barrow 14 #2- intermed. hole	Total/NA	Soil	6020	81476

General Chemistry

Prep Batch: 81232

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-81232/1-A	MB 580-81232/1-A	Total/NA	Solid	9012A	
AUB0026-06	Walakpa #1 #3- intermed. hole	Total/NA	Soil	9012A	
AUB0026-07	S. Barrow 19 #1- surface hole	Total/NA	Soil	9012A	
AUB0026-08	S. Barrow 19 #2- intermed. hole	Total/NA	Soil	9012A	
AUB0026-09	S. Barrow 19 #3- intermed. hole	Total/NA	Soil	9012A	
AUB0026-10	S. Barrow 14 #1- surface hole	Total/NA	Soil	9012A	
AUB0026-11	S. Barrow 14 #2- intermed. hole	Total/NA	Soil	9012A	
AUB0026-12	S. Barrow 14 #3- intermed. hole	Total/NA	Soil	9012A	
LCS 580-81232/2-A	LCS 580-81232/2-A	Total/NA	Solid	9012A	
AUB0026-01	Brontosaurus #1 #1- surface hole	Total/NA	Soil	9012A	
580-24607-1 MS	AUB0026-01	Total/NA	Solid	9012A	
580-24607-1 DU	AUB0026-01	Total/NA	Solid	9012A	
AUB0026-02	Brontosaurus #1 #2- intermed hole	Total/NA	Soil	9012A	
AUB0026-03	Brontosaurus #1 #3- intermed hole	Total/NA	Soil	9012A	
AUB0026-04	Walakpa #1 #1- surface hole	Total/NA	Soil	9012A	
AUB0026-05	Walakpa #1 #2- intermed. hole	Total/NA	Soil	9012A	

Analysis Batch: 81335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
AUB0026-01	Brontosaurus #1 #1- surface hole	Total/NA	Soil	Moisture	
AUB0026-09	S. Barrow 19 #3- intermed. hole	Total/NA	Soil	Moisture	
AUB0026-10	S. Barrow 14 #1- surface hole	Total/NA	Soil	Moisture	
AUB0026-11	S. Barrow 14 #2- intermed. hole	Total/NA	Soil	Moisture	
AUB0026-12	S. Barrow 14 #3- intermed. hole	Total/NA	Soil	Moisture	
580-24607-1 DU	AUB0026-01	Total/NA	Solid	Moisture	
AUB0026-02	Brontosaurus #1 #2- intermed hole	Total/NA	Soil	Moisture	
AUB0026-03	Brontosaurus #1 #3- intermed hole	Total/NA	Soil	Moisture	

QC Association Summary

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

General Chemistry (Continued)

Analysis Batch: 81335 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
AUB0026-04	Walakpa #1 #1- surface hole	Total/NA	Soil	Moisture	
AUB0026-05	Walakpa #1 #2- intermed. hole	Total/NA	Soil	Moisture	
AUB0026-06	Walakpa #1 #3- intermed. hole	Total/NA	Soil	Moisture	
AUB0026-07	S. Barrow 19 #1- surface hole	Total/NA	Soil	Moisture	
AUB0026-08	S. Barrow 19 #2- intermed. hole	Total/NA	Soil	Moisture	

Analysis Batch: 81358

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-81232/1-A	MB 580-81232/1-A	Total/NA	Solid	9012A	81232
AUB0026-06	Walakpa #1 #3- intermed. hole	Total/NA	Soil	9012A	81232
AUB0026-07	S. Barrow 19 #1- surface hole	Total/NA	Soil	9012A	81232
AUB0026-08	S. Barrow 19 #2- intermed. hole	Total/NA	Soil	9012A	81232
AUB0026-09	S. Barrow 19 #3- intermed. hole	Total/NA	Soil	9012A	81232
AUB0026-10	S. Barrow 14 #1- surface hole	Total/NA	Soil	9012A	81232
AUB0026-11	S. Barrow 14 #2- intermed. hole	Total/NA	Soil	9012A	81232
AUB0026-12	S. Barrow 14 #3- intermed. hole	Total/NA	Soil	9012A	81232
LCS 580-81232/2-A	LCS 580-81232/2-A	Total/NA	Solid	9012A	81232
AUB0026-01	Brontosaurus #1 #1- surface hole	Total/NA	Soil	9012A	81232
580-24607-1 MS	AUB0026-01	Total/NA	Solid	9012A	81232
580-24607-1 DU	AUB0026-01	Total/NA	Solid	9012A	81232
AUB0026-02	Brontosaurus #1 #2- intermed hole	Total/NA	Soil	9012A	81232
AUB0026-03	Brontosaurus #1 #3- intermed hole	Total/NA	Soil	9012A	81232
AUB0026-04	Walakpa #1 #1- surface hole	Total/NA	Soil	9012A	81232
AUB0026-05	Walakpa #1 #2- intermed. hole	Total/NA	Soil	9012A	81232

Leach Batch: 81790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 580-81790/1-A	MB 580-81790/1-A	Soluble	Solid	DI Leach	
AUB0026-05	Walakpa #1 #2- intermed. hole	Soluble	Soil	DI Leach	
AUB0026-06	Walakpa #1 #3- intermed. hole	Soluble	Soil	DI Leach	
AUB0026-06	Walakpa #1 #3- intermed. hole	Soluble	Soil	DI Leach	
AUB0026-07	S. Barrow 19 #1- surface hole	Soluble	Soil	DI Leach	
AUB0026-08	S. Barrow 19 #2- intermed. hole	Soluble	Soil	DI Leach	
AUB0026-09	S. Barrow 19 #3- intermed. hole	Soluble	Soil	DI Leach	
AUB0026-10	S. Barrow 14 #1- surface hole	Soluble	Soil	DI Leach	
AUB0026-10	S. Barrow 14 #1- surface hole	Soluble	Soil	DI Leach	
AUB0026-11	S. Barrow 14 #2- intermed. hole	Soluble	Soil	DI Leach	
AUB0026-11	S. Barrow 14 #2- intermed. hole	Soluble	Soil	DI Leach	
AUB0026-12	S. Barrow 14 #3- intermed. hole	Soluble	Soil	DI Leach	
LCS 580-81790/2-A	LCS 580-81790/2-A	Soluble	Solid	DI Leach	
AUB0026-01	Brontosaurus #1 #1- surface hole	Soluble	Soil	DI Leach	
580-24607-1 MS	AUB0026-01	Soluble	Solid	DI Leach	
580-24607-1 DU	AUB0026-01	Soluble	Solid	DI Leach	
AUB0026-02	Brontosaurus #1 #2- intermed hole	Soluble	Soil	DI Leach	
AUB0026-02	Brontosaurus #1 #2- intermed hole	Soluble	Soil	DI Leach	
580-24607-2 MS	AUB0026-02	Soluble	Solid	DI Leach	
AUB0026-03	Brontosaurus #1 #3- intermed hole	Soluble	Soil	DI Leach	
AUB0026-04	Walakpa #1 #1- surface hole	Soluble	Soil	DI Leach	
AUB0026-04	Walakpa #1 #1- surface hole	Soluble	Soil	DI Leach	

QC Association Summary

Client: Petrotechnical Resources of Alaska
 Project/Site: [none]

TestAmerica Job ID: AUB0026

General Chemistry (Continued)

Analysis Batch: 81909

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
AUB0026-04	Walakpa #1 #1- surface hole	Soluble	Soil	300.0	
AUB0026-05	Walakpa #1 #2- intermed. hole	Soluble	Soil	300.0	
AUB0026-06	Walakpa #1 #3- intermed. hole	Soluble	Soil	300.0	
AUB0026-10	S. Barrow 14 #1- surface hole	Soluble	Soil	300.0	
AUB0026-11	S. Barrow 14 #2- intermed. hole	Soluble	Soil	300.0	
AUB0026-02	Brontosaurus #1 #2- intermed hole	Soluble	Soil	300.0	
580-24607-2 MS	AUB0026-02	Soluble	Solid	300.0	
AUB0026-04	Walakpa #1 #1- surface hole	Soluble	Soil	300.0	
AUB0026-06	Walakpa #1 #3- intermed. hole	Soluble	Soil	300.0	
MB 580-81790/1-A	MB 580-81790/1-A	Soluble	Solid	300.0	
AUB0026-07	S. Barrow 19 #1- surface hole	Soluble	Soil	300.0	
AUB0026-09	S. Barrow 19 #3- intermed. hole	Soluble	Soil	300.0	
AUB0026-10	S. Barrow 14 #1- surface hole	Soluble	Soil	300.0	
AUB0026-12	S. Barrow 14 #3- intermed. hole	Soluble	Soil	300.0	
AUB0026-03	Brontosaurus #1 #3- intermed hole	Soluble	Soil	300.0	
LCS 580-81790/2-A	LCS 580-81790/2-A	Soluble	Solid	300.0	
AUB0026-08	S. Barrow 19 #2- intermed. hole	Soluble	Soil	300.0	
AUB0026-11	S. Barrow 14 #2- intermed. hole	Soluble	Soil	300.0	
AUB0026-01	Brontosaurus #1 #1- surface hole	Soluble	Soil	300.0	
580-24607-1 MS	AUB0026-01	Soluble	Solid	300.0	
580-24607-1 DU	AUB0026-01	Soluble	Solid	300.0	
AUB0026-02	Brontosaurus #1 #2- intermed hole	Soluble	Soil	300.0	



Lab Chronicle

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: Brontosaurus #1 #1- surface hole

Lab Sample ID: AUB0026-01

Date Collected: 02/17/11 10:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 08:04	SP	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle
Total/NA	Analysis	6020		10	81616	03/03/11 16:24	FCW	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		1	81618	03/03/11 12:05	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:04	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle
Soluble	Analysis	300.0		1	81909	03/08/11 09:49	AO	TestAmerica Seattle

Client Sample ID: Brontosaurus #1 #2- intermed hole

Lab Sample ID: AUB0026-02

Date Collected: 02/17/11 10:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 08:09	SP	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle
Total/NA	Analysis	6020		10	81616	03/03/11 16:36	FCW	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		1	81618	03/03/11 12:07	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:04	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle
Soluble	Analysis	300.0		10	81909	03/08/11 15:52	AO	TestAmerica Seattle
Soluble	Analysis	300.0		1	81909	03/08/11 10:38	AO	TestAmerica Seattle

Client Sample ID: Brontosaurus #1 #3- intermed hole

Lab Sample ID: AUB0026-03

Date Collected: 02/17/11 11:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 08:14	SP	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle
Total/NA	Analysis	6020		10	81616	03/03/11 17:00	FCW	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		1	81618	03/03/11 12:10	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:04	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle

Lab Chronicle

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: Brontosaurus #1 #3- intermed hole

Lab Sample ID: AUB0026-03

Date Collected: 02/17/11 11:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Soluble	Analysis	300.0		1	81909	03/08/11 18:19	AO	TestAmerica Seattle

Client Sample ID: Walakpa #1 #1- surface hole

Lab Sample ID: AUB0026-04

Date Collected: 02/17/11 11:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 08:19	SP	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle
Total/NA	Analysis	6020		10	81616	03/03/11 17:12	FCW	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		1	81618	03/03/11 12:13	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:04	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle
Soluble	Analysis	300.0		1	81909	03/08/11 12:00	AO	TestAmerica Seattle
Soluble	Analysis	300.0		10	81909	03/08/11 16:25	AO	TestAmerica Seattle

Client Sample ID: Walakpa #1 #2- intermed. hole

Lab Sample ID: AUB0026-05

Date Collected: 02/17/11 12:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 99.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 08:24	SP	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle
Total/NA	Analysis	6020		10	81616	03/03/11 17:24	FCW	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		10	81618	03/03/11 12:45	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:04	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle
Soluble	Analysis	300.0		1	81909	03/08/11 12:16	AO	TestAmerica Seattle

Client Sample ID: Walakpa #1 #3- intermed. hole

Lab Sample ID: AUB0026-06

Date Collected: 02/17/11 12:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 98.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 08:29	SP	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle

TestAmerica Anchorage

Lab Chronicle

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: Walakpa #1 #3- intermed. hole

Date Collected: 02/17/11 12:30

Date Received: 02/18/11 13:50

Lab Sample ID: AUB0026-06

Matrix: Soil

Percent Solids: 98.6

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Analysis	6020		10	81616	03/03/11 17:36	FCW	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		1	81618	03/03/11 12:25	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:04	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle
Soluble	Analysis	300.0		1	81909	03/08/11 12:33	AO	TestAmerica Seattle
Soluble	Analysis	300.0		10	81909	03/08/11 16:41	AO	TestAmerica Seattle

Client Sample ID: S. Barrow 19 #1- surface hole

Date Collected: 02/17/11 13:00

Date Received: 02/18/11 13:50

Lab Sample ID: AUB0026-07

Matrix: Soil

Percent Solids: 99.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 08:34	SP	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle
Total/NA	Analysis	6020		10	81616	03/03/11 17:48	FCW	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		10	81618	03/03/11 12:48	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:04	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle
Soluble	Analysis	300.0		10	81909	03/08/11 16:57	AO	TestAmerica Seattle

Client Sample ID: S. Barrow 19 #2- intermed. hole

Date Collected: 02/17/11 13:30

Date Received: 02/18/11 13:50

Lab Sample ID: AUB0026-08

Matrix: Soil

Percent Solids: 97.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 08:38	SP	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		10	81618	03/03/11 12:51	FCW	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle
Total/NA	Analysis	6020		10	81639	03/04/11 07:34	FCW	TestAmerica Seattle
Total/NA	Analysis	6020		1000	81639	03/04/11 07:55	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:04	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle
Soluble	Analysis	300.0		50	81909	03/09/11 09:26	AO	TestAmerica Seattle

TestAmerica Anchorage

Lab Chronicle

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: S. Barrow 19 #3- intermed. hole

Date Collected: 02/17/11 14:00

Date Received: 02/18/11 13:50

Lab Sample ID: AUB0026-09

Matrix: Soil

Percent Solids: 98.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 08:53	SP	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		1	81618	03/03/11 12:34	FCW	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle
Total/NA	Analysis	6020		10	81639	03/04/11 07:38	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:04	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle
Soluble	Analysis	300.0		100	81909	03/08/11 17:30	AO	TestAmerica Seattle

Client Sample ID: S. Barrow 14 #1- surface hole

Date Collected: 02/17/11 14:30

Date Received: 02/18/11 13:50

Lab Sample ID: AUB0026-10

Matrix: Soil

Percent Solids: 99.2

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 08:57	SP	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		20	81618	03/03/11 13:00	FCW	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle
Total/NA	Analysis	6020		10	81639	03/04/11 07:42	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:04	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle
Soluble	Analysis	300.0		1	81909	03/08/11 13:38	AO	TestAmerica Seattle
Soluble	Analysis	300.0		10	81909	03/08/11 17:47	AO	TestAmerica Seattle

Client Sample ID: S. Barrow 14 #2- intermed. hole

Date Collected: 02/17/11 15:00

Date Received: 02/18/11 13:50

Lab Sample ID: AUB0026-11

Matrix: Soil

Percent Solids: 98.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 09:02	SP	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		10	81618	03/03/11 13:03	FCW	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle
Total/NA	Analysis	6020		10	81639	03/04/11 07:46	FCW	TestAmerica Seattle
Total/NA	Analysis	6020		1000	81639	03/04/11 07:59	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:04	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle

Lab Chronicle

Client: Petrotechnical Resources of Alaska
 Project/Site: [none]

TestAmerica Job ID: AUB0026

Client Sample ID: S. Barrow 14 #2- intermed. hole

Lab Sample ID: AUB0026-11

Date Collected: 02/17/11 15:00

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 98.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle
Soluble	Analysis	300.0		1	81909	03/08/11 13:55	AO	TestAmerica Seattle
Soluble	Analysis	300.0		50	81909	03/09/11 11:10	AO	TestAmerica Seattle

Client Sample ID: S. Barrow 14 #3- intermed. hole

Lab Sample ID: AUB0026-12

Date Collected: 02/17/11 15:30

Matrix: Soil

Date Received: 02/18/11 13:50

Percent Solids: 98.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared Or Analyzed	Analyst	Lab
Total/NA	Prep	3050B			81322	02/28/11 10:15	PAB	TestAmerica Seattle
Total/NA	Analysis	6010B		100	81403	03/01/11 09:07	SP	TestAmerica Seattle
Total/NA	Prep	7471A			81552	03/03/11 09:03	PAB	TestAmerica Seattle
Total/NA	Analysis	7471A		10	81618	03/03/11 13:06	FCW	TestAmerica Seattle
Total/NA	Prep	3050B			81476	03/02/11 10:22	PAB	TestAmerica Seattle
Total/NA	Analysis	6020		10	81639	03/04/11 07:51	FCW	TestAmerica Seattle
Total/NA	Analysis	Moisture		1	81335	02/28/11 11:24	PAB	TestAmerica Seattle
Total/NA	Prep	9012A			81232	02/24/11 17:05	AO	TestAmerica Seattle
Total/NA	Analysis	9012A		1	81358	02/28/11 14:39	AO	TestAmerica Seattle
Soluble	Leach	DI Leach			81790	03/07/11 13:36	AO	TestAmerica Seattle
Soluble	Analysis	300.0		10	81909	03/08/11 18:03	AO	TestAmerica Seattle

Certification Summary

Client: Petrotechnical Resources of Alaska
 Project/Site: [none]

TestAmerica Job ID: AUB0026

Laboratory	Authority	Program	EPA Region	Certification ID	* Expiration Date
TestAmerica Anchorage	Alaska	Alaska UST	10	UST-067	06/16/11
TestAmerica Anchorage	Alaska	State Program	10	AK00975	06/30/11
TestAmerica Seattle		USDA		P330-08-00099	05/21/11
TestAmerica Seattle	Alaska	Alaska UST	10	UST-022	03/03/11
TestAmerica Seattle	California	NELAC	9	1115CA	01/31/12
TestAmerica Seattle	Florida	NELAC	4	E871074	06/30/11
TestAmerica Seattle	L-A-B	DoD ELAP	0	L2236	01/19/13
TestAmerica Seattle	L-A-B	ISO/IEC 17025	0	L2236	01/19/13
TestAmerica Seattle	Louisiana	NELAC Secondary AB	6	05016	06/30/11
TestAmerica Seattle	Montana	MT DEQ UST	8		04/30/20
TestAmerica Seattle	Oregon	NELAC	10	WA100007	11/06/11
TestAmerica Seattle	Washington	State Program	10	C553	02/16/12

Accreditation may not be offered or required for all methods and analytes reported in this package. Please contact your project manager for the laboratory's current list of certified methods and analytes.

* Any expired certifications in this list are currently pending renewal and are considered valid.



Method Summary

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL SEA
6020	Metals (ICP/MS)	SW846	TAL SEA
7471A	Mercury (CVAA)	SW846	TAL SEA
300.0	Anions, Ion Chromatography	MCAWW	TAL SEA
9012A	Cyanide, Total and/or Amenable	SW846	TAL SEA
Moisture	Percent Moisture	EPA	TAL SEA

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310



Sample Summary

Client: Petrotechnical Resources of Alaska
Project/Site: [none]

TestAmerica Job ID: AUB0026

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
AUB0026-01	Brontosaurus #1 #1- surface hole	Soil	02/17/11 10:00	02/18/11 13:50
AUB0026-02	Brontosaurus #1 #2- intermed hole	Soil	02/17/11 10:30	02/18/11 13:50
AUB0026-03	Brontosaurus #1 #3- intermed hole	Soil	02/17/11 11:00	02/18/11 13:50
AUB0026-04	Walakpa #1 #1- surface hole	Soil	02/17/11 11:30	02/18/11 13:50
AUB0026-05	Walakpa #1 #2- intermed. hole	Soil	02/17/11 12:00	02/18/11 13:50
AUB0026-06	Walakpa #1 #3- intermed. hole	Soil	02/17/11 12:30	02/18/11 13:50
AUB0026-07	S. Barrow 19 #1- surface hole	Soil	02/17/11 13:00	02/18/11 13:50
AUB0026-08	S. Barrow 19 #2- intermed. hole	Soil	02/17/11 13:30	02/18/11 13:50
AUB0026-09	S. Barrow 19 #3- intermed. hole	Soil	02/17/11 14:00	02/18/11 13:50
AUB0026-10	S. Barrow 14 #1- surface hole	Soil	02/17/11 14:30	02/18/11 13:50
AUB0026-11	S. Barrow 14 #2- intermed. hole	Soil	02/17/11 15:00	02/18/11 13:50
AUB0026-12	S. Barrow 14 #3- intermed. hole	Soil	02/17/11 15:30	02/18/11 13:50

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

11720 North Creek Pkwy N Suite 400, Bothell, WA 98011-8244
 11922 E. First Ave, Spokane, WA 99206-5302
 9405 SW Nimbus Ave, Beaverton, OR 97008-7145
 2000 W International Airport Rd Ste A10, Anchorage, AK 99502-1119

425-420-9200 FAX 420-9210
 509-924-9200 FAX 924-9290
 503-906-9200 FAX 906-9210
 907-563-9200 FAX 563-9210

CHAIN OF CUSTODY REPORT

Work Order #: **AUB0026**

CLIENT: PRA		INVOICE TO:		PRESERVATIVE		REQUESTED ANALYSES		TURNAROUND REQUEST	
REPORT TO: Petrochemical Resources of Alaska 3601 C Street Anch, AK (1424 Suite) 99503		PROJECT NAME: bmemullen@petroak.com		P.O. NUMBER:		MATRIX (W, S, O)		# OF CONT.	
PHONE: 272-1232 email: bmemullen@petroak.com		PROJECT NUMBER:		OTHER Specify:		LOCATION/ COMMENTS		TA W/O ID	
PROJECT NAME: (main office #)		PROJECT NUMBER: Also: Bill Vandylce		SAMPLING DATE/TIME		MATERIAL		TA W/O ID	
SAMPLED BY: North Slope Borough Project		CLIENT SAMPLE IDENTIFICATION		DATE/TIME		MATERIAL		TA W/O ID	
1	Brontosaurus #1	#1 - surface hole	2/17/11 @ 10:00am						01
2	Brontosaurus #1	#2 - interned hole	" @ 10:30 am						02
3	Brontosaurus #1	#3 - interned hole	" @ 11:00 am						03
4	WALAKPA #1	#1 - surface hole	" @ 11:30 am						04
5	WALAKPA #1	#2 - interned hole	" @ 12:00 pm						05
6	WALAKPA #1	#3 - interned hole	" @ 12:30 pm						06
7	S. Barron #1	#1 - surface hole	" @ 1:00 pm						07
8	S. Barron #1	#2 - interned hole	" @ 1:30 pm						08
9	S. Barron #1	#3 - interned hole	" @ 2:00 pm						09
10	S. Barron #1	#1 - surface hole	" @ 2:30 pm						10

RELEASED BY: *[Signature]* DATE: 02/18/11
 PRINT NAME: *[Signature]* TIME: 1:50
 RECEIVED BY: *[Signature]* DATE: *[Signature]*
 PRINT NAME: *[Signature]* TIME: *[Signature]*

TEMP: 5.7°C
 FIRM: *[Signature]*
 DATE: 02/18/11
 TIME: 1:50
 FIRM: *[Signature]*
 DATE: *[Signature]*
 TIME: *[Signature]*

Page 1/2



Test America Anchorage Cooler Receipt Form

(Army Corps. Compliant)

WORK ORDER # AUB0021 CLIENT: PPA PROJECT: North Slope Borough Project
Date /Time Cooler Arrived 02/18/11 13:50 Cooler signed for by: Johanna Dreher
(Print name)

Preliminary Examination Phase:

Date cooler opened: same as date received or / /

Cooler opened by (print) Johanna Dreher (sign) Johanna Dreher

1. Delivered by ALASKA AIRLINES Fed-Ex UPS NAC LYNDEN CLIENT Other:

Shipment Tracking # if applicable NA (include copy of shipping papers in file)

2. Number of Custody Seals Signed by Date / /

Were custody seals unbroken and intact on arrival? Yes No

3. Were custody papers sealed in a plastic bag? Yes No

4. Were custody papers filled out properly (ink, signed, etc.)? Yes No

5. Did you sign the custody papers in the appropriate place? Yes No

6. Was ice used? Yes No Type of ice: blue ice gel ice real ice dry ice Condition of Ice: melting

Temperature by Digi-Thermo Probe 5.7 °C Thermometer # rec# 5

Acceptance Criteria: 0 - 6°C

7. Packing in Cooler: bubble wrap styrofoam cardboard Other:

8. Did samples arrive in plastic bags? Yes No

9. Did all bottles arrive unbroken, and with labels in good condition? Yes No

10. Are all bottle labels complete (ID, date, time, etc.) Yes No

11. Do bottle labels and Chain of Custody agree? Yes No

12. Are the containers and preservatives correct for the tests indicated? Yes No

13. Conoco Phillips, Alyeska, BP H2O samples only: pH < 2? Yes No N/A

14. Is there adequate volume for the tests requested? Yes No

15. Were VOA vials free of bubbles? N/A Yes No

If "NO" which containers contained "head space" or bubbles?

Log-in Phase:

Date of sample log-in 02/22/11

Samples logged in by (print) Johanna Dreher (sign) Johanna Dreher

1. Was project identifiable from custody papers? Yes No

2. Do Turn Around Times and Due Dates agree? Yes No

3. Was the Project Manager notified of status? Yes No

4. Was the Lab notified of status? Yes No

5. Was the COC scanned and copied? Yes No